

Pope John Paul II State School of Higher Education in Białą Podlaska

Ewa Pawłowicz-Sosnowska

**THE VALUES AND METHODS
IN ENVIRONMENTAL EDUCATION
IN THE OPINION OF THE STUDENTS
AT HIGHER VOCATIONAL STATE SCHOOLS IN POLAND**



Wydawnictwo PSW
Białą Podlaska 2019

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in the opinion of the students at higher vocational state schools in Poland”

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Dedication to all my beloved ones

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Introduction

Pro-ecological education related to the process of shaping human attitude towards the environment that surrounds him, is particularly associated with making the pupil aware of the fact that he is part of his own environment, and at the same time man constitutes a cognitive and exploratory entity in his environment, which in turn can be:

1. natural environment in which the man is trying to explore it, discover its natural resources as well as its threats;
2. socio-economic and socio-political environment, which has been associated with the so-called "city" (*polis*) since ancient times;
3. an esthetic and ethical environment connected with moral aspects and defined values¹.

¹ The concept of the environment is not unequivocal in science, which is why in this publication we rely on, referring to the Aristotelian-Thomist tradition, on the division of the environment proposed by an outstanding educator, Stefan Kunowski (1909-1977), who writes in the work *Fundamentals of Modern Pedagogy*, Warsaw, Salesian Publishing House, 2001, pp. 228-236, that the object of ecology as environmental science is the natural environment itself and its impact on the features of organisms in biology, and on the behaviour and reactions of individuals in psychology or groups in sociology as well as influences on educational development in pedagogy. In terms of content affecting the learner, we distinguish the following environments: 1) the natural environment including both extraterrestrial impacts on organisms (cosmic, nuclear radiation, ionospheres, etc.) along with geographical influences (terrain, soil, climate) and the environment of living nature (microorganisms, insects), flora and fauna); 2) the social environment of people and relations between them (both in family, neighborhood, school, professional, church and wider environment – civic, party, etc.); 3) a cultural environment influenced by material culture (construction, communication, work workshops, etc.) and spiritual culture, which is transmitted not only through upbringing, teaching, schooling, education, pastoral work, but also by indirect means of mass information (books, newspapers, magazines illustrated, cinema, radio, television, Internet, etc.). Among the various environmental influences on the learner, we distinguish, following S. Kunowski in the contour theory, the influence of the spiritual environment in which the highest ideas and values of the tradition of national, European, Christian culture and human relation spread. The spiritual environment, as the deepest creation of the history of life and civilization, takes shapes appropriate to the age of time, most sensitive to changes in fate and prone to mysterious grace. Elusively and creatively, it results from the overconscious, ideological aspirations of agos and culture, from emotional bonds with the ethos (especially groups such as family, school class, school, professional group and workplace, as well as broader social groups such as the Church, nation, state or universal brotherhood) It also includes love of life (bios), love of the family landscape, love of the homeland with all the beauty of the natural environment.

In the present publication, we focus on the latter definition of environment, paying attention to its axiological aspects.

Pro-ecological education can be perceived as a specific direction of education that has also developed its own methodology, and today has become a field of human education based on shaping his attitudes and behaviour. Additionally, this trend encompasses education by providing a human being with knowledge about ecosystems, biosystems and sociosystems, considered not only from axiological and methodological, but mainly from existential perspectives.

On the basis of the collected literature of the subject, which today is perceived as the field of education², it is essential to devote our attention to in the theoretical part of the publication so that we could undertake the analysis of specific data on the basis of the achieved results of our own empirical research. This type of education – like any other- needs to be also associated with values – especially pro-ecological ones that pedagogical axiology deals with.

Studies written by such authors as S. Hessen, B. Suchodolski, B. Nawroczyński, S. Kunowski³, Z.K. Mysłakowski, K. Kotłowski or in recent years H. Świda-Zięmba, U. Ostrowska, T. Lewowicki, L. Witkowski, M. Nowak, W. Szczęsny, J. Homplewicz, J. Górniewicz were of great significance for the development of pedagogical axiology in Poland.

Axiology of pro-ecological education, in addition to its foundations rooted in philosophy, is closely related to eco-philosophy and ecological ethics. Within this area, the following works are of great significance for this publication:

² In contemporary pedagogical fields Agnieszka Gromkowska-Melosik has already distinguished ecological pedagogy in Part III of Pedagogy, volume 1, edited by Z. Kwieciński and B. Śliwerski, Warsaw, PWN, 2008, pp. 425-435.

³ S. Kunowski, *Podstawy współczesne pedagogiki*, Warszawa, Wydawnictwo Salezjańskie, 2004.

J. W. Czartoszewski's⁴, J. M. Dołęga's⁵, K. Lorenz's, S. Zięba's⁶, W. Tyburski's⁷, A. Papuziński's⁸, Z. Hull's⁹, D. Kiełczewski's, Z. Łepko's¹⁰, J. Łukomski's¹¹, Z. Piątek's, H.

- ⁴ J. W. Czartoszewski (ed.), *Wychowanie do poszanowania środowiska społeczno-przyrodniczego*, Warszawa, Wydawnictwo Księży Werbistów Verbinum, 2003; J. W. Czartoszewski, *Edukacja ekologiczna na progu XXI wieku: stan, możliwości, programy*, Warszawa, Wydawnictwo Księży Werbistów Verbinum, 2001; J. W. Czartoszewski, A. Skowroński (ed.), *Ochrona środowiska społeczno przyrodniczego w filozofii i teologii*, Warszawa, Wydawnictwo Uniwersytetu Kardynała Stefana Wyszyńskiego, 2001.
- ⁵ J. M. Dołęga, *Człowiek w zagrożonym środowisku*, Warszawa, Wydawnictwo ATK, 1998; J. M. Dołęga, *Ekologia w teologii i filozofii chrześcijańskiej*, in: A. Papuziński (ed.), *Wprowadzenie do filozoficznych problemów ekologii*, Bydgoszcz, Wydawnictwo Uczelniane Wyższej Szkoły Pedagogicznej w Bydgoszczy, 1999, pp. 133-165; J. M. Dołęga, *Koncepcja sozologii systemowej*, Warszawa, Wydawnictwo UKSW, 2001; J. M. Dołęga, *Miejsce problematyki etycznej i ekonomicznej w ekofilozofii*, in: W. Tyburski (ed.), *Ekologia – Ekonomia – Etyka*, Toruń, UMK, 1997; J. M. Dołęga, *Nauki środowiskowe na początku XXI wieku*, „Paedagogia Christiana”. *Edukacja Ekologiczna* nr 2/28 (2011), Toruń, UMK, 2001, pp. 11-38; J. M. Dołęga, *Ochrona środowiska społeczno – przyrodniczego w filozofii i teologii*, Warszawa, Wydawnictwo UKSW, 2001; J. M. Dołęga, *Ochrona środowiska w filozofii i teologii*, Warszawa, Wydawnictwo Akademii Teologii Katolickiej, 1999; J. M. Dołęga, *Troska Jana Pawła II o środowisko*, in: S. Urbański (ed.), *Duchowość współczesnego człowieka w świetle globalizacji i edukacji*, Warszawa, Wydawnictwo Uniwersytetu Kardynała Stefana Wyszyńskiego, 2003, pp. 135-147; J. M. Dołęga, *Znaczenie nauk ekologicznych w ochronie środowiska i edukacji ekologicznej*, in: Z. Ciećko, J. M. Dołęga (ed.), *Ochrona środowiska i edukacja ekologiczna w Unii Europejskiej i Polsce*, Olecko, Wydawnictwo Wszechnicy Mazurskiej, 2003, p. 23; J. M. Dołęga, *Znaczenie sozologii ekofilozofii w kształtowaniu świadomości proekologicznej*, „Człowiek i Przyroda” nr 8-9, 1998, p. 219; J. M. Dołęga (ed.), *Podstawy kultury ekologicznej. Bases of ecological culture*, Warszawa, Wydawnictwo Acta Universitatis Masuriensis, 2002; J. M. Dołęga, J. Sandner (ed.), *Świadomość i edukacja ekologiczna*, Warszawa, Wydawnictwo ATK, 1998; J. M. Dołęga, J. W. Czartoszewski (red.), *Edukacja ekologiczna w rodzinie*, Olecko, Wydawnictwo Wszechnicy Mazurskiej Acta Universitatis Masuriensis („Episteme” 9/2000), 2000.
- ⁶ S. Zięba, *Religia a ekologia*, in: S. Zięba (ed.) *Konferencje ekologiczne, ekologia humanistyczna tom 4*, Lublin, KUL, 1995; S. Zięba, *Życie w aspekcie ekologicznym*, „Człowiek i Przyroda” nr 2, Lublin, KUL, 1995; S. Zięba, *W poszukiwaniu podstaw odpowiedzialności za przyrodę*, „Człowiek i Przyroda” nr 4, Lublin, EkoKUL, 1996; S. Zięba, *Natura i człowiek w ekologii humanistycznej*, Lublin, KUL, 1998; S. Zięba, *Historia myśli ekologicznej*, Lublin, KUL, 2004; S. Zięba, *Perspektywy ekologii człowieka*, Lublin, KUL, 2007; S. Zięba, Wróblewski Z. (ed.), *Ekologia a transformacje cywilizacyjne na przełomie wieków*, Lublin, Zakład Ekologii Człowiek KUL, 2000.
- ⁷ W. Tyburski, *Pojednać się z Ziemią. W kręgu zagadnień humanizmu ekologicznego*, Toruń, IPIR, 1993; W. Tyburski, *Ekologia i bioetyka*, Toruń, Wydawnictwo UMK, 1996; W. Tyburski, *Człowiek – środowisko przyrodnicze w świetle wybranych stanowisk filozoficznych i ekofilozoficznych*, „Paedagogia Christiana”. *Edukacja Ekologiczna* nr 2/28 (2011), Toruń, UMK, 2001, pp. 41-63.
- ⁸ A. Papuziński (ed.), *Wprowadzenie do filozoficznych problemów ekologii*, Bydgoszcz, Wydawnictwo Uczelniane Wyższej Szkoły Pedagogicznej w Bydgoszczy, 1999; A. Papuziński, (ed.), *Zrównoważony rozwój. Od utopii do praw człowieka*, Bydgoszcz, Oficyna Wydawnicza Branta, 2005.
- ⁹ Z. Hull, *Problemy filozofii i ekologii*, in: A. Papuziński (ed.), *Wprowadzenie do filozoficznych problemów ekologii*, Bydgoszcz, Wydawnictwo Uczelniane Wyższej Szkoły Pedagogicznej w Bydgoszczy, 1999, pp. 67-120; Z. Hull, W. Tulibacki (ed.), *Człowiek wobec świata*, Olsztyn, Wydawnictwo PTF Oddział w Olsztynie, 1996.
- ¹⁰ Z. Łepko, *Antropologia kryzysu ekologicznego*, Warszawa, Wydawnictwo Uniwersytetu Kardynała Stefana Wyszyńskiego, 2003.
- ¹¹ J. Łukomski, *Elements of ecology and ecoetics*, Kielce, Wydawnictwo Uczelniane Wszechnica Świętokrzyska, 2003, pp. 176-178; J. Łukomski, *Solidarność człowieka z przyrodą*, Radom, Radomskie Wydawnictwo Diecezjalne „AVE”, 1994; J. Łukomski, *Ekologia w gimnazjum, Przewodnik dla nauczycieli*, Kielce, Wydawnictwo JEDNOŚĆ, 2007.

Skolimowski's¹², W. Sztumski's, K. Waloszczyk's, K. Łastowski's¹³, S. Kozłowski's¹⁴, J. Jaron's.

It is also associated with theological sciences and ecotheology (M. Ozorowski, M. Wyrostkiewicz¹⁵). At the same time, the issue of pro-ecological education fits into the much broader context of scientific research referring to the issue of the relations: man – natural environment, especially in sociological research (E. Albińska¹⁶, T. Wierzbicki, P. T. Gliński, P. Matczak¹⁷, J. Wódz) as well as psychological research (K. Popielski¹⁸, A. Biela¹⁹, R. Kulik, A. Elias, K. Wódz)²⁰.

However, within the pedagogical approach the issue of pro-ecological education was discussed by: K. Chałas²¹, D. Cichy²², S. Dziekoński, L. Domka²³, K. Gąsecki, W. Hemmerling, A. Kalinowska, L. Kozuchowski, Z. Łomny, W. Sobczyk, L. Tuszyńska, M. Wolny, who pointed at the specificity of educational tasks, as well as the multiplicity of matters regarding human relations with the natural environment²⁴.

In particular, Helena Radlinska's (1879-1954) point of view must be presented. The scholar emphasised the role of school education that was particularly responsible for ecological education and ecology.

¹² H. Skolimowski, *Nadzieja matką mądrych. Eseje o ekologii*, Warszawa, Biblioteka Ery Ekologicznej TP Filozofii Ekologicznej, 1993; H. Skolimowski, *Filozofia żyjąca. Ekofilozofia jako drzewo życia*, Warszawa, Wydawnictwo Pusty Obłok, 1993.

¹³ K. Łastowski, *Ekologia a filozofia. Od ekologii jako nauki biologicznej do ekologii jako nauki humanistycznej*, in: A. Papuziński (ed.), *Wprowadzenie do filozoficznych problemów ekologii*, Bydgoszcz, Wydawnictwo Uczelniane Wyższej Szkoły Pedagogicznej w Bydgoszczy, 1999, pp. 51-56; K. Łastowski, M. Rafiński (ed.), *Idee ekologii w świadomości społecznej*, Poznań – Daszewice, SORUS, 1992, pp. 5-9.

¹⁴ S. Kozłowski, *Rio początek ery ekologicznej. Szczyt Ziemi*, Łódź, Akapit Press, 1993; S. Kozłowski, *W drodze do ekorozwoju*. Warszawa, Wydawnictwo Naukowe PWN, 1997.

¹⁵ M. Wyrostkiewicz, *Ekologia ludzka. Osoba i jej środowisko z perspektywy teologiczno-moralnej*, Lublin, Wydawnictwo KUL, 2007.

¹⁶ E. Albińska, *Człowiek w środowisku przyrodniczym i społecznym*, Lublin, Wydawnictwo KUL, 2005.

¹⁷ P. Matczak, *Problemy ekologiczne jako problemy społeczne*, Poznań, Wydawnictwo Naukowe Uniwersytetu im. Adama Mickiewicza, 2000.

¹⁸ K. Popielski, *Psychologia egzystencji wartości w życiu*, Lublin, Wydawnictwo KUL, 2008.

¹⁹ A. Biela, *Ochrona środowiska naturalnego jako problem psychologiczny*, Lublin, Wydawnictwo KUL, 1986.

²⁰ D. Kiełczewski, *Ekologia społeczna*, Białystok, Wydawnictwo Ekonomia i Środowisko, 2001, p. 10; J. B. Faliński, *Naukowe podstawy działań na rzecz ochrony przyrody i środowiska*, in: J. B. Faliński, A. Kalinowska, L. Korporowicz, F. Plit, *Nauka i ruchy społeczne w ochronie środowiska naturalnego. Podstawy Ochrony Środowiska*, Warszawa, Wydanie pierwsze, WSiP, 1994, z. 1, p. 25.

²¹ K. Chałas, *Szkoła wyższa a optymalizacja reformy edukacji*, in: Karpińska A. (ed.), *Edukacja w dialogu i reformie*, Białystok, Wydawnictwo Uniwersyteckie Trans Humana, 2002, pp. 325-337; K. Chałas, *Edukacja ekologiczna z doświadczeń szkoły podstawowej w Mielnie*, Lublin, Przedsiębiorstwo Wydawnicze Związku Nieświadomych, 1997.

²² D. Cichy (ed.), *Edukacja środowiskowa wzmocnieniem zrównoważonego rozwoju*, Instytut Badań Edukacyjnych, 2005; D. Cichy, *Szkoła wobec wyzwań edukacji biologicznej i środowiskowej w XXI wieku*, Warszawa, Instytut Badań Edukacyjnych, 2003.

²³ L. Domka, *Dialog z przyrodą w edukacji dla ekorozwoju*, Warszawa-Poznań, Wydawnictwo Naukowe PWN, 2001; L. Domka, *Education of elementary upbringing and basic teaching students for sustainable development*, „Kultur Ökologie” nr 1, 2003, pp. 23-25.

²⁴ T. Frąckowiak, *Panorama problemowa książki: „Człowiek, cywilizacja i krzyk okaleczonej ziemi”*, in: T. Frąckowiak (ed.), *Arytmia egzystencji społecznej a wychowanie*, Warszawa, Wydawnictwo Fundacja Innowacja i Wyższa Szkoła Społeczno-Ekonomiczna, 2001, p. 26.

Another researcher who connected the issues of pro-ecological education with human development against the background of natural (ecosystem, biosystem), social and cultural (social system)²⁵ processes is Ryszard Wroczyński (1909-1987).

Other social, pedagogues, especially Mikołaj Winiarski and Wiesław Theiss, also discussed the issues of environmental education.

The works written by K. Denka, K. Chałas, A. Maja or J. Łukomski focus on school education at its various levels.

A great variety of approaches to the issue of human beings has been observed since the 19th century: from German idealism, treating man as an absolute reason, to the formulation of specific sciences, especially humanities, naturalism and evolutionism. They have often resulted in simplified human concepts and, as a consequence, educational, upbringing concepts that are also reflected in pro-ecological education²⁶.

Pro-ecological education refers to a man in relation to whom a special value may be the indication of Pope Benedict XVI that "in order to educate, one must know who the human person is and know his nature" (CV 61)²⁷. Education always includes a defined and possible state, it stretches between reality and the ideal, and in this field of specific tension there is the human being himself, who is the principle and basis for implementing a specific concept of value through education²⁸.

Unfortunately, there is a significant lack of such a perspective of understanding education in many contemporary approaches, in which we can notice the interest of educators in only one of its dimensions, e.g. biological, psychological, social or only cultural, not to mention the spiritual dimension – namely *human spirituality*. Then, education is limited, either to innate (genetic) factors, or to external influences and stimuli of the surrounding environment – falling into the threat of functioning in the aforementioned two-factor approaches to the theory of education.

It would be an overlook of this revolution (called the *revolution of spirit* brought by Christianity) and would ignore this upbringing factor, which is the *personal factor – the spiritual one*²⁹.

The aim of encompassing all these elements, without falling into unidimensional approach is to link pro-ecological education with the perspective of general pedagogy in our present work. In this perspective, we want to search for the sense of pro-ecological education and its values and to reflect the directions of its transformation. Such an intention requires taking into account not only the achievements of ecology, but also health education and pro-ecological education.

²⁵ W. Theiss, *Pedagogika społeczna w koncepcji Ryszarda Wroczyńskiego (1909-1987)*, in: S. Kawula, *Studia z pedagogiki społecznej*, Olsztyn, WSP, 1996, p. 303.

²⁶ M. Nowak, *Czy wychowanie bez celu?*, „Paedagogia Christiana”, 1/29 (2012), pp. 60-66.

²⁷ Benedykt XVI, *Encyklika "Caritas in Veritate" – o integralnym rozwoju ludzkim w miłości i prawdzie*, Kraków, 2009, CV, nr 61.

²⁸ M. Nowak, *Czy wychowanie bez celu?*, „Paedagogia Christiana”, 1/29 (2012), p. 66.

²⁹ Ibid. p. 66; M. Nowak, *Osoba i wartość w pedagogice ogólnej*, in: M. Nowak, P. Magier, I. Szewczak (ed.) *Antropologiczna pedagogika ogólna*, Lublin, Wydawnictwo Gaudium, 2010, pp. 41-55.

Together, they form a view of those disciplines in cooperation with which ecological education is conducted³⁰.

Life, history and the world can be used as tools to educate man to values, to harmony, to develop feelings, for virtues, thereby pointing to the need to discover and enrich them through them and in relationships with others, his humanity by dominating the circumstances, tendencies, dispositions so that the harmony of relations between feelings, values and virtues becomes present in his life, his history and his world³¹.

In fact, a person will not become a discoverer of values if he is not firstly sensitive to them or if he does not strive to assimilate them in a continuous effort of upbringing, formation or education³². First, however, the experience of oneself and one's own identity enables the acquisition of values in the process of their reception, as well as discovering the external ideal and making it an internal form of oneself, which is described by S. Kunowski as a process of *introception of values*³³.

On the basis of the above reasons, pro-ecological education should be characterized by special openness to the man himself if he wants to help him solve his problems. Thus, in openness to humans, we want to consider the process of pro-ecological education in its complexity, integrity, openness and dynamics³⁴.

Pro-ecological education requires systemic solutions and it cannot be treated as temporary, collective, single activity, or as a cluster of methods or randomly chosen techniques. It also requires an appropriate program and cooperation of the entire class or academic community, as well as specialist teacher's preparation at all levels of education. Constructing and implementing an effective educational system in the field of education is a constant effort of the subjects of this education. This effort is becoming more and more necessary today. In this regard, it is worth recalling the words of Pope Francis, who, referring to the celebration of World Environment Day, promoted by the United Nations, during a general audience in the Vatican on June 5, 2013, appealed not only for respect for the natural environment, but above all for human ecology because the human person himself is at risk today.

This kind of care for the preservation and protection of the natural environment – in a religious context has already been recorded in the *Bible*, in the book of *Genesis*, where in the description of the creation of the world and man, we also find indications of human responsibility for the world. Not surprisingly, it is from the perspective of religion, especially through the teaching of recent popes, that we hear messages touching the problem of "human ecology" as closely related to "environmental ecology".

We are experiencing a crisis of respect for the natural environment of man, which is currently being analyzed from many different perspectives and seems

³⁰ M. Nowak, *Pedagogiczny profil nauk o wychowaniu. Studium z odniesieniami do pedagogiki pielęgniarstwa*, Lublin, Wydawnictwo KUL, 2012, p. 198; T. Hejnicka-Bezwińska, *Pedagogika ogólna*, Warszawa, Wydawnictwo Akademickie i Profesjonalne, 2008.

³¹ M. Nowak, *Czy wychowanie bez celu?*, „Paedagogia Christiana” 1/29 (2012), pp. 56-57.

³² Ibid. p. 60.

³³ Ibid. p. 60; S. Kunowski, *Wartości w procesie wychowania*, Kraków, Oficyna Wydawnicza „Impuls”, 2003, p. 17.

³⁴ M. Nowak, *Pedagogiczny profil nauk o wychowaniu*, p. 178.

to reflect most clearly visibly in man himself. Due to the fact that the causes of this crisis seem to be deeply rooted and they do not concern only the issues of economics or politics, but above all ethics and anthropology, taking remedial efforts must be associated not only with abandoning extreme pursuit of profit and consumption (often referred to as the first signs "culture of rejection"), but also the pursuit to feel human life, a person as basic values that must be respected and protected, opposed to a culture of waste and rejection, in favor of promoting a culture of solidarity and meeting³⁵.

It must be acknowledged that the State Higher Vocation Schools Schools (PWSZ), which were established in Poland after 1996 as a new type of university, give students the possibility to gain B.A. degree³⁶. In addition, these educational institutions can significantly contribute to educating and preparing students for responsible entry into the world of professional career, including achieving harmony with the surrounding world and with oneself.

Such a pursuit was perceived as leading criteria a in the selection of these schools for our analysis.

The given issues were first examined by analysing the collected literature of the subject, orienting the analysis on the basic problem of the publication, which was formulated in the form of the question: What values of pro-ecological education are preferred by students of the State Vocational Schools in Poland and what are the challenges in regard to methods currently implemented in conducting pro-ecological education?

In this work, the method of both analysis and synthesis was used to analyze the literature of the subject as well as research results. In connection with the conducted own research, research methods were used, which will be described more precisely in the methodological part of this work (chapter IV).

The theoretical structure of the work as well as the fulfillment if its goals were undertaken on the basis of both the analysis and synthesis of the collected literature of the subject. Moreover, the analysis of existing official documents, such as: the Strategy of Ecological Education, Ecological Policy of Poland or the study of educational standards and study programs implemented and approved at the PWSZ in Poland turned out to be helpful.

However, the basic goal of the current publication was to recognise both the scope and manner of understanding and conveying the value of pro-ecological education at the PWSZ in Poland. Therefore, this publication is of theoretical-research nature and, apart from the theoretical part, it also includes a methodological and empirical part (with the analysis of the results of own empirical research), deepening the analyses conducted in the theoretical part³⁷.

³⁵ <http://www.swietostworzenia.pl/2-aktualne/352-papiez-na-swiatowy-dzien-ochrony-srodowiska-ekologia-ludzka-i-ekologia-srodowiska-ida-w-parze>; <http://www.niedziela.pl/arttykul/5121/Papiez-Franciszek-wzywa-do-poszanowania>, downloaded on 05th June 2013.

³⁶ *Ustawa z dnia 26 czerwca 1997 r. o wyższych szkołach zawodowych (Dz. U. z 1997 r. Nr 96, poz. 590).*

³⁷ M. Nowak, *Teorie i koncepcje wychowania*, Warszawa, Wydawnictwo Akademickie i Profesjonalne, 2008, p. 44.

In the light of the analysis of the collected literature of the subject (in the theoretical part), and then based on the analysis of the collected opinions expressed by students of the State Higher Vocational Schools in Poland, about the values and methods of pro-ecological education, we want to present distinctively appreciated pro-ecological values and indicate their content, sources and methods of conveyance. In this way, we want to determine their conditions, factors that affect the understanding and occurrence of the value of pro-ecological education among students of PWSZ in Poland, during the first-cycle level of education.

When it comes to the theoretical part, the present publication contains three chapters in regard to the analysis of problems of values and methods of pro-ecological education that are connected with educational tasks of the university, particularly focused on the axiology of pro-ecological education.

Chapter I, entitled: *Values and methods of pro-ecological education in the literature of the subject*, discusses the general characteristics of pro-ecological education in the historical aspect, pointing to its genesis and development. In this chapter we present the issues of values and methods of pro-ecological education in individual historical periods and in selected contemporary pedagogical faculties, as well as in Catholic Social Science. At the same time, we introduce basic problems related to the axiology of pro-ecological education and methods of introducing these values in Poland, and then we attempt to determine the importance of pro-ecological education in human life and community having explained the basic concepts in the field of the discussed issues.

In chapter II, entitled: *The process of pro-ecological education*, we present the basics of pro-ecological education (anthropological, ontological, axiological) as well as its biological, psychological, socio-cultural and spiritual dimension. Therefore, in this chapter we present the concept of man and his role in creating the theory of pro-ecological education, as well as the axiology of pro-ecological education. In addition, the analysis of attitudes towards pro-ecological values and an attempt to indicate ways of deriving the goals and principles of this education are discussed. Moreover, we also point to the theoretical proposal of pro-ecological education which is understood as education approaching towards values and taking into account the assumptions of Christian personalism.

Chapter III entitled: *Education towards pro-ecological values and its implementation in vocational colleges in Poland*, focused mainly on the analysis of both pro-ecological education and training process in vocational colleges. We present the existing conditions of the pro-ecological education and training process at the PWSZ, its status and place in the education program. In the present chapter the standards and educational programs are analysed, as well as the content of pro-ecological education at the PWSZ in Poland, which form the basis for the organization of our own research. Most importantly, we undertake the analysis of the value of the ecosystem, the biosystem, the social system and the methodology of pro-ecological education at the PWSZ. Finally, we also study the pro-ecological lifestyle and its subjects attending the PWSZ in Poland.

The second part of the publication – called methodological, includes Chapter IV, entitled: *Methodology of own empirical research*, presents the methodological

procedure applied in our own empirical research, along with a description of the research area and its purpose, formulation of problems and hypotheses, methods, techniques and tools, description of the research sample and organization and the course of empirical own research.

The third part of the publication – called empirical, includes Chapter V, entitled: *Correlation of preferred pro-ecological values with the methods of pro-ecological education of PWSZ students in Poland (in the light of own research)*, presents a diagnosis of opinions regarding the values and methods of pro-ecological education, perception of the value of this education and their presence among students at the State Higher Vocational Schools in Poland. We also present correlations of preferred pro-ecological values in not only school, local, family but also in mass media environments. Furthermore, we discuss the impact of the natural environment on students' opinions regarding pro-ecological values, which will also reflect the basic differences in the understanding of the value of pro-ecological education by students and the influence of the value of pro-ecological education on students' lifestyles.

Finally, we summarise the results of our own empirical research, and come to conclusions and postulates connected with passing on pro-ecological values as well as shaping pro-ecological attitudes (pro-ecological lifestyle), directed at foster children, parents and educators.

Chapter 1

Values and methods of pro-ecological education in the literature of the subject

The problem of values, existing as long as the human exists, has been analyzed since the end of the 19th century as part of a philosophical discipline called axiology. In pedagogy, it appears as an axiology of education. In relation to the raised issue of pro-ecological education, we can talk about the axiology of pro-ecological education, focused, in particular, on the issues of its goals and values, status of values as well as related methods of evaluation and preferences³⁸.

However, this requires to present and explain basic definitions of the publication.

1.1. Explanation of basic definitions

In the issues related to the values and methods of ecological education, we can encounter a number of basic and specialized concepts that require explanation. We make these concepts the basic concepts of this publication.

The basic concepts presented in this work, which will be explained, include: 1) *ecology*, 2) *axiology – axiology of pro-ecological education*, 3) *values – pro-ecological values*, 4) *education – pro-ecological education with methods*, 5) *environmental education with methods*, 6) *pro-ecological lifestyle*. These categories will be explained in the following order:

Ad. 1) *ecology*. All the meanings of the word “ecology” and its references, although they are really varied, focus on a certain problem field and common concepts close to ecology as the discipline of knowledge. The term “ecology” appeared for the first time in biology – it was first used by Ernst Haeckel (1834-1919) in 1869. He defined ecology as a discipline of knowledge, the subject of which is the overall interaction between organisms and their environment, both animate

³⁸ M. Nowak, *Teorie i koncepcje wychowania*, p. 499.

and inanimate³⁹. The term comes from the Greek words: oikos – meaning: home, place of life and logos – word, science; so literally, ecology means a discipline of knowledge dealing with the place of living of organisms – the environment⁴⁰.

In regard to the category of “ecology”, we must also refer to the concept of environment and show its constituent elements. In a general approach, the word “environment” means all the systems in which the process of life takes place and where a human being exists (ecosystem, biosystem and sociosystem). In addition, by the word “ecology” we understand all these relations and relationships that arise in the human’s environment, which we can also defined as Ecosystem Ecology, Biosystem Ecology, and Social System Ecology.

Ecosystem ecology researches its following elements⁴¹:

- living organisms (biosystem) – biotic factors;
- human being with the whole anthroposphere (sociosystem);
- abiotic factors – atmosphere, hydrosphere, lithosphere, and others.

In turn, the ecology of the biosystem (biosphere) takes into consideration a specific system of living organisms, which functioning guarantees harmonious coexistence of man and nature. The complex life processes, which man and his environment are subjected to, allow for a characteristic ability to reconstruct. On the basis of ecologists’ research, these processes occur at various levels of biological life and they create natural environmental subsystems in which each higher system contains lower level elements. There are also interrelationships and influences between levels that determine system integration.

As a result, each subsystem is a functional whole, but it is more than the sum of its components. The hierarchical structure of the organization of life on Earth is the law of nature. It is of fundamental importance in controlling ecological processes. Analyzing the biosphere according to these subsystems, in their natural arrangement, makes it easier to understand the complexity of the interaction of the biosphere system – with other systems (sociosphere and technosphere), and also allows forecasting the effects of individual activities on a different scale.

However, the sociosystem ecology deals with the analysis of the society system in relation to the life environment. The attitude of the society towards the environment is shaped, among others, under the influence of existing cultural values and resulting from them ethical norms, socio-philosophical mainstream, including religious ones appreciated by the society, or socio-philosophical ideas often propagated by individual political groups, or mass-media dominating today⁴².

³⁹ Ch. J. Krebs, *Ekologia. Eksperymentalna analiza rozmieszczenia i liczebności*, Warszawa, PWN, 2001, p. 7.

⁴⁰ P. Trojan, *Ekologia ogólna*, Warszawa, PWN, 1977, p. 11; E. Odum, *Podstawy ekologii*, Warszawa, PWRiL, 1982; Ch. J. Krebs, *Ekologia. Eksperymentalna analiza rozmieszczenia i liczebności*, Warszawa, PWN, 2001.

⁴¹ A. M. Mannion, *Zmiany środowiska Ziemi. Historia środowiska przyrodniczego i kulturowego*, Warszawa, PWN, 2001, pp. 15-17.

⁴² More about the impact of consumerism according to E. Pieszak, *Człowiek i społeczeństwo konsumpcyjne. Dyskursy*, Poznań Wydawnictwo Naukowe UAM, 2013; also on the impact of globalization in: J. W. Pietrewicz, *Ochrona środowiska w warunkach procesów globalizacji*, Warszawa, Oficyna Wydawnicza Szkoła Główna Handlowa w Warszawie, 2011; and more broadly on philosophical and legal, socio-economic and political aspects of sustainable development

The 21st century is manifested by the rapid pace of civilization changes, as well as social ones, which has a significant impact on the lifestyle of modern man. At the same time, the loss of values aimed at making human's existence perfect becomes noticeable. When it comes to human's lifestyle the loss of human is observed. Almost all areas of life are dominated by the trend of satisfying, above all, only the vital needs of man, where "to be" is to produce and "to live" is to have⁴³.

In the era of rapid civilization changes, the integration of humanistic, natural and technical knowledge, including ecological knowledge, becomes significant in the perception of the ecology of the sociosystem. Ecological knowledge can also be connected with ecological imagination – that is, a kind of skill, the ability to predict the effects of taken actions from an ecological perspective. Additionally, it involves the ability to see holistically and capture relations between individuals or organized (social) human activity and natural processes. Sometimes, the term "ecological consciousness" is also used but now after the Marxist's period, this category is too instrumental and would require great caution with its use.

Ecology is the field of science that studies the mutual relations between organisms and their life environment⁴⁴. Therefore, ecology deals with the study of relations and interrelationships between living organisms. Because each organism is an element of the environment in relation to other organisms, we can distinguish: *human ecology* – dealing with the study of the relationship between man and the artificial environment he created and the natural environment; *social ecology* – studying the relations and connections occurring in the relationship between the social system (sociosystem) and the natural system (ecosystem) as well as modeling these relationships in order to achieve and strengthen the balance between these categories of systems that create the biosystem⁴⁵.

Social ecology, studies and evaluates current and potential forms of human's activity in the natural environment and attitudes towards it, recommending such behaviours that are consistent with the properties of natural world as well as attitudes towards the development of human civilization⁴⁶.

Nowadays, ecology makes it easier to recognise the imbalance of the entire biosphere (biosystem), without excluding the sociosystem. At the same time, it

edited by A. Papużński, *Zrównoważony rozwój. Od utopii do praw człowieka*, Bydgoszcz, Oficyna Wydawnicza Branta, 2005.

⁴³ M. Wyrostkiewicz, *Ekologia ludzka. Osoba i jej środowisko z perspektywy teologiczno-moralnej*, Lublin, Wydawnictwo KUL, 2007; pp. 59-106.

⁴⁴ Ch. J. Krebs, *Ekologia. Eksperymentalna analiza rozmieszczenia i liczebności*, Warszawa, PWN, 2001, p. 7; E. Pyłka-Gutowska, *Ekologia z ochroną środowiska. Przewodnik*, Warszawa, Wydawnictwo Oświata, 1996, pp. 240-255.

⁴⁵ D. Kielczewski, *Ekologia społeczna*, Białystok, Wydawnictwo Ekonomia i Środowisko, 2001; W. Piwowarski (ed.), *Słownik Katolickiej Nauki Społecznej*, Warszawa, Wydawnictwo Misjonarzy Klaretynów „PALAMBRA”, 1993, p. 45; B. Prandecka (ed.), *Interdyscyplinarne podstawy ochrony środowiska przyrodniczego*, Wrocław, Ossolineum, 1993.

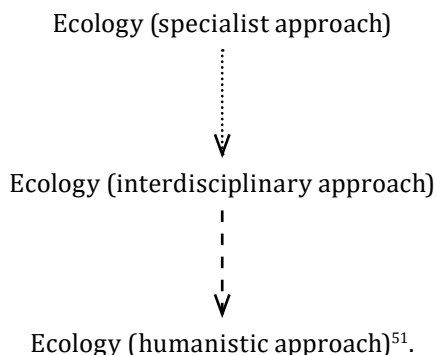
⁴⁶ D. Kielczewski, *Ekologia społeczna*, Białystok, Wydawnictwo Ekonomia i Środowisko, 2001; W. Piwowarski (ed.), *Słownik Katolickiej Nauki Społecznej*, Warszawa, Wydawnictwo Misjonarzy Klaretynów „PALAMBRA”, 1993, p. 45.

plays a significant role in environmental protection⁴⁷, which can be achieved in different ways: *shallow (moderate) ecology* and *deep ecology*.

Deep ecology, in contrast to *shallow ecology*, does not focus only on protective or remedial measures limiting human interference in natural processes, but expresses itself in the pursuit of harmonious coexistence and joint development of man with the world around him⁴⁸. Deep ecology aims to shape the pro-ecological attitude (pro-ecological lifestyle), we will refer to in this publication as a lifestyle ecology. Therefore, some authors consider ecology in this context to be an imponderability of education and social education⁴⁹.

Consequently, the main attention of modern ecology has focused on man and his living environment, despite the fact that the subject of his inquiries as a natural science, are the interdependencies between all organisms and their living environment⁵⁰.

Following Krzysztof Kostowski, we present wider and wider ranges of understanding of ecology as well as a scheme of their interrelationships



Explanations:

- 1)> – connection with other fields of natural science;
- 2) - - - -> – connection with fields of humanistic knowledge.

⁴⁷ W. Piwowski (ed.), *Słownik Katolickiej Nauki Społecznej*, p. 45.

⁴⁸ M. Wolny, *Pedagogiczne aspekty ekologii i ochrony środowiska*, Olsztyn, UWM, 2002, p. 16; A. Gromkowska-Melosik, *Pedagogika ekologiczna*, in: Z. Kwieciński, B. Śliwerski (ed.), *Pedagogika*, tom 1, Warszawa, PWN, 2003, pp. 428-433.; S. Jaromi OFM Conv., *Ecologia humana – chrześcijańska odpowiedź na kryzys ekologiczny*, Kraków, Wydawnictwo Franciszkanów „Bratni Zew”, 2004, pp. 166-173.

⁴⁹ Z. Endler, J. Michalczyk, *O pojęciu środowiska – rozważania terminologiczne*, Olsztyn, ZWŁOP, 1991, p. 6.

⁵⁰ Ch. J. Krebs, *Ekologia. Eksperymentalna analiza rozmieszczenia i liczebności*, Warszawa, PWN, 2001, p. 7.

⁵¹ K. Łastowski, *Ekologia a filozofia. Od ekologii jako nauki biologicznej do ekologii jako nauki humanistycznej*, in: A. Papuziński (ed.), *Wprowadzenie do filozoficznych problemów ekologii*, Bydgoszcz, Wydawnictwo Uczelniane Wyższej Szkoły Pedagogicznej w Bydgoszczy, 1999, p. 51.

The first relation transfers elements of specialist ecological knowledge into the broader understanding of ecology, in which it is necessary to explain connections with other scientific disciplines, such as environmental protection.

However, the second relation transfers selected elements of interdisciplinary ecological knowledge into the area of humanist-oriented understanding of ecology, in which elements of ecological knowledge will be confronted with elements of axiology⁵².

According to K. Łastowski, relation that connect individual understandings of ecology set a new field of ecological content – the fourth understanding of ecology. The vertical “cross-section” of these understandings of ecology is determined by the cross-domain understanding of ecology, and the meaning of this term is similar to the expression “transdisciplinary”, which is used by G. Bateson⁵³. The essence of such understanding is the specific integration of content (through the “cross-section” of the three previous concepts) of the fourth understanding of ecology. It assumes that the elements of three different approaches to ecology are properly combined and put into one integrated field of knowledge. The fourth understanding of ecology, proposed by Łastowski, emphasizes that the educational and ideological shaping of the human individual is aimed at forming the value system and pro-ecological attitude. There is no need to justify and explain the reason for taking this task⁵⁴. Almost all of us encounter circumstances that are in favour of including factors that respect the primary values of our lives in our attitude to the social and natural environment as well as to ourselves⁵⁵.

Therefore, speaking and writing about “ecology”, one can use this name in a narrow – scientific meaning, or in a broad sense – then we put our attention to everything that relates to the natural environment and its connections and interaction with man in a personal as well as social dimension⁵⁶.

*The Dictionary of Catholic Social Science*⁵⁷ defines the following categories: ecology – nature – environmental protection while explaining the term “ecology”. This fact seems to point to the same area of cognitive penetration, despite different approaches. Consequently, it deals with solidarity between people and a new attitude towards nature resulting from this relation⁵⁸.

Ecology, pointing at the basic problems for human existence, becomes a meeting place for many previously existing, loosely connected scientific fields

⁵² Ibid. p. 51.

⁵³ G. Bateson, *Umysł i przyroda. Jedność konieczna*, Warszawa, PIW, 1996.

⁵⁴ K. Łastowski, *Ekologia a filozofia. Od ekologii jako nauki biologicznej do ekologii jako nauki humanistycznej*, p. 52; K. Łastowski, M. Rafiński (ed.), *Idee ekologii w świadomości społecznej*, Poznań – Daszewice, Sorus, 1992, pp. 5-9.

⁵⁵ K. Łastowski, *Ekologia a filozofia. Od ekologii jako nauki biologicznej do ekologii jako nauki humanistycznej*, p. 52.

⁵⁶ Z. Hull, *Problemy filozofii ekologii*, in: A. Papużyński (ed.), *Wprowadzenie do filozoficznych problemów ekologii*, pp. 67-68.

⁵⁷ W. Piwowarski (ed.), *Słownik Katolickiej Nauki Społecznej*, Warszawa, Wydawnictwo Misjonarzy Klaretynów „PALAMBRA”, 1993.

⁵⁸ W. Piwowarski (ed.), *Słownik Katolickiej Nauki Społecznej*, p. 46.

and disciplines. Therefore, ecology is more than just a new branch of knowledge, it is "science without borders"⁵⁹.

Ecology can be considered as a multidisciplinary and interdisciplinary science about man and his life environment, or rather about human relations with the surrounding environment. Teaching ecology understood in this way is an important task to be carried out as part of pro-ecological education, because it requires not only the transfer of humanistic, natural, economic and technical knowledge⁶⁰, but above all, shaping the system of pro-ecological values and a new pro-ecological lifestyle⁶¹.

Even saint Francis of Assisi (1181-1226) was in favour of pro-ecological attitude. He In the thirteenth century he encouraged other to manifest the attitude of poverty, respect, love and admiration for nature. His attitude can become a peculiar model of overcoming dangerous moral illness in ecology, with its symptoms – hedonism and consumerism⁶².

The attitude of Franciscan's poverty, namely the useless view of nature, as well as the charism of love of nature, as a value, are cultivated by Franciscans, who organize symposia and scientific publications as well as support ecological movements, in particular the Ecological Movement of St. Francis of Assisi (REFA);

Ad.2) *axiology* (greek. *axia* – worth something, *logos* – science) is a philosophical discipline dealing with values. More easily it can be defined as the science of values. Axiology deals with the study of values, their sources and hierarchies, as well as their arrangement. There are also specific axiologies that are related to the areas of interest of various sciences. Their role is to consider the values determined by the research areas of individual disciplines, among which we can also point to pedagogical axiology, which is usually positioned as a part of general pedagogy and which focuses on educational values⁶³.

On the basis of educational sciences, axiology resulted in the emergence of two disciplines: educational axiology and educational teleology. Axiology of pro-ecological education, focused, in particular, on the issue of the goals of pro-ecological education, indicates pro-ecological values, analyzes their ontological status and preferences of values⁶⁴. On the other hand, teleology of education defines the principles of establishing ideals and goals of education. It examines

⁵⁹ E. Kośmicki, *Uwagi o genezie świadomości ekologicznej*, in: K. Łastowski, M. Rafiński (ed.), *Idee ekologii w świadomości społecznej*, p. 50.

⁶⁰ A. Misiółek (ed.), *Kształtowanie świadomości ekologicznej i edukacja na rzecz zrównoważonego rozwoju i ochrony środowiska*, *Materiały V Konferencji naukowej Śląskie Seminarium Ochrony Środowiska*, Bytom, Wyższa Szkoła Ekonomii i Administracji w Bytomiu, 2004, p. 9.

⁶¹ E. Bielecka, *Nowe spojrzenie na miejsce i funkcję pedagogiki w ochronie i kształtowaniu środowiska*, in: *Przemiany w teorii i praktyce pedagogicznej*, „Zeszyty Naukowe”. Białystok, Filia UW w Białymstoku, t. 25, 1992, z. 72, p. 40.

⁶² Jan Paweł II, *Orędzie na XXIII Światowy Dzień Pokoju 1 stycznia 1990 roku*, in: Z. Świerczek, *Ekologia – Kościół i św. Franciszek*, Kraków, Wyższe Seminarium Duchowne OO. Franciszkanów, 1990, p. 194.

⁶³ W. Okoń, *Słownik pedagogiczny*, p. 18.

⁶⁴ M. Nowak, *Teorie i koncepcje wychowania*, p. 499.

their interdependencies, the circumstances of their occurrence and the conditions for putting them into practice⁶⁵.

All in all, each discipline devoted to education, due to its purpose-oriented orientation, determined by the formal subject of pedagogical research, faces the issue of values and goals⁶⁶.

We want to examine the axiology of education both in the traditional approach of education to value, as well as, taking into account current challenges and the need for systemic, dynamic and open approaches – in its anthropological dimension. It is best reflected by the task approach, associated with pointing to the specific tasks set for pupils as part of pro-ecological education⁶⁷.

Therefore, axiology of education deals with the analysis of sources of values in education, establishing their hierarchy, their content analysis and justification. In its focus on values, axiology also tackles the issue of educational goals⁶⁸. Educational goals as well as values are necessary for man in order to give him the possibilities of becoming more fulfilled. They meet these requirements if they are open to humans and have their foundations in anthropology. Therefore, they are characterized by a pedagogical view of the *person* and an attempt to formulate objective norms⁶⁹;

Ad. 3) *Values – pro-ecological values*. Values are an object “which we cannot pass too quickly” and which cannot be interpreted in one aspect. They should be interdisciplinary and placed in an anthropological context⁷⁰.

Values are closely related to the person who realizes and fulfills them in itself and in relation to the social and natural environment. Man constantly transcends himself and goes beyond himself, always towards and always for the realization of values. Man reflects its axiological interior through external beauty. Every person in relation to the social and natural environment is guided by specific values. We can feel, interiorize, realize or experience them. Values determine our attitude to the world around us⁷¹.

Man learns the values when he experiences them, when he meets them and responds to them with feelings, acts of will, attitude and behaviour. Man consciously accepts and learns the values through experiencing them⁷², he is guided by them in his action. Values determine the directions of man's functioning in real life⁷³.

We can often encounter attempts to determine the hierarchy of values combined with their hierarchical arrangement. Therefore, there are vital values (health), artistic (beauty, order), moral (bravery) and finally spiritual.

⁶⁵ M. Nowak, *Pedagogiczny profil nauk o wychowaniu*, p. 395.

⁶⁶ Ibid. pp. 393-394.

⁶⁷ Ibid. pp. 393-394.

⁶⁸ M. Nowak, *Teorie i koncepcje wychowania*, pp. 346, 499.

⁶⁹ Ibid. p. 367.

⁷⁰ M. Nowak, *Podstawy pedagogiki otwartej. Ujęcie dynamiczne w inspiracji chrześcijańskiej*, Lublin, Redakcja Wydawnictw KUL, 2001, p. 383.

⁷¹ A. Molesztak, *Godność jako fundament rozwiązywania dylematów moralnych*, in: K. Kalka, A. Papuziński (ed.), *Etyka wobec współczesnych dylematów*, Bydgoszcz, UKW, 2006, pp. 45-46.

⁷² A. Siemianowski, *Człowiek a świat wartości*, Gniezno, Gaudentinum, 1993, p. 16.

⁷³ A. Molesztak, *Godność jako fundament rozwiązywania dylematów moralnych*, pp. 45-46.

We want to introduce here one of the most known typologies of values – the hierarchy of Max Scheler's values, who distinguishes:

- hedonic values (including pleasure values);
- useful values (including utilitarian and civilization values);
- vital values (including health, happiness, contentment);
- spirit values (e.g. intellectual, aesthetic);
- religious values (sacred)⁷⁴.

These values do not relate to the very fact of existence, but to the nature of individual categories of entities. Moral values, for example, relate only to man. In this regard, it should be emphasized that in the scope of the philosophy of being, the theory of reality itself is more basic than the theory of value. The approach to reality and, therefore, being in its constitutive elements is more primitive within this scope than the approach in matching them to intentional acts of the human psyche⁷⁵.

It is generally observed that the theory of values assumes the theory of being, and ethical values are associated with the philosophical concept of man⁷⁶.

In the theory of cognition (Immanuel Kant (1724-1804), Edmund Husserl (1859-1938), Max Scheler (1874-1928)) values are connected with the field of obligation but the order of being and the order of values are separated. According to this distinction, Kant speaks of the field of existence (*Sein*) and the field of obligation (*Sollen*), which then he associates with the concept of values. The latter field constitutes the correlation of the act of will. The highest correlation of this will is the human being, as the "measure" of everything (the norm also defined by Kant as the "personalistic norm"), which concentrates mainly on the highest moral values⁷⁷.

E. Husserl, among others, referred to Kant's concept. According to him, emotional acts possess the content referring to intentional objects. In his opinion, feelings, like intellectual acts, can transcend beyond subjectivity. Values, on the other hand, constitute the universe of objects what in its existence is not conditioned by the individual psychological experience of man (axiological objectivity). Another representative of this mainstream of thinking, M. Scheler, made a distinction between "value" and "good". He thinks that "good is what has value and is not the same as what is the value of the thing itself"⁷⁸.

According to Scheler, values are ideal qualities, which are originally given in emotional acts. These acts capture mentioned values regardless of sensual experience. By distinguishing four spheres of human existence, Scheler believes that feelings, in case of the value, constitute a fundamental and irreplaceable sphere, which is separate from both the sphere of reason and the will dependent on feelings⁷⁹.

⁷⁴ M. Nowak, *Pedagogiczny profil nauk o wychowaniu*, p. 399; M. Scheler, *Pisma z antropologii filozoficznej i teorii wiedzy*, Warszawa, PWN, 1987, pp. 42-43.

⁷⁵ A. M. Krąpiec, *Metafizyka*, Wydanie 2, Lublin, TN KUL, 1978, p. 217.

⁷⁶ J. Łukomski, *Elementy ekologii i ekoetyki*, Kielce, Wszechnica Świętokrzyska, 2003, p. 176.

⁷⁷ A. M. Krąpiec, *Metafizyka*, p. 218.

⁷⁸ Ibid. pp. 218-219.

⁷⁹ A. Stępień, *Z problematyki doświadczenia wartości*, „Zeszyty Naukowe KUL” 23, 1980, nr 1, p. 36.

Nowadays, in times of crisis of values, people simplify the understanding of values, reducing them to the economic dimension or simply to their efficiency. Often, the attention of contemporary people focuses primarily on hedonistic, useful and vital values.

In case of the possibilities of learning values, there are different opinion and beliefs what leads to the disputes: naturalism and anti-naturalism, cognitionism and anti-evolutionism⁸⁰.

In ancient times and the Middle Ages, the position of cognitivism prevailed. However, in modern times, the attitude was "rationalized". It was thought that every value is revealed or constituted thanks to emotional and desirable activity, and the rationalization of value or our knowledge about values is something secondary to non-rational contact with values (brentanists, phenomenologists)⁸¹.

The presented positions are also reflected in the approach to ecological values and have their implications within the field of *eco-ethics*⁸².

Anna Marek-Bieniasz, referring to the concepts of both Nicolai Hartmann (1882-1950) and Władysław Stróżewski⁸³, considers the problem of ecological values on the basis of anti-cognitive mainstream and claims that nature is an intrinsic value which constantly undergoes the processes of improvement. It has intrinsic value, but "it cannot be said that it is a value itself. "There is no such a thing as value – nature, but there are values that we define as natural (ecological)"⁸⁴. Maximizing these natural values is the goal of ethical nature protection, which is the good value of all beings. "Moral values, the implementation of which contributes to the concretization in the world of natural values, are called ethical ecological values"⁸⁵. The latter constitute: respect for life and nature, responsibility for the condition of nature (common good of humankind) and asceticism in the field of consumption of Earth's resources⁸⁶.

A different attitude is presented by Krystyna Najder-Stefaniak⁸⁷, who, referring to the urgent matter, which is the need to change mentality and attitudes, the need for metanoia, refers to transcendental values. She writes about three "human attitudes to reality". They mean: 1 / cognitive attitude that directs the human mind towards the truth, 2 / moral attitude, which is expressed in the pursuit of achieving good, and 3 / aesthetic attitude, which allows to approach to beauty. According to her: "It is useful that man be fairly evenly distributed in all the spaces of the Platonic triad"⁸⁸.

⁸⁰ Ibid. p. 34.

⁸¹ J. Łukomski, *Elementy ekologii i ekoetyki*, Kielce, Wszechnica Świętokrzyska, 2003, p. 177.

⁸² J.M. Bocheński, *ABC tomizmu*, Londyn, „Veritas”, 1950, pp. 62-63.

⁸³ W. Stróżewski, *Istnienie i wartość*, Kraków, Znak, 1981; W. Stróżewski, *W kręgu wartości*, Kraków, Znak, 1992.

⁸⁴ A. Marek-Bieniasz, *Za i przeciw realizacji wartości ekologicznych*, in: J. M. Dołęga (ed.) i inni, *Ochrona środowiska społeczno-przyrodniczego w filozofii i teologii*, Warszawa, UKSW, 2001, pp. 282-284.

⁸⁵ Ibid. pp. 285-286.

⁸⁶ Ibid. pp. 286-287.

⁸⁷ K. Najder-Stefaniak, *Wprowadzenie do ekofilozofii*, Warszawa, Wydawnictwo SGGW, 2013.

⁸⁸ K. Najder-Stefaniak, *Edukacyjne implikacje platońskiej triady*, in: J.M. Dołęga (ed.), *Ochrona środowiska społeczno-przyrodniczego w filozofii i teologii*, pp. 210-215.

The respect for these meta-values will allow us to move from the possessive to pro-ecological attitude. It will also allow to re-evaluate the domain of "particular" values. According to the author: "In the perspective of the ecological paradigm, we learn to accept the relationship between understanding and faith, action and hope, contemplation and love. We also learn to see the interdependence of the sense of truth, goodness and beauty"⁸⁹.

Wiesław Sztumski, also discusses non-transcendental values, which are, among others vital and moral values. In connection with the fact that the consumerist value system ("to have") and the ecological system ("to be") are currently opposing each other. That is why, he emphasizes the need to shape the so-called *ecological conscience*. By this kind of conscience he understands moral sensitivity to harmful human activity in the natural and social environment, responsibility for the condition of the external and internal environment to enable the existence of people and other beings, and the ability to evaluate according to the following criterion: "All that serves to preserve our species is good and life"⁹⁰.

According to Sztumski, "at the basis of the <<ecological>> hierarchy of values lies environmental ethics, bioethics, oriented towards the value of the environment and life. It uses a specific criterion of good: good is what serves to preserve life (especially people) in terrestrial conditions (...) and which does not cause adverse changes in the natural, social and spiritual environment"⁹¹.

It is also worth paying attention to the eco-ethical views of Zbigniew Hull, expressed in the following sentences: "Ecological values, which simply can be defined as everything that serves to maintain the balance of ecosystems and the entire biosphere in nature, human behavior, social activities and all human products, should take a high place in the adopted hierarchy. They should fulfill the role of criteria regulating human relations with nature, a guideline of activities as well as encourage the attitude to create norms and rules of conduct"⁹².

In regard to Max Scheler's anthropology and theory of values, in ecological education man is considered as not only a natural being, but even more as a spiritual, ethical and axiological being what makes us different from other living organisms. The uniqueness of *man's place in space* (as Scheler called it) is expressed in experiencing and realizing the values, especially spiritual and moral values of man as a spiritual being. Władysław Szewczyk⁹³ shared this opinion, indicating that man exceeds beyond "so-to-be" animals, touching the essence of things, touching values beyond and above him.

At this point, it is worth pointing out that the issue of conscience (also ecological) undergoes unique changes in the life of believing Christians, who in this matter associate their lives with evangelical values (faith, hope and love). We should pursue these values through a true attitude of love that does not step back

⁸⁹ Ibid. p. 218.

⁹⁰ W. Sztumski, *Environmentalizm i edukacja proekologiczna*, in: J.M. Dołęga (ed.), *Ochrona środowiska społeczno-przyrodniczego w filozofii i teologii*, p. 180.

⁹¹ Ibid. p. 179.

⁹² L. Domka, *Dialog z przyrodą w edukacji dla ekorozwoju*, Warszawa-Poznań, PWN, 2001, p. 84.

⁹³ W. Szewczyk, *Kim jest człowiek, Zarys antropologii filozoficznej*, Tarnów, Biblos, 2009, pp. 107-109.

from sacrifice for our fellow human being and our highest values, including our own lives. Believers claim that acceptance of Christ's teaching is connected with opening up for the final goal of everything, including upbringing – understood as *eternal happiness*, known as the *Kingdom of God* (salvation)⁹⁴.

Summing up, the axiology of pro-ecological education focuses in this publication on assessing life, human health and his living environment. The foundations of this evaluation are found in axiology and the philosophy of being. In the scope of pro-ecological education, we point to human life and health as the highest values, but we do not consider them to be absolute values. Nevertheless, the socio-natural environment is treated as a common good⁹⁵.

Generally speaking, ecological values refer to everything what exists in nature, human behavior, his social and material activity as well as all human outcomes which are essential to maintain the balance between the social system and the biosystem and ecosystem⁹⁶. Values materialize in the broadly understood man's contacts with nature.

On the basis of the source literature⁹⁷, the following groups of pro-ecological values can be distinguished:

- *axiology of ecosystems*, undertaken by the shallow ecology characterized above, promoting the value of preserving human life and health as well as the environment as a common good. Within this framework, reference is made to: care for the preservation of species biodiversity, care for the protection of the atmosphere, lithosphere and hydrosphere, saving in the management of nature resources⁹⁸.

⁹⁴ M. Nowak, *Pedagogiczny profil nauk o wychowaniu*, p. 404.

⁹⁵ J. M. Dołęga, *Troska Jana Pawła II o środowisko*, in: S. Urbański (ed.), *Duchowość współczesnego człowieka w świetle globalizacji i edukacji*, Warszawa, Wydawnictwo Uniwersytetu Kardynała Stefana Wyszyńskiego, 2003, p. 147.

⁹⁶ Z. Hull, *Problemy filozofii ekologii*, in: A. Papuziński (ed.), *Wprowadzenie do filozoficznych problemów ekologii*, Bydgoszcz, Wydawnictwo Uczelniane Wyższej Szkoły Pedagogicznej w Bydgoszczy, 1999, p. 71; R. Nazar, S. Popławski, *Wartości i ekologia*, in: Z. Hull, W. Tulibacki (ed.), *Człowiek wobec świata*, Olsztyn, Wyd. PTF Oddział w Olsztynie, 1996, pp. 272-280; Z. Hull, *Człowiek i biosfera – wymiar aksjologiczny*, in: Z. Hull, W. Tulibacki (ed.), *Człowiek wobec świata*, Olsztyn, Wyd. PTF Oddział w Olsztynie, 1996, pp. 81-90; Włodzimierz Tyburski, *Główne kierunki i zasady etyki środowiskowej*, in: A. Papuziński (ed.), *Wprowadzenie do filozoficznych problemów ekologii*, Bydgoszcz, Wydawnictwo Uczelniane Wyższej Szkoły Pedagogicznej w Bydgoszczy, 1999, pp. 97-132.

⁹⁷ J. M. Dołęga, *Ekologia w teologii i filozofii chrześcijańskiej*, in: A. Papuziński (ed.), *Wprowadzenie do filozoficznych problemów ekologii*, Bydgoszcz, Wydawnictwo Uczelniane Wyższej Szkoły Pedagogicznej w Bydgoszczy, 1999, pp. 161-162; E. J. Pałyga (ed.), *Ekologia społeczna i współpraca międzynarodowa w zakresie ochrony środowiska*, Warszawa, AKEE, 1992, pp. 18-53; L. Ostasz, *Ku etyce uniwersalistycznej i zarys teorii wartości*, Kraków, WM, 1994; K. Kloskowski, *O naczelnej zasadzie etycznej relacji: człowiek – środowisko*, in: J. Dębowski (ed.), *Człowiek i środowisko. Humanistyka i ekologia. Prace I Olsztyńskiego Sympozjum Ekologicznego, Olsztyn 5-6 maja 1994 roku*, Olsztyn, Wydawnictwo WSP w Olsztynie, 1995, pp. 107-112; B. Hałaczek, *Aksjologiczna koncepcja nauki podłożem postulatów etyki uniwersalnej*, in: J. Sekuła (ed.), *Czy jest możliwa etyka uniwersalna – materiały Ogólnopolskiej Konferencji Naukowej*, Warszawa, WSRP, 1994, pp. 129-140; S. Dziamski (ed.), *Aksjologia, etyka, samookreślenie*, Poznań, WF Humaniora, 1996; J. M. Dołęga, *Miejsce problematyki etycznej i ekonomicznej w ekofilozofii*, in: W. Tyburski (ed.), *Ekologia – Ekonomia – Etyka*, Toruń, UMK, 1997.

⁹⁸ A. Papuziński (ed.), *Wprowadzenie do filozoficznych problemów ekologii*, Bydgoszcz, Wydawnictwo Uczelniane Wyższej Szkoły Pedagogicznej w Bydgoszczy, 1999; E. J. Pałyga (ed.), *Ekologia społeczna*

In turn, *deep ecology*, explained above, extends the group of pro-ecological values that are important in changing the lifestyle, to:

1. axiology of biosystems, with such values as: respect for life, respect for human life and health, harmony;
2. axiology of social systems: peace, solidarity, justice, responsibility, restraint, moderation;
3. values in methods and attitudes (in a lifestyle): work, contemplation, compassion, community⁹⁹.

Deep ecology shapes the pro-ecological attitude of man in all the aspects of the Platonic triad of values: truth, good and beauty¹⁰⁰. In particular, basic human authorities are pointed out, which cause that cognition directs the human mind towards truth, the will is expressed in the pursuit of good, and creativity and aesthetic sensitivity allow us to achieve beauty. The aforementioned values are characteristic for the human being, and their ecological aspect is revealed in human's contact with nature. Violation of these values invariably leads to the degradation of man and the natural world. In other words: the ecological crisis is also a crisis of values¹⁰¹. That is why, pro-ecological actions against loss of value are becoming so significant today. Therefore, pro-ecological education helps the pupil understand, accept and implement pro-ecological values in relation to others and the world in which he lives, but above all in changing his lifestyle;

Ad. 4) *education – pro-ecological education with methods*. According to Janusz Gajda, education is associated with the choice of pro-ecological values. It involves

i współpraca międzynarodowa w zakresie ochrony środowiska, Warszawa, AKEE, 1992, pp. 18-53; L. Ostasz, *Ku etyce uniwersalistycznej i zarys teorii wartości*, Kraków, WM, 1994; K. Kloskowski, *O naczelnym zasadzie etycznej relacji: człowiek – środowisko*, in: J. Dębowski (ed.), *Człowiek i środowisko. Humanistyka i ekologia. Prace I Olsztyńskiego Sympozjum Ekologicznego, Olsztyn 5-6 maja 1994 roku*, Olsztyn, Wydawnictwo WSP w Olsztynie, 1995, pp. 107-112; B. Hałaczek, *Aksjologiczna koncepcja nauki podłożem postulatu etyki uniwersalnej*, in: J. Sekuła (ed.), *Czy jest możliwa etyka uniwersalna – materiały Ogólnopolskiej Konferencji Naukowej*, Warszawa, WSRP, 1994, pp. 129-140; S. Dziamski (ed.), *Aksjologia, etyka, samookreślenie*, Poznań, WF Humaniora, 1996; J. M. Dołęga, *Miejsce problematyki etycznej i ekonomicznej w ekofilozofii*, in: W. Tyburski (ed.), *Ekologia – Ekonomia – Etyka*, Toruń, UMK, 1997.

⁹⁹ J. Łukomski, *Elementy ekologii i ekoetyki*, Kielce, Wszechnica Świętokrzyska, 2003; J. M. Dołęga (ed.), *Ochrona środowiska społeczno-przyrodniczego w filozofii i teologii*, Warszawa, UKSW, 2001; A. Papuziński (ed.), *Wprowadzenie do filozoficznych problemów ekologii*, Bydgoszcz, Wydawnictwo Uczelniane Wyższej Szkoły Pedagogicznej w Bydgoszczy, 1999; E. J. Pałyga (ed.), *Ekologia społeczna i współpraca międzynarodowa w zakresie ochrony środowiska*, Warszawa, AKEE, 1992, pp. 18-53; L. Ostasz, *Ku etyce uniwersalistycznej i zarys teorii wartości*, Kraków, WM, 1994; K. Kloskowski, *O naczelnym zasadzie etycznej relacji: człowiek – środowisko*, in: J. Dębowski (ed.), *Człowiek i środowisko. Humanistyka i ekologia. Prace I Olsztyńskiego Sympozjum Ekologicznego, Olsztyn 5-6 maja 1994 roku*, Olsztyn, Wydawnictwo WSP w Olsztynie, 1995, pp. 107-112; B. Hałaczek, *Aksjologiczna koncepcja nauki podłożem postulatu etyki uniwersalnej*, in: J. Sekuła (ed.), *Czy jest możliwa etyka uniwersalna – materiały Ogólnopolskiej Konferencji Naukowej*, Warszawa, WSRP, 1994, pp. 129-140; S. Dziamski (ed.), *Aksjologia, etyka, samookreślenie*, Poznań, WF Humaniora, 1996; J. M. Dołęga, *Miejsce problematyki etycznej i ekonomicznej w ekofilozofii*, in: W. Tyburski (ed.), *Ekologia – Ekonomia – Etyka*, Toruń, UMK, 1997.

¹⁰⁰ K. Najder-Stefaniak, *Edukacyjne implikacje platońskiej triady*, in: J. M. Dołęga (ed.), *Ochrona środowiska społeczno-przyrodniczego w filozofii i teologii*, pp. 210-215.

¹⁰¹ W. Tyburski, *Komponenty kultury ekologicznej*, in: J. M. Dołęga (ed.), *Podstawy kultury ekologicznej*, „Zeszyty Naukowe” 32, Warszawa, Wydawnictwo UKSW, 2002, p. 20.

getting ready both for life in the coming world and for the ability to co-create reality in the name of accepted ideals and challenges of the future, often difficult and ambiguous to define, especially in the conditions of rapid socio-political changes and crises that hit our civilization more and more frequently.

However, *pro-ecological education* will be treated in the present publication as helping the pupil to understand, accept and implement pro-ecological values in relation to himself, to others and to the world in which he lives, but most importantly these values will be associated with changing pupil's lifestyle. In other words, pro-ecological education is a process which involves the implementation of pro-ecological values into the world. This process also provokes positive changes as to the attitudes (lifestyle) of a man towards the world, another man and himself. A system of values, functioning within the axiomatic and normative sphere of specific sensitivity or pro-ecological mentality, plays a significant role in such pro-ecological education understood in this way. It should complement the canon of approved humanistic values by emphasizing, in a special way, the autotelic value of life. Also, it should emphasise the importance of the environmental components that determine its quality¹⁰²;

Ad. 5) *environmental education with methods* (in the life environment) also used in the present publication, constitutes a specific educational direction. Starting from pollution of the seas, rivers and lakes, forests, fields and mountains, it indicates the need for ecological education and educates to counteract the negative effects of industrialization and ill-considered human activities. The responsible and conscious use of natural resources, landscapes and cultural goods are important goals of modern education¹⁰³.

In this case, Katarzyna Olbrycht¹⁰⁴ discusses "axiological education options", which she directs at teachers. The aim of axiological education is to increase teachers' competence related to the knowledge of the issues of value and evaluation, as well as making conscious, independent axiological pro-ecological decisions. There is also the so-called moment of deciding, namely the moment between cognition and decision (or choice) – it is the recognition and appreciation of objective, external, theoretical values – as own and personal values, as the desired and dignified acquisition, as an introduction to better "I". The conditioning and causality of education clearly aim at just the interiorization of values in which the transformation and interiorization of values would take place, transforming our theoretical judgment about a given thing into a practical and active judgment. This is how *evaluation* is called by G. Corallo¹⁰⁵.

A specific combination of these terms is *ecological and environmental education* associated with learning about the world of nature, or more generally, nature. It mainly involves education to respect the environment, starting with the protection

¹⁰² D. Cichy, *Bezpieczeństwo ekologiczne w świadomości młodzieży*, Warszawa, Oficyna Wydawnicza Alma Press, 1993.

¹⁰³ M. Nowak, *Pedagogiczny profil nauk o wychowaniu*, p. 123.

¹⁰⁴ K. Olbrycht, *Prawda, dobro i piękno w wychowaniu człowieka jako osoby*, Katowice, Wydawnictwo Uniwersytetu Śląskiego, 2000, pp. 95-96; K. Olbrycht, *Wychowanie do wartości – w centrum aksjologicznych dylematów współczesnej edukacji*, „Paedagogia Christiana” 1/29 (2012), pp. 89-104.

¹⁰⁵ M. Nowak, *Czy wychowanie bez celu?*, „Paedagogia Christiana”, 1/29 (2012), p. 61.

of ecosystems (according to shallow ecology), and even more it introduces the adoption of pro-ecological attitudes resulting from the awareness of the risks associated with the choice of an appropriate lifestyle (which is indicated in deep ecology)¹⁰⁶.

In the research part of the present publication, we want to focus on *the situational definition of education*¹⁰⁷, concerning the impact of the educational environment and its impact on the process of changing attitudes (lifestyle) of man towards the world, other people and themselves. Therefore, we treat pro-ecological education as a process of pro-ecological interactions (namely the process of transferring pro-ecological values and causing positive changes in a person's lifestyle) on pupils, not only implemented by teachers, but also circumstances and conditions recognized as *educational situations*.

Such pro-ecological activities are favourable to pupils while learning pro-ecological content and values and lead to the creation of awareness of the mutual relationship between man, his social and natural environment. In pro-ecological education it is also emphasized that man influences the environment, transforms it with his presence, while nature has a strong impact on him. Therefore, education essentially aims to create such development conditions in which the pupils will take an effort, beneficial to the integral development of man and improvement of their living environment;

Ad. 6) *Lifestyle*. The category "lifestyle" dates back to the early 20th century, when in Europe, especially in Germany, the phenomenon of young people seeking a new quality of life and a different lifestyle (*neue Lebensstil*) began to be noticed¹⁰⁸. This concept reflects the existential reality of man, which is usually expressed in a dynamic sense.

Lifestyle received special inspiration not only from the depth psychology, psychoanalysis, but also the individual psychology of Alfred Adler (1870-1937). "Final" (goal-oriented) thinking, characteristic of individual psychology, determines the individual lifestyle of a human being, conditioned by his individuality and coherence of human personality, namely reflecting the unity of human personality. At the same time, this individual (single) lifestyle is influenced by environmental factors. The final result is what a man consciously and unconsciously takes advantage of his predispositions and experiences, which are responsible for making a given individual stand out from others¹⁰⁹.

A man, shaping himself in his humanity, is looking not only for values, but also for their foundations, their general and common approach, what gives rise to values, which in turn become his possibility of life and acting in a humane way¹¹⁰.

¹⁰⁶ M. Nowak, *Pedagogiczny profil nauk o wychowaniu*, p. 125.

¹⁰⁷ S. Kunowski, *Podstawy współczesnej pedagogiki*, pp. 166-169.

¹⁰⁸ M. Nowak, C. Nanni, *La „Jugendbewegung” teolesca d'inizio secolo: ascesa, declino e limiti di un'intenzione autoformativa*, „Orientamenti Pedagogici”, Roma, 1990, t. XXXVII, nr 1, pp. 23-24.

¹⁰⁹ M. Nowak, *Czy wychowanie bez celu?*, „Paedagogia Christiana” nr 1 (29), 2012, p. 52.

¹¹⁰ *Ibid.* p. 55.

Lifestyle considered from the perspective of individual psychology is conditioned by both personal characteristics and environmental influences¹¹¹.

In the pedagogical context, we can define "lifestyle" as a way of education through rather indirect influences, focused on personal choice of the concept of life with the adopted system of values and skills specific for social communication¹¹².

Man, facing his actions, reveals most fully not only the origin of values and the criteria for their systematization, but also how man has created and shaped in a certain system of values¹¹³.

In a specific life experience, a person acquires values in the process of adopting the external ideal and making it an internal form of his personality. The introception of values that takes place in this way, socially conditioned and based on the individual perception of values, opens man to the objective world of values, which he first learns, then recognizes and assimilates it¹¹⁴. In the process of education and shaping the lifestyle, individuality of a person becomes significant, as well as his collective life, and especially, as it is emphasized from the perspective of individual psychology – the so-called "sense of community" (*social sense*).

We also associate *quality of life*¹¹⁵ with lifestyle, which is also sometimes shown as the goal of life (as perceived, among others, from the perspective in psychology, sociology, economics, medicine and quality of life). Other words related to this concept are the meaning of life, lifestyle, standard of living, way of life, as well as happiness, joy, satisfaction, contentment and well-being. Nowadays, this concept is connected with the categories: post-industrial society and ecological society, which give grounds for recognizing concern for the quality of life not only in modern times. To be honest, environmental advocates and sociologists introduced this concept as a criticism of industrial and post-industrial society, seeking a different socio-economic pattern as a recipe for experienced disturbances in social life, but initially the term meant all the goods that should serve the consumer in industrial society, and especially his good fortune and well-being.

The term "quality of life" is usually used in a utilitarian approach¹¹⁶. Over time, this concept was introduced into the three areas of research: environmental protection, urbanization problems and socio-psychological motives¹¹⁷.

Within the framework of quality of life, the subjective states of a person experiencing joy and the feeling of meaning as well as experiencing well-being are increasingly emphasized¹¹⁸. Such a phenomenon raises the need for a pedagogical approach to the quality of life, which was sought, among others as part of humanist-

¹¹¹ A. Siciński (ed.), *Styl życia, koncepcje i propozycje*, Warszawa, PWN, 1976, pp. 205-239; A. Siciński (ed.), *Styl życia, Przemiany we współczesnej Polsce*, Warszawa, PWN, 1978, pp. 351-384.

¹¹² P. Gianda, *Stile di vita*, in: I. M. Prellezo, C. Nanni, G. Malizia (ed.), *Dizionario di scienze dell'educazione*, Torino, Editrice, Elle Di Ci – Editrice las & S.E.I. Società Editrice Internazionale, 1997, p. 1066.

¹¹³ M. Nowak, *Czy wychowanie bez celu?*, „Paedagogia Christiana” nr 1 (29), 2012, p. 56.

¹¹⁴ Stefan Kunowski writes in this sense about the introspection of values, S. Kunowski, *Wartości w procesie wychowania*, Kraków, Oficyna Wydawnicza „Impuls”, 2003.

¹¹⁵ J. Daszykowska, *Jakość życia w perspektywie pedagogicznej*, Kraków, Oficyna Wydawnicza „Impuls”, 2010.

¹¹⁶ P. Singer, *Praktische Ethik*, Stuttgart, Reclam, 1984.

¹¹⁷ M. Nowak, *Pedagogiczny profil nauk o wychowaniu*, p. 449.

¹¹⁸ J. Daszykowska, *Jakość życia w perspektywie pedagogicznej*, pp. 54-60.

oriented pedagogy. Aforementioned attitude has been discussed, among others, by K. Sośnicki, S. Kunowski, B. Suchodolski and I. Wojnarowa¹¹⁹.

The aim of people's pursuit to achieve goals and ambitions, which are more and more widely highlighted in pedagogy, is to release the human life potential, namely his individual, intellectual and creative resources, as well as physical, biological, social, spiritual ones, as part of the fulfillment of his own humanity.

In this understanding of the quality of life, meaning is gained not so much as happiness, but satisfaction with a good life, made possible by values, especially those that will allow us to creatively shape our own existence. In this sense, Augustyn Bańka points to the quality of development as a function of the sense of quality of life¹²⁰.

According to Irena Wojnarowa, it is human development orientation that is the basis for the humanistic interpretation of the quality of life and it is meant by "being", which means "knowing – understanding – interacting – creating"¹²¹. Man can achieve real value and joy of life as well as its high quality by improving himself in the process of development. Thus, we fit into the axiological issues of pedagogy, together with the emphasis on the role of values in the educational process and generally in the entire human life.

Władysław Stróżewski emphasizes that the idea of humanity itself assumes that the man is a being that faces values and that he is in a way doomed to the realization of those values, if he really wants to be a human¹²².

1.2. Values of pro-ecological education – genesis and historical aspects

Values, including pro-ecological ones, undergo changes which are generated by various factors and conditions. On the one hand, the need to redefine and create new approaches to the issue of values (corresponding to a given era and culture) is emphasized, on the other hand, in many cases there are fears that this type of situation can lead to and, in fact, often leads to the actual loss of goods that are important for human beings, for human groups as well as for certain institutions. Therefore, the analysis of values, including pro-ecological ones that are of interest to us in the present publication, also becomes justified in a historical perspective.

1.2.1. Genesis and development of pro-ecological education axiology

Pro-ecological values can be associated with the knowledge about ecosystems, biosystems and sociosystems considered axiologically, and most importantly from

¹¹⁹ M. Nowak, *Pedagogiczny profil nauk o wychowaniu*, p. 450.

¹²⁰ A. Bańka, *Jakość życia a jakość rozwoju. Społeczny kontekst płci, aktywności i rodziny*, in: A. Bańka (ed.), *Psychologia jakości życia*, Poznań, Stowarzyszenie Psychologia i Architektura, 2005, p. 13.

¹²¹ I. Wojnar, *Humanistyczna orientacja edukacji*, in: J. Kuźma, J. Morbitzer (ed.), *Nauki pedagogiczne w teorii i praktyce edukacyjnej*, t. 1, Kraków, AP, 2003, p. 25.

¹²² W. Stróżewski, *W kręgu wartości*, Kraków, Znak, 1992, pp. 56-57.

existential perspective. Going back to the origins of values, we can associate them with taking responsibility for the social and natural environment.

It was the ancient people who distinguished two attitudes towards the sources of origin of values. In the source literature we can find works by authors who connect values with a gift given by gods, as well as publications written by those who associate values with human experience.

In Ancient Times and the Middle Ages, the position of cognitivism prevailed. J. Łukomski emphasizes that in modern times "rationalization" of such an attitude has been observed. People started to think that every value is revealed or constituted by emotional and desirable activity. It was also believed that rationalization of values or our knowledge of values is secondary in relation to non-rational contact with values (brentanists, phenomenologists)¹²³.

It was in ancient times when the dependence of human existence on the natural environment was observed. The ancient people placed human existence in the perspective of a participant in natural resources. They believed that man depends on nature, which affects him both in a favourable as well as unfavourable way. They also claimed that the progress of civilization involves observing nature which influences the process of learning and developing. In order to support such a thesis, a medical tractate of Hippocrates from Kos (c. 460-377 BC), consisting of three parts, can be presented. The first part, entitled: *About air, waters and surroundings*; second part is called: *About primary care*, and the third part is known as: *Commandment*. In this poem, the author described the conditions in which a person can develop in a healthy way as well factors that are harmful to human development. Similar manifestations of ecological thinking occur in many other works written by ancient thinkers¹²⁴.

Historical aspects of ecological education in Poland are described in detail by Edyta Wolter, starting with the appearance of literature in Poland in the Middle Ages, until 1989 – till the moment the issue of sustainable development and ecological education arose as a social problem¹²⁵.

In the Middle Ages, allegorical representations of nature were displayed, the spiritual relationship between man and nature was presented, as well as the relationship with the surrounding environment of life-giving nature. One can notice culturally determined attitudes towards nature, understood in the aesthetic category – lyrical description of nature. Experiencing beauty as well as perceiving nature from a creative-religious perspective experiences of beauty and perception of nature, in accordance with the cultural sense of the symbolism of God's Mystery of Life, in which God is its source and a man implanted in the Tree of Life can also be noticed¹²⁶. Human beings, social reality, and natural phenomena were allegorised – thus expressing holiness, divinity, a poetic image of allegory

¹²³ J. Łukomski, *Elementy ekologii i ekoetyki*, Kielce, Wszechnica Świętokrzyska, 2003, p. 177.

¹²⁴ T. Bieńkowski, *U początków myślenia ekologicznego*, in: B. Kuźnicka (ed.), *Ekologia człowieka historia i współczesność*, Warszawa, PAN, 1995, pp. 75-86.

¹²⁵ E. Wolter, *Historyczne aspekty edukacji ekologicznej w Polsce*, Warszawa, Wydawnictwo Uniwersytetu Kardynała Stefana Wyszyńskiego, 2006, p. 9.

¹²⁶ Cz. Bartnik, *Z teologii życia*, „Człowiek i Przyroda” nr 10, 1999, p. 33.

of human fate. Seeing in man a being created in the image of God, endowed with – unlike animals – a divine spiritual element. Thanks to the symbolism, the surrounding reality gained more strengthened meanings, and individual elements of the earthly world or space served as a place of self expression¹²⁷.

Nature played an extremely significant role in community-based monastic life as it protected against loneliness and it constituted a specific reserve for the Franciscans as well as a refuge of natural beauty, requiring respect¹²⁸. Also, the art of curing was often based not only on natural resources but also on recognizing the healing properties of plants and trees. The monks even cultivated therapeutic plants and herbs, helpful in the treatment of diseases in special gardens called herbarias. Additionally, the monks ran pharmacies where such medicines were available.

In all periods of human history, gifts of nature were appreciated and used – the first fruit trees appeared around the houses such as apple trees, plums, cherries and pears. Gardens where turnips, carrots, cucumbers and onions were planted appeared next to orchads. Mushrooms and berries were collected in the forest, thus enriching the food¹²⁹.

Gall Anonim in the *Polish Chronicle* appreciated the geographical location of Poland, emphasizing that it is the country with clean air, fertile and richly forested land, woolly sheep and dairy cows as well as waters abounding fish¹³⁰.

Jan Długosz recorded valuable information about fauna on the territory of Poland¹³¹. In the first book of *Polish History*, he described the Republic of Poland as a forestry land abounding in grain, fruit, fish, birds and animals, also rich in iron, lead, and salt.

In the Middle Ages, the beginning of the protection of natural resources is dated by protecting hunting areas and forests due to the decrease in the number of hunting animals, which was noticed by the rulers and magnates at that time. They forbade hunting of certain animals. Also, the destruction of plants, and above all valuable tree species was not allowed¹³².

In turn, the period of Renaissance developed an ancient tradition and it became a new cognitive quality of affirmation of life, based on mental mainstreams – humanism and Terentius message: “I am human – nothing what is human is unfamiliar to me”.

Thereby, the Renaissance was beginning to be more interested in worldly reality¹³³. The temporal individuality of the era also creates the basis for interest in human anatomy and physiology, and in a broader perspective – natural sciences¹³⁴.

¹²⁷ E. Wolter, *Historyczne aspekty edukacji ekologicznej w Polsce*, pp. 31-44.

¹²⁸ A. Leńkowa (ed.), *Człowiek przeciwko sobie?*, Warszawa, Instytut Wydawniczy PAX, 1986, pp. 48-49.

¹²⁹ E. Wolter, *Historyczne aspekty edukacji ekologicznej w Polsce*, pp. 31-44.

¹³⁰ Gall Anonim, *Kronika polska*, Wrocław, Zakład Narodowy im. Ossolińskich, 2003, p. 10.

¹³¹ K. Kowalska, *Zoologia*, in: K. Maślankiewicz (ed.), *Zarys dziejów nauk przyrodniczych w Polsce*, Warszawa, Wiedza Powszechna, 1983, p. 335.

¹³² E. Wolter, *Historyczne aspekty edukacji ekologicznej w Polsce*, pp. 31-44.

¹³³ E. Wolter, *Historyczne aspekty edukacji ekologicznej w Polsce*, p. 45.

¹³⁴ *Ibid.* p. 46.

The achievements of ancient Greek culture, through Hellenic culture and the culture of the Middle Ages, in modern times served to create the national pedagogical systems of individual countries, and the revival ideal of education, taking into account the value of moral and religious education, was increasingly expressed in temporal categories, associated with joyful, but not the promiscuous but rational and ethical activity of functional and publicly useful life¹³⁵.

Here, it is necessary to emphasise following E. Wolter that one of the most important humanist educators in Europe in the epoch of revival was Jan Ludwik Vives from Spain (1492-1540). He justified the value of raising children in harmony with children's nature, taking into account individual psychological possibilities related to the gradual maturation of getting to know the surrounding reality, also by observing plants and animals¹³⁶.

The Renaissance optimism of exploratory renewal can be seen in the idea of joyful humanism, manifested especially in the fifteenth century, in reference to the ancient Epicurean ethics. According to this ethics, intellectual (spiritual) pleasure is a good (ethical hedonism) identified with happiness, which manifests itself in life in harmony with nature, in a life in which peace (ataraxia) is to be its final goal. Humanists noticed the legitimacy of comprehensive and individual education – they postulated the ideal of an educated man who knows the ancient culture¹³⁷.

The Renaissance period is characterized by an anti-dogmatic and quite eclectic approach, mainly anthropocentric, also associated with faith in the limitless possibilities of human reason. The idea of the progress of modern European culture was developed. In addition, attempts were made to criticize scholasticism, and people turned to nature as a source of knowledge¹³⁸. It is worth mentioning that in 1543 in Nuremberg the work of Nicolaus Copernicus entitled *the Revolutions of the Heavenly Spheres* was published. In this publication the author shows that the Earth revolves around the Sun. In general, it can also be concluded that while the 15th century was the century of great sea expeditions, the 16th century was a period of trade in exploited natural resources mainly in the area of the Portuguese and Spanish colonial empire¹³⁹.

In the Renaissance period, the protection of ecosystems is expanding, by means of the introduction of subsequent royal decrees for nature protection in Poland, including the protection of a beaver, auroch, bison, falcon and swan. Among these trends, the development of agricultural literature and herbal medicine is observed. The interest in the beauty of nature is also increasing. In the literature of Renaissance, there were numerous references praising the beauty of the mountains, the highlands. During this time, Teofrast von Hohenheim Paracelsus (1493-1541), a representative of the philosophy of nature, noticed that nature is one of the important elements in human life – surrounding man. Fields, meadows,

¹³⁵ A. Smołalski, *Idealy wychowawcze w polskiej myśli pedagogicznej od XVI w. do końca II Rzeczypospolitej*, Opole, Wydawnictwo Uniwersytetu Opolskiego, 1994, p. 17.

¹³⁶ E. Wolter, *Historyczne aspekty edukacji ekologicznej w Polsce*, pp. 47-48.

¹³⁷ Ibid. pp. 48-49.

¹³⁸ B. Suchodolski, *Kilka refleksji nad dziejami nauk przyrodniczych*, in: K. Maślankiewicz (ed.), *Zarys dziejów nauk przyrodniczych w Polsce*, Warszawa, Wiedza Powszechna, 1983, pp. 19-20.

¹³⁹ E. Wolter, *Historyczne aspekty edukacji ekologicznej w Polsce*, pp. 45-64.

mountains, forests are perceived as pharmacies. It is believed that they not only heal, but positively affect the human system. It was understood that health depends on individual responsibility, and therefore exercise was also recommended to care for vitality¹⁴⁰.

It is also worth mentioning that during the Renaissance, plant and animal motifs were used in architectural ornamentation. Harmonious education was promoted in accordance with nature, presented in the age of Renaissance primarily by Mikołaj Rej (1505-1569), Łukasz Górnicki (1527-1603), Jan Kochanowski (1530-1584), Szymon Szymonowicz (1558-1629) or Erazm Glicznier-Skrzetuski (about 1535-1603). This education was associated with the postulate of sustainable human development in terms of relations with the natural environment, as well as knowledge about the dangers that are a consequence of pathological behavior and undergoing to stereotypes. Education was treated as fulfillment in mortal life, in its natural surroundings, while maintaining respect for religious values¹⁴¹.

While Renaissance humanism was understood from the perspective of anthropocentrism inscribed in the laws of nature, Baroque humanism was already more multidimensional, both emotional and turning to medieval theocentrism, but recognized more from the perspective of an individual who can recognize his own choice of depth of dialogue with God. It was believed that God exists, but earthly life – the world he created, works in accordance with the laws freed from direct God's interference¹⁴².

In the Baroque era, building foundations for the development of natural sciences is observed. Cartesian methodology, namely faith in the power of reason, influenced the development of this education. The representative of the mechanistic concept of nature were Baruch Spinoza (1632-1677) and Gottfried Wilhelm Leibniz (1646-1716). According to these authors, every phenomenon of the universe is part of a mechanism that works purposefully, in accordance with logic¹⁴³.

John Locke (1632-1704), referred to the education of children in term of enabling them contact with nature. He believed that knowledge, ideas, and moral principles arise from gradual experience, sensory perception and observation. The author of *Thoughts on upbringing*, emphasized the respect for any living creature in upbringing. He presented the idea of hardening the body, the imperative of treating a child as an adult – with seriousness and respect, upbringing primarily man (moral education) and not just an “enlightened being”¹⁴⁴.

¹⁴⁰ A. Gaweł, *Pedagogizmy wobec wartości zdrowia*, Kraków, Wydawnictwo Uniwersytetu Jagiellońskiego, 2003, p. 56.

¹⁴¹ E. Wolter, *Historyczne aspekty edukacji ekologicznej w Polsce*, pp. 54-64; D. Żołędź, *Ideaty edukacyjne doby staropolskiej. Stanowe modele i potrzeby edukacyjne szesnastego i siedemnastego wieku*, Warszawa – Poznań, PWN, 1990, pp. 8-10; M. Rej, *Żywot człowieka poczciwego*, (opr. J. Krzyżanowski), Wrocław, Zakład Narodowy im. Ossolińskich, 2003, t. 1, pp. 90-329, t. 2, pp. 436-595; Ł. Górnicki, *Dworzanin polski*, (opr. R. Pollak), Wrocław, Zakład Narodowy im. Ossolińskich, 2004, t. 2, pp. 127-495.

¹⁴² E. Wolter, *Historyczne aspekty edukacji ekologicznej w Polsce*, pp. 45-76.

¹⁴³ Ibid. pp. 66-71.

¹⁴⁴ J. Locke, *Myśli o wychowaniu* (tłum. M. Heitzman), Warszawa, Wydawnictwo Akademickie „Żak”, 2002, pp. 51-83; J. Locke, *Wybór pism pedagogicznych* (opr. H. Pohoska), Warszawa, Państwowe Zakłady Wydawnictw Szkolnych, 1948, pp. 44-96.

In turn, according to Jan Amos Comenius (1592-1670), man is the image of God, a part of nature (laws occurring in nature). He also believed that life is a temporal preparation for eternal life. Comenius emphasized that man is given a long life, but human beings cannot reasonably use the possibilities of vital forces, do not care about health and eat badly. Using the naturalistic metaphor, Comenius noted that man must be taught (learned) to be observe and imitate nature¹⁴⁵.

In the Baroque era, an apotheosis of idyllic life was proclaimed, admiring the beauty of nature. In order to preserve homeostasis moderation, good housekeeping were recommended while living in the countryside.

However, in the age of Enlightenment, in the middle of the eighteenth century, biology (natural history) was already established. Karol Linneusz (1707-1778), defined the hierarchical arrangement of plants and animals. Jean Baptiste de Lamarck (1744-1828), explained the theory of evolution in the work entitled "*Philosophy of Zoology*"¹⁴⁶.

According to philosopher Denis Diderot (1713-1784), nature is a source of perfection, and the law of nature is true, because there are no mistakes in nature. Water, air, earth, fire – all elements have their own meaning and place in the completeness of a natural system whose laws are to be studied by philosophy. In turn, Francois Marie Arouet, called Voltaire (1694-1778) considers only the rational law (eternal) the law of nature, which is perfect, and man is part of it. Similarly, the naturalist philosopher Paul Dietrich Holbach (1723-1789) explains that nature is a whole, embraces individual beings, and man is a being fully subjected to the determinants of nature¹⁴⁷.

Also Jean Jacques Rousseau (1712-1778) concluded that in the state of nature (also) man is not an independent being, but is subject to the laws of nature. Rousseau considered the concept of nature in the theological aspect (when he regretted that in man he did not see the divine simplicity of the Creator of Nature), the natural-historical (when he omitted the supernatural human element) and psychological (when he thought everything about the human soul). Rousseau apotheosized nature and individual education. He stated that man is by nature good, but the wrong system of social civilization means that everything good, when it comes out of the Creator, comes out in the hands of man¹⁴⁸. He believed that nature is a joy of man. He postulated to constantly observe nature and benefit from it for healthy development. He proposed education in harmony with nature, because nature shapes man physically and educators morally. Nature is also the best environment shaping the child's mind and emotional sphere¹⁴⁹.

In turn, the representative of the pedagogical thought of the turn of the 18th and 19th centuries – Johann Heinrich Pestalozzi (1746-1827), considered human

¹⁴⁵ J. A. Komeński, *O człowieku użytkowniku tego świata*, „Kwartalnik Pedagogiczny”, Warszawa, 1957, p. 107; J. A. Komeński, *Wielka Dydaktyka*, Lwów, Naukowe Towarzystwo Pedagogiczne, 1935, p. 146.

¹⁴⁶ E. Wolter, *Historyczne aspekty edukacji ekologicznej w Polsce*, 2006, pp. 77-83.

¹⁴⁷ Ibid. pp. 77-78.

¹⁴⁸ J. J. Rousseau, *Emil czyli o wychowaniu* (tłum. W. Husarski), Lwów – Warszawa, Nakładem Wydawnictwa Naukowego Towarzystwa Pedagogicznego, 1930, cz. 1, pp. 5-7, 81-95.

¹⁴⁹ J. J. Rousseau, *Emil czyli o wychowaniu* (tłum. W. Husarski), Lwów – Warszawa, Nakładem Wydawnictwa Naukowego Towarzystwa Pedagogicznego, 1930, cz. 2, pp. 85-87.

existence in three perspectives: natural, social and moral. By existing on a natural level, man is portrayed as innocent – like a child, he enjoys life and derives pleasure from the nature surrounding him, namely fields and forests, which he respects and trusts. And when he claims his right for the land and takes it, then he goes into a social state that should be consistent with the morality of man just as a social being¹⁵⁰.

Pestalozzi also wrote that “as a work of nature, as an animal I am perfect; as a work of myself I strive for perfection; as a work of a kind I try to stay at a stage where self-perfection is not possible”¹⁵¹. In his pedagogical writings, he postulated that upbringing should be the process of gradual transition from natural childish egoism to moral independence – spiritual autonomy¹⁵².

The reason for pro-ecological education in Poland during the Enlightenment is poetic expression by means of the beauty of nature, which was also expressed by Adam Naruszewicz (1733-1796), praising the beauty of the wisdom of nature and emphasizing the peace of pastoral life according to the laws of nature¹⁵³. Also bishop Ignacy Krasicki (1735-1801) with poetic delight presented the ecologically ordered transcendence of the seasons¹⁵⁴. Franciszek Karpiński (1741-1825) also expressed ecological inspirations in songs and idylls. He admired the beauty of his native nature, thereby contributing to its perception and sensitivity to its elements¹⁵⁵.

Jan Śniadecki (1756-1830) admired the created world and called for the right use of all the wonders and favors of God that were spilled in the act of creating the world. Being interested in the philosophy of nature, Jan Śniadecki stated that only the inductive method allows to explore and learn about individual laws of nature, which end with human knowledge of nature, because in nature there is a harmony and order – the work of the Supreme Wisdom. The laws of nature are not as changeable as human behavior, they are eternal – timeless laws¹⁵⁶. The considerations of Jan Śniadecki are part of the genesis and development of issues in the field of human ecology in Poland and in the world.

In turn, Jędrzej Śniadecki (1768-1838), not only a comprehensive thinker but also a philosopher of nature, popularizing the knowledge of natural sciences – attempted to prove the thesis on “the circulation of matter in nature”, the interdependence of organisms (beings) and the human relationship with still

¹⁵⁰ J. H. Pestalozzi, *Moje badania nad udziałem natury w rozwoju rodzaju ludzkiego*, (tłum. H. Białek), Wrocław, Wydawnictwo Polskiej Akademii Nauk, Komitet Nauk Pedagogicznych, Zakład Narodowy im. Ossolińskich, 1984, pp. 66-115.

¹⁵¹ Ibid. p. 120.

¹⁵² E. Wolter, *Historyczne aspekty edukacji ekologicznej w Polsce*, p. 82.

¹⁵³ J. Platt, *Sielanki i poezje sielskie Adama Naruszewicza*, Wrocław – Warszawa – Kraków, Wydawnictwo Polskiej Akademii Nauk, Zakład Narodowy im. Ossolińskich, 1967, pp. 49-199; A. Naruszewicz, *Cztery części roku – piosenki wieśniackie Wiosna, Lato, Jesień, Zima* in: *Zabawy Przyjemne i Pożyteczne*, t. 2, pp. 474-479; A. Naruszewicz, *Liryki wybrane*, Warszawa, PIW, 1964, pp. 41-43.

¹⁵⁴ I. Krasicki, *Monachomachia*, Wrocław, Zakład Narodowy im. Ossolińskich, 2003, p. 59.

¹⁵⁵ F. Karpiński, *Sielanki; Pisma wierszem i prozą*, <http://literat.ug.edu.pl/krpnski/>, downloaded on 12.10.2010.

¹⁵⁶ A. Skorski, *Filozofia Jana Śniadeckiego*, chodzi Poznań, Nakładem Tygodnika Wielkopolskiego, 1873, p. 29.

life, emphasizing human inefficiency in the face of natural wonders¹⁵⁷. He was influenced by the works of John Locke (1632-1704), Frederic Schelling (1775-1854) – a philosopher of nature who claimed that nature (understood as nature) “suggests” educational behavior, but the educational ideal defines society.

Jędrzej Śniadecki critically assessed human interference in the management of natural resources, formulating the thesis that man’s relationship with nature is a condition of his life, man is an integral part of the whole system of nature (natural world) that wisdom must be derived from in the process of determining the principles of social behavior (laws of nature)¹⁵⁸.

He also postulated reducing and minimizing contradictions between nature and culture, initiating the issue of healthy – that is, physically and mentally balanced harmonious education. His postulates regarding education as a social process – especially in health education – are a derivative of the anthropological concept contained in *The Theory of Organic Beings*¹⁵⁹, in which, using biological and chemical methods, he explained the unity of the organic and inorganic world. Jędrzej Śniadecki, using the similarity of appropriateness, argued that a master who wants to undertake the process of raising a man must first, just like a farmer know the land he is to cultivate.

Jędrzej Śniadecki has become a precursor of ecology in Poland. He justified the conditions connected with the development of the human body in regard to the impact of the social and natural environment, which affects the formation of human physiological properties. He explained nature as a collection of individual units and closely related species so that every being could sustain itself, should develop thanks to water, air, heat, sunlight, as well as sources of food¹⁶⁰.

It should be emphasized that Jędrzej Śniadecki postulated a close relationship and the need for cooperation in solving scientific problems related to biology, chemistry, medicine and social sciences¹⁶¹.

Jan Krzysztof Kluk (1739-1796), who contributed to the creation of Polish zoology emphasized the importance of native nature and the need to protect it. He was a passionate nature researcher¹⁶², also noticing the aesthetic and recreational value of forest natural resources. He is the author of the first nature manuals (natural history) written in Polish¹⁶³.

Like Jan Krzysztof Kluk, also Stanisław Staszic (1755-1826) – a naturalist and philosopher derived knowledge from observing nature and concluded that man is part of nature. God wants us to be happy and only people can destroy God’s

¹⁵⁷ K. Sławiński, *Jędrzej Śniadecki życie i dzieła*, Odbitka z „Roczników Chemii” t. XIX, 1939, p. 9; L. Świerżawski, *Jędrzej Śniadecki jego żywot, naukowe i społeczne stanowisko*, Petersburg, Księgarnia K. Grendyszyńskiego, 1900, p. 27.

¹⁵⁸ E. Wolter, *Historyczne aspekty edukacji ekologicznej w Polsce*, p. 95.

¹⁵⁹ Była to praca pionierska Jędrzeja Śniadeckiego, która wydana na początku XIX wieku, ukazała się pięć lat wcześniej od słynnego dzieła francuskiego przyrodnika ewolucjonisty – Jeana Baptiste’a Lamarck’a (1774-1829) pt. *Filozofia zoologii* (1809).

¹⁶⁰ J. Śniadecki, *Wybór pism naukowych*, Kraków, PWN, 1954, p. 442.

¹⁶¹ E. Wolter, *Historyczne aspekty edukacji ekologicznej w Polsce*, p. 97.

¹⁶² G. Brzęk, *Krzysztof Kluk*, Lublin, Lubelskie Towarzystwo Nauk, 1977, pp. 158-188.

¹⁶³ Cz. Majorek, *Książki szkolnej Komisji Edukacji Narodowej*, Warszawa, Wydawnictwo Szkolne i Pedagogiczne, 1975, pp. 30-71.

intention to make humans happy. Human health depends on natural rights and a well-organized society¹⁶⁴. He strived for sustainable social development as well as healthy civilization development, which will occur when Polish society (as well as other societies in other European countries) matures for mutual respect and respect for human dignity and respect for both the laws of nature and God's law of love of a fellow creature. Stanisław Staszic emphasized that people from Heavenly Providence received agriculture as a gift, but unfortunately the farmer still remains a slave in our country¹⁶⁵.

According to Stanisław Staszic, man is largely a derivative of the quality of natural laws in his imperfections, namely natural and social phenomena derived from nature – one must help mother nature improve the essence of life, including social life, because it is the source of life. This natural relationship can only be understood by an educated person who, thanks to education, is not only professionally useful in public – as a citizen of the state, but also emotionally sensitive to both negative and positive aspects of existence. It is only man who can also notice in nature the laws governing development. Staszic noticed the value of the mountains (the Tatras) in the aspect of the evolution of Polish culture¹⁶⁶.

The humanism of the culture of Polish Enlightenment referred to the ancient tradition and Renaissance, and in philosophical reflection in regard to human existence, it implied the idea of progress in the autonomy of reason, at the same time expressed the desideratum of "returning to nature."

He demanded tolerance and enlightenment of human reason and the development of education as well as national public utilities in praise of work as a social good and the opportunity for personal freedom to be manifested. The philosophy of enlightenment formulated a creative basis for the development of natural thought in the age of social transformation¹⁶⁷.

Romantic theorist Friedrich Wilhelm Joseph von Schelling (1775-1854) explored the philosophy of nature (nature). He claimed that between man and God there is mediator of esoteric intuition of nature, and therefore dialogue with nature is necessary¹⁶⁸.

Romanticism having created an aesthetic respect of the homeliness of native nature thus gave the basis on which concepts of nature protection developed in later times¹⁶⁹.

Alexander von Humboldt (1769-1859) was the first to draw the attention of the broad public to the importance of natural monuments by introducing the concept

¹⁶⁴ S. Staszic, *Przestrogi dla Polski*, (oprac. S. Czarnowski) Wrocław, Zakład Narodowy im. Ossolińskich, 2003, p. 16.

¹⁶⁵ E. Wolter, *Historyczne aspekty edukacji ekologicznej w Polsce*, pp. 108-113.

¹⁶⁶ Ibid. p. 107.

¹⁶⁷ Ibid. p. 108.

¹⁶⁸ B. Andrzejewski, *Ekologia w świadomości romantycznej*, in: K. Łastowski, M. Rafiński (ed.), *Idee ekologii w świadomości społecznej*, Poznań – Daszewice, Sorus, 1992, pp. 161-165.

¹⁶⁹ J. Kolbuszewski, *Ochrona przyrody a kultura*, Wrocław, Towarzystwo Przyjaciół Polonistyki Wrocławskiej, 1992, pp. 58-76.

of “natural monument” – in 1819. Then in 1850 he described the flora of various geographical zones in the work: *The picture of nature*¹⁷⁰.

During the period of Romanticism, the therapeutic function of native nature was emphasized in Poland by the following authors: Józef Ignacy Kraszewski (1812-1887), Seweryn Goszczyński (1801-1876), Bogusz Zygmunt Stęczyński (1814-1890), Wincenty Pol (1807-1872), Teofil Lenartowicz (1822-1893) as well as Adam Mickiewicz (1798-1855). The beauty of the Tatra's nature was admired. Polish romantic humanism praised nature. Not only the beauty of nature was emphasized, but also all the goods that come from its resources. The issues of the importance of health in the development of each person were also discussed.

Ludwik Bierkowski (1801-1860) wrote that man is an integral part of nature and as a creature gifted generously by nature he must undertake the labor of physical and work and mental, without which human existence is threatened. In order to be both useful in a society and able to work (in the natural sense), man must take care of health. Ludwik Bierkowski also attempted to raise the importance of physical education in harmonious human development. He emphasized that disruption of the natural balance of nature in the human body always causes a disease state¹⁷¹. The Resurrectionists' Assembly formed in exile for work among the Polish diaspora also taught to value health as a value and object of human attitudes, taught to follow God's commandments that serve homeostasis and sustainable social development¹⁷².

Bronisław Ferdynand Trentowski (1808-1869) considered writing the foundations of the universal philosophy of nature. According to him, nature is a divine existence in the so-called “the moment of materiality”, namely God in his eternal and temporal corporeality. Man is the “flower of all revelation”, the last link in nature. Therefore, the principles of nature should be sought in the essence of man and in divine existence, and the ultimate goal of nature is “the human self at the moment of its body”. Nature is created according to the laws – categories of nature, which Trentowski gave as: extension, constant change of corporality (metamorphosis), unification, diversity, rule of law, purposefulness, multiplicity¹⁷³.

The source of these categories of “nature” would be a progressive analysis of the principle of nature. In turn, the canons of nature are created thanks to the progressive synthesis of the category of nature and the principles of nature, and thus by gradually combining everything that has already been presented. Trentowski distinguished three quantitative and three qualitative canons of nature: evolution, involution, evolution, heterogeneity, homogeneity, and analogy. Finally, the seventh canon of nature would be nature itself, which is divided into: the pranature of majestic stars (heaven), the inorganic nature of epigenesis and induction, and organic nature in which all preceding natures become absolute

¹⁷⁰ A. Leńkowa, *Z dziejów ochrony przyrody*, in: A. Leńkowa (ed.), *Człowiek przeciwko sobie?*, Warszawa, PAX, 1969, p. 53.

¹⁷¹ E. Wolter, *Historyczne aspekty edukacji ekologicznej w Polsce*, pp. 113-124.

¹⁷² W. Kwiatkowski, *Co nam daje religia i Kościół*, Albano, Nakładem Księży Zmartwychwstania Pańskiego, 1940, pp. 26-60.

¹⁷³ B. F. Trentowski, *Podstawy filozofii uniwersalnej wstęp do nauki o naturze*, Warszawa, Wydawnictwo Naukowe PWN, 1978, pp. 306-865.

unity, and in which God appears as the Messiah – a human, individual Divine Person¹⁷⁴.

Trentowski, like the aforementioned Schelling, described man as a reduced whole of nature. According to him, nature equals a man divided into factors. He wanted to raise a man – a man of “real deed”, wise, reasonable and uniquely individual. In regard to the views of J. J. Rousseau (1712-1778), Trentowski postulated a calm, free education, developing both mind and physical fitness¹⁷⁵.

In turn, Karol Libelt (1807-1875), understood education as a process dependent on social factors, especially political and economic as well as the influence of the natural environment¹⁷⁶.

In the age of positivism, a great importance was attached to the natural sciences. Positivism is a period of shaping independent scientific disciplines and practicing humanities on the model of natural research methods. Charles Darwin (1809-1882), presented the idea of organic evolution of plants and animals, in the book entitled *On the emergence of species by natural selection*. He studied biological evolution and the interactions of the environment and the organisms inhabiting them¹⁷⁷.

In turn, Herbert Spencer (1820-1903) wrote a pedagogically valuable work entitled *About mental, moral and physical education*, which was published in England in 1861 and which was translated into many languages. The first Polish translation was already published in 1879 and had a great impact on the ideological assumptions of Polish positivism¹⁷⁸.

In Polish positivism, nature issues were discussed primarily in books and school textbooks intended for children. Nature was shown as the “great book of the revelation of the Spirit of God”, as well as a model of beauty. Nature tours, collecting natural collections were promoted, as well as practical applications, for example in the garden. They admired the beauty of the native nature, especially the one found in the Tatra Mountains, as well as the health and tourist importance of nature. In the second half of the 19th century, travel descriptions became popular: ethnographic, natural and geographical¹⁷⁹.

In the period of positivism, nature was conceived in terms of beauty and good. However, in comparison to the romantic admiration of nature, in which the emotional element dominated over the rational interpretation of natural phenomena – in the period of positivism the scientific factor (also referred to as conversations) was of primary importance. During this period, scientists focused on the development of nature research, as well as the collection of zoological collections¹⁸⁰.

¹⁷⁴ Ibid. pp. 306-865.

¹⁷⁵ Ibid. pp. 306-865.

¹⁷⁶ E. Wolter, *Historyczne aspekty edukacji ekologicznej w Polsce*, pp. 131-133.

¹⁷⁷ Ibid. p. 144.

¹⁷⁸ H. Spencer, *O wychowaniu umysłowym moralnym i fizycznym*, tłum. A. Peretiatkowicz, wstęp R. Wroczyński, Wydanie 2, Warszawa, Wydawnictwo Akademickie „Żak” 2002.

¹⁷⁹ E. Wolter, *Historyczne aspekty edukacji ekologicznej w Polsce*, pp. 148-157.

¹⁸⁰ E. Wolter, *Historyczne aspekty edukacji ekologicznej w Polsce*, pp. 146-157.

It is worth noting that it was in 1866 that Ernst Haeckel (1834-1919) formulated the concept of "ecology", which defines the relationship between human communities and the social and natural environment¹⁸¹. He defined ecology as science about living organisms, the relationships between them and their living environments. The term "ecology", formulated by Haeckel, was made more precise by Stephen Alfred Forbes (1844-1930¹⁸²) on the basis of his classic work entitled *The Lake as a Microcosm* which was published in 1895¹⁸³.

In the period of positivism, on the Polish territories of the Prussian and Austrian partitions, nature protection was promoted during school education. In addition, it was the time when nature reserves were established¹⁸⁴.

Then the modernism of humanism essentially became part of the wide range of approaches to the axiology of pro-ecological education. The German philosopher Edmund Husserl (1859-1938) created one of the most important directions of 20th century philosophy – phenomenology, which was initially a mathematical and logical philosophy, then a philosophy of consciousness, finally developed into the philosophy of life. He believed that in order to create independent (certain) knowledge, it is necessary to get rid of assumptions, because they are secondary to primary truths – objective science is a subjective product of practice. In addition, science cannot be the work of an individual – and thus a completed work, because no way of philosophizing determines one rightness¹⁸⁵.

In turn, Henri Bergson (1859-1941) was an opponent of rationalism, intellectual knowledge constituting the basis of natural sciences. He believed that the intellect is too static in order to grasp the uniqueness of the dynamics of action (impoverishes the image of the world), while human behavior is guided by feelings. Bergson created a philosophical direction – intuitionism. He argued that intuitive cognition is selfless (connects instinct and intellect). In his philosophy of life, existence is a continuous creative process that is constantly evolving thanks to the "rush of life"¹⁸⁶.

Then Ludwig Wittgenstein (1889-1951), who was a student of B. Russell, in accordance with neo-positivist logic assumed that one should not preach ethical theses but act. Nevertheless, Martin Heidegger (1889-1976), who was E. Husserl's student, being perceived as a humanist, philosopher and representative of existentialism, decided that the basic principle of knowledge must be its truthfulness, the essence of truth – freedom¹⁸⁷.

¹⁸¹ Z. Wójcik, *Czynniki i uwarunkowania rozwoju świadomości ekologicznej człowieka*, in: B. Kuźnicka (ed.), *Ekologia człowieka, historia, współczesność*, Warszawa, PAN, 1995, p. 98.

¹⁸² S. A. Forbes, *The Lake as a Microcosm*, Bulletin of the Peoria Science Association 1887: 77-87. Reprinted in Bulletin Illinois Natural History Survey 15: 537-550, 1925.

¹⁸³ J. M. Dołęga, *Znaczenie nauk ekologicznych w ochronie środowiska i edukacji ekologicznej*, in: Z. Ciećko, J.M. Dołęga (ed.), *Ochrona środowiska i edukacja ekologiczna w Unii Europejskiej i Polsce*, Olecko, Wydawnictwo Wszechnicy Mazurskiej, 2003, p. 23; Ch. J. Krebs, *Ekologia. Eksperymentalna analiza rozmieszczenia i liczebności*, przekład z ang. A. Kozakiewicz, M. Kozakiewicz, J. Szacki, Warszawa, PWN, 2001, p. 7.

¹⁸⁴ E. Wolter, *Historyczne aspekty edukacji ekologicznej w Polsce*, pp. 158-159.

¹⁸⁵ Ibid. p. 162.

¹⁸⁶ Ibid. p. 162.

¹⁸⁷ Ibid. p. 162-163.

The modernist culture of the first half of the 20th century was the culture of the city – a bourgeois civilization inspired by the positivist worship of progress.

One of the trends characteristic for modernism was neo-romanticism – a direction that continued the tradition of romanticism. In Polish culture this period of 1890-1918 was called “Young Poland”. It was the implication of European modernism. It resulted in the revival of national-independence romantic traditions, the development of realistic and naturalistic tendencies, and the worship of the individual sphere of the spirit.

Stanisław Witkiewicz (1851-1915), who created in architecture style characteristic for Zakopane, a place in Polish mountains, admired the beauty of the power of natural beauty. He exhibited the strong relationship of man with the natural environment and its constructive impact on human health. He wrote, among others, about the fact that the misery of human relations will not change until people really think about their souls¹⁸⁸. He believed that everyone should take up the challenge of self-education and self-upbringing (self-education), involving the need to set their attitude towards people and phenomena on the highest possible basis, which is goodness, gentleness, stability, which does not exclude either strength or truth¹⁸⁹. He believed in the value of creative enthusiasm. However, the synthesis of nature can be mastered only through harmony with nature.

The world of nature and the motifs of the seasons were also close to Jan Kasprowicz (1860-1926), who associated them with the evolution of creativity in all areas: from naturalism through symbolism and expressionism to regional dialect.

Władysław Reymont (1867-1925) and Stefan Żeromski (1864-1925) also exposed the fullness of life and natural beauty.

However, the necessity of combining natural and humanistic knowledge was presented by the pedagogue Stanisław Karpowicz (1864-1921)¹⁹⁰. Above all, the role of Jan Gwalbert Pawlikowski (1860-1939) – the initiator of the Polish nature protection movement, should be emphasized, because he created a school for nature protection, which includes, in turn, outstanding naturalists, such as M. Sokołowski (1894-1939), W. Kulesza (1891-1938), W. Szafer (1886-1970), B. Hryniewiecki (1875-1963), and S. Kulczyński (1895-1975)¹⁹¹.

It is worth noting that Pawlikowski himself was the author of translations of many foreign laws and Polish nature protection legislation. His pioneering thought – expressed by the thesis of the necessity of treating the idea of nature protection as a cultural mainstream and its multifaceted organization should be mentioned. This belief, attitude is an example of ecological education and puts Pawlikowski as well as his achievements among the creators of the modern idea of nature protection, conditioned primarily by awakening and developing social awareness, ecological culture – in the scope of species, individual, reserve

¹⁸⁸ S. Witkiewicz, *Myśli*, Warszawa, Towarzystwo Wydawnicze „Ignis”, 1923, p. 51.

¹⁸⁹ Ibid. p. 14, 58.

¹⁹⁰ E. Wolter, *Historyczne aspekty edukacji ekologicznej w Polsce*, pp. 164-166.

¹⁹¹ Ibid. pp. 166-168.

protection, creations of living nature (plants, animals) and inanimate (rocks). It is also associated with a warning that the greatest danger threatening nature comes from man, who treats it as an inexhaustible source of use. Pawlikowski repeatedly opposed the tormenting of animals. He explained that man is part of nature, he bore its features for a long time and was one inseparable element of nature – he probably did not realize its value. When man became more knowledgeable and created his (urban) works, he went away too far from nature – he felt that he had lost something valuable. Pawlikowski justified the need to take up the struggle of true culture, an integral part of which is ecological awareness – with the pseudo-culture that damages the natural environment¹⁹². The significant educational task is to teach the rational management of natural resources¹⁹³.

Jan Gwalbert Pawlikowski, initiated and made a valuable contribution to his efforts for the development of protective legislation enabling the protection of nature, regardless of the will of the owner or holder of the rights of use – due to the scientific, aesthetic, historical and commemorative purpose and preservation of the specific character of the area. At the same time, he explained that the act itself is not yet protection and that is why he emphasized the importance of promoting the idea of nature protection among the society, so that it would penetrate the masses and become voluntary, real protection, not resulting only from obligation, but it should be a culturally grounded idea, norms and habits of conduct. In order to achieve such an attitude, the society must taught such behaviours¹⁹⁴.

According to Pawlikowski, it was the task of the state to organize didactic and educational activities, including not only intellectual and fitness but also emotional and motivational sphere of personality.

The result of extensive and complex educational work may be the evaluation of nature, and its protection should become an inspiration for shaping moral, intellectual, physical as well as social forces, especially among the young generation –namely including moral, mental, social, aesthetic and health education. Teaching – learning can be implemented in various forms, such as: nature expeditions, trips, associations or sections (tourist, animal protection), nature clubs, sightseeing societies and nature lovers, using didactic means: literary works, myths and legends referring to nature (trees, stones), atlases of plants and animals, geological guides, nature specimens, articles devoted to the issues connected with nature¹⁹⁵.

Education advantageous to learning in regard to the value of the natural environment implies the field of civil and patriotic education. Nature is a value for social education by developing a love for native nature, its geographical, historical and ethnographic elements. Nature is also a value necessary to protect the characteristic features of the local landscape as treasures of both native culture and the subject of national pride.

That is why, for these reasons, the protection of Polish nature was put on equally with patriotism and in general it should become the norm of social behavior. Health

¹⁹² J. G. Pawlikowski, *Kultura a natura*, Łódź, Biblioteka Obywatela, 2010.

¹⁹³ E. Wolter, *Historyczne aspekty edukacji ekologicznej w Polsce*, pp. 167-171.

¹⁹⁴ J. G. Pawlikowski, *Kultura a natura*, Łódź, Biblioteka Obywatela, 2010.

¹⁹⁵ Ibid.

education is also important in upbringing and ecological education as nature helps to maintain not only psychophysical balance but is also an accompaniment to human feelings.

Both ecological upbringing and education are also performed through aesthetic values. Pawlikowski explained that it was necessary to protect nature, following the model of works of art, motivated by aesthetic (ideal nature) considerations related to spiritual needs. People create picturesque descriptions of nature, express an adoration by means of writing, painting, drawing, composing, arranging flower beds resembling forest corners, resting in the bosom of nature as well as contemplating¹⁹⁶.

The presented components of pro-ecological education are complementary – they teach the formulation of judgments, sensitivity to beauty, responsibility. In addition, they shape pro-social and pro-ecological attitudes. Jan Gwalbert Pawlikowski demonstrated the necessity to shape pro-ecological social sensitivity as well as the need to conduct extensive educational work as a cultural mainstream, which is depicted in a sensual, rational and irrational perspective. He argued that there are masterpieces in nature comparable to outstanding artistic works. They are a cultural treasure and therefore the protection of nature, as one of the implications of culture, involves “becoming aware about the truth of nature aware, increasing its value”¹⁹⁷.

The issues of nature were also discussed by Marian Raciborski (1863-1917), the initiator of the nature conservation movement. This movement was continued by Władysław Szafer (1886-1970), who initiated the creation of the oldest nature reserve in the Polish territory in the Białowieża Forest and contributed to the creation of the International Bureau of Nature Conservation in Brussels¹⁹⁸.

In 1920, the State Council for Nature Conservation was established, headed by the prominent Polish naturalist – Władysław Szafer. In 1923, he also intended to establish the League for the Conservation of Nature in Poland, inspired by the Swiss League for Conservation of Nature, which had been successfully thriving since 1909. In 1928, the League for Nature Conservation was established, which actively engaged in the campaign on the protection of Tatra's nature and the establishment of a national park in this area, carried out in particular by the State Council for Nature Conservation. With the outbreak of World War II, the League's activity was discontinued. The year 1946 is the time when the League for Nature Conservation was again a full-fledged association. In the first place this association shaped the proper man's attitude towards nature, awakening love to nature, especially among young people. Magazine “Nature Poland” began to appear since 1957. Then League for Conservation of Nature applied for and received public support in the following matters: establishment of a ministry of environmental protection, appointment

¹⁹⁶ Ibid.

¹⁹⁷ E. Wolter, *Jan Gwalbert Pawlikowski (1860-1939) Człowiek jest częścią przyrody*, „Wychowawca” nr 07-08, 2004, http://www.wychowawca.home.pl/website/miesiecznik/07-08_139-140/04.htm, downloaded on 20th October 2010; E. Wolter, *Historyczne aspekty edukacji ekologicznej w Polsce*, pp. 170-172.

¹⁹⁸ E. Wolter, *Historyczne aspekty edukacji ekologicznej w Polsce*, p. 172.

of the Parliamentary Committee for Environmental Protection, development of the principles of state ecopolitics by the Government, introduction of a separate subject "Environmental protection" at all levels of education, legal protection of areas of outstanding natural value, creation of national parks, nature reserves, landscape parks, protected landscape areas, ecological lands, etc., establishment of Bank Of Environment Protection and National Fund for Environmental Protection. Today League for Conservation of Nature also cooperates with many national and international environmental organizations such as the International Coalition "Nature Volunteers" (CVA), Europa Nostra and the World Society for the Protection of Animals (WSPA). In addition, League for Conservation of Nature is, among others, founding member of the World Union for Conservation of Nature (IUCN). League for Conservation of Mature also runs the European Ecological Centre, which is the initiator and implementer of the European Green Card, which met with significant interest of national institutions¹⁹⁹.

The co-creator of the Polish theory of nature protection was a botanist – Adam Wodziczko (1887-1948). Thanks to him three nature reserves were created. He treated the nature reserve as a harmonious whole, in which every living thing has a certain task to fulfill and you cannot remove any links so as not to harm the whole. He claimed that nature is a tutor of future generations as "the beloved face of our homeland." He propagated the idea of nature protection²⁰⁰.

Marian Sokołowski (1894-1939) also discussed the issue of environmental education and upbringing. He is the author of scientific dissertations and many works promoting native nature and, in particular, the beauty of the Tatra Mountains. He explained that in order to be able to pass on cultural and natural heritage to the next generations, it is necessary to popularize natural and scientific knowledge and educate society to lead a mature life together with the natural environment. Sokołowski also emphasized aesthetic value of the natural environment and its historical and patriotic value. He noticed the need to introduce nature protection issues into didactic and educational work at school in various subjects (nature, geography, history, literature), while considering a separate teaching subject devoted to this issue. In addition, Sokołowski valued didactic talks concerning the nature, plant and animal protection. He also discussed the issue of humane treatment of animals, sharply condemning the forced fattening of poultry and hunting organized to derive fun. He also criticized the inefficient establishment of zoological collections (aquariums, terrariums, cages for wild animals). Sokołowski believed that it is necessary to talk to children about animals, remove prejudices against them (especially leeches, snakes, lizards, frogs). He also claimed that children must be taught the respect for animals, because they are also useful for humans. He also emphasized the educational value of (well planned and carried out) trips to nature reserves and nature parks. According to Sokołowski, feeding animals and birds, planting fruit trees, caring for potted plants, establishing school gardens – these, in fact, simple and easy to implement in school practice, initiate

¹⁹⁹ Liga Ochrony Przyrody http://www.lop.org.pl/index.php?option=com_content&view=article&id=18&Itemid=24, downloaded on 12.10.2011.

²⁰⁰ E. Wolter, *Historyczne aspekty edukacji ekologicznej w Polsce*, p. 174.

good cooperation with nature and communing with it. He also argued that direct contact with nature, especially with the forest, has a huge impact on the child's spiritual development, helps to grow naturally into culture by means of learning about the monuments of native nature²⁰¹.

In the period of Young Poland and in the years of the Second Polish Republic, the issues of nature protection were discussed primarily by botanists, zoologists, naturalists and geologists. Thanks to scientific research, publications and organizational activity, they propagated knowledge about the environment, making others aware of the need to protect the natural resources of the environment.

In the periodicals published in that period, articles about protecting individual plants, animals, forest reserves, fisheries, tourism and poetic art, expressing the beauty of nature, prevailed. Specialist-educational articles were published as well as information on current conferences, lectures promoting the knowledge of nature and related to environmental protection were presented. In addition, legal regulations and circular letters regarding to the protection of both Polish and foreign legislation were published there. In these magazines, photos of flora and fauna as well as health resorts were presented. Reports were published in the press in regard to the activity of agricultural circles and on the course of the "Spring Festival" or nature competitions²⁰².

Cecylia Plater-Zyberkówna (1853-1920) made interesting considerations about the place of man in nature. She wrote, among others, that in human life, as in nature, everything has its proper time – and so youth – like spring, is the time of the most intense work and puberty. The author compared the human personality: a) with volatile sand – thus emphasizing the features: exterior, opportunism, instability of character; b) with clay – expressing heaviness, stiffness and persistence of upbringing; c) with mud marshes – defining sensual and shallow individuality in proceedings; d) and finally with humus – describing the personality of the activist²⁰³. According to her, in nature, every living being has its place in mutual dependence on the laws of nature²⁰⁴.

Plater-Zyberkówna compared a child with grain, and the upbringing process to a process of plant care, which, without care (air, moisture, cleaning the soil of weeds), cannot develop properly. In addition, she claimed that the individuality of each soul should be respected²⁰⁵. She also noticed the interdependence of human existence and the surrounding natural environment. She also drew attention to the issue of raising a healthy society as a national-state community²⁰⁶.

Nowadays, the attitude characteristic for postmodernism seems to be the most influential, which, like modernism, implies that what is radical and conservative is not a sufficiently precise theoretical concept, but is associated with post-industrial

²⁰¹ E. Wolter, *Historyczne aspekty edukacji ekologicznej w Polsce*, pp. 174-177.

²⁰² Ibid. pp. 178-180.

²⁰³ Ibid. p. 181.

²⁰⁴ Ibid. p. 181.

²⁰⁵ Ibid. p. 182.

²⁰⁶ Ibid. p. 182.

quality of high technology, while maintaining multi-directional criticism of post-industrial society²⁰⁷.

It is worth emphasizing that in difficult years of rapid civilization progress after the end of World War II, the *Universal Declaration of Human Rights* was adopted on December 10, 1948 as the common highest goal of all peoples and all nations in pursuit of achieving through teaching and upbringing in order to develop respect for human rights and freedoms, and in particular the right to life²⁰⁸. It was a courageous and clear document based on the assumptions of personalism, so it is not surprising that in connection with new trends, especially postmodernism, the possibility of softening its meaning was sought, which is reflected, among others, in the treaty developed under the Council of Europe and entitled: *European Convention on Human Rights*²⁰⁹.

The Catholic Church also dealt with the issue of pro-environmental education. It was discussed, among others Pope Pius XII (1876-1958), who spoke about the need to respect the fair division of labour for general social good. In turn, Pope John XXIII (1881-1963) in the Encyclical "*Mater et Magistra*", signed on May 15, 1961, raised the problem of fair remuneration for work and the need to implement the principles of humanization of enterprises in everyday life. He postulated the renewal of social relations in truth, justice and love²¹⁰. At the same time, he emphasized the importance of the role of the social system in the development of societies.

John XXIII explained that peace on earth protects the order in the universe, established by God – the Creator, and harmony in social relations. Each person is a person who is subjected to existing rights and obligations. Each of us, therefore, has a number of powers, such as the right to live and have a dignified standard of living, the right to respect and have a good opinion, the right to worship God and to choose freely own marital status as well as to have the right lead a free family life. Everyone is a member of the human family – and thus has the right to protect their own rights²¹¹.

While John XXIII in the Encyclical "*Mater et Magistra*" sought ways to restore the socio-economic balance in the accelerated economic development after World War II – in the Encyclical "*Pacem in Terris*" he defined the humanistic principles of integral international peace – shaping peace as well as respect for personal human freedom²¹².

Humanist reforms, for the sake of sustainable and authentic human development, were continued during the pontificate of Pope Paul VI (1897-1978) in years 1963–

²⁰⁷ A. Bullock, O. Stallybrass, S. Trombley, B. Eadie (ed.), *Słownik pojęć postmodernistycznych*, Katowice, Wydawnictwo Książnica, 1999, p. 461; K. Wilkoszewska, *Czym jest postmodernizm?*, Kraków PAN, 1997, pp. 15-43; Z. Melosik, *Pedagogika postmodernizmu*, in: Z. Kwieciński, B. Śliwerski (ed.), *Pedagogika*, t. 1, Warszawa, PWN, 2008, pp. 452-465.

²⁰⁸ *Powszechna Deklaracja Praw Człowieka*, Warszawa, ONZ, 1989, pp. 5-16.

²⁰⁹ *Europejska Konwencja Praw Człowieka*, Zakamycze, Kantor Wydawniczy, 2000, p. 5.

²¹⁰ Jan XXIII, *Mater et Magistra*, in: Jan XXIII, Paweł VI, Jan Paweł II, *Encykliki*, Warszawa, Instytut Wydawniczy PAX, 1981, pp. 16-48.

²¹¹ Jan XXIII, *Pacem in terris*, in: Jan XXIII, Paweł VI, Jan Paweł II, *Encykliki*, Warszawa, Instytut Wydawniczy PAX, 1981, pp. 49-79.

²¹² Jan Paweł II, *Sollicitudo rei socialis*, Wrocław, Wydawnictwo Wrocławskiej Księgarni Archidiecezjalnej, 1994, p. 107.

1975 (the encyclical "*Populorum Progressio*" is an exemplification, signed on March 26, 1967). Also during the pontificate of John Paul II, being in charge of the Church since 1978, who was the co-creator of integrated ecology, combining environmental protection with care for the spiritual human environment John Paul II (1920-2005) in the aspects of orderly relations between people, social relations between citizens and the power of a given state, relations between states, and relations between people and states and global power – values founded on the foundation of truth, justice, love and freedom²¹³.

Sustainable development (eco-development), in the concept of John Paul II leads to a "civilization of love"²¹⁴. It implies cultural spiritual heritage, native appreciation as well as human dignity. John Paul II repeatedly reminded that European culture is a synthesis of Christianity and humanism, therefore Christian identity must be nurtured and rediscovered for the successful future of this continent – especially because thanks to Christianity, Europe has gradually matured to accept "human dignity" as a value²¹⁵.

John Paul II emphasized that, among others, the Church serves true freedom and the explication of human experience. In addition it pursues to achieve the truth and justice through the Gospel, shaping a mature and full social personality, which is prepared for ecumenical dialogue²¹⁶.

According to John Paul II, prosperous homelands are both Europe's prosperity and earthly mothers of the communities of a given nation. The law of force cannot dominate over the power of law, so the sovereignty of society is the basis of the (well-) existence of every state. John Paul II combined the love of his homeland with respect for other nations – respect for their autonomous rights and actions.

In the *Message for World Day of Peace*, Pope John Paul II explained that there is no peace without justice as well as there is no justice without forgiveness, which ensures long-lasting real social benefit²¹⁷.

John Paul II justifies that man can realize the value of truth and good only through freedom. The basis of external freedom is the internal freedom of each individual – a social being who realizes himself as a Person. Freedom is given and at the same time asked to man by the Creator. Mental disposition expressed by the ability to be a spiritually autonomous being is achieved when a child is properly brought up from an early age so that human beings realize their humanity

²¹³ Paweł VI, *Populorum Progressio*, in: Jan XXIII, Paweł VI, Jan Paweł II, *Encykliki*, Warszawa, Instytut Wydawniczy PAX, 1981, pp. 116-141; W. Bołoz, *Etyczne uwarunkowania edukacji ekologicznej rodziny*, in: W. Bołoz (ed.), *Edukacja ekologiczna rodziny stan możliwości programu*, Warszawa, Wydawnictwo Akademii Teologii Katolickiej, 1995, pp. 28-29; Jan XXIII, *Pacem in terris*, in: Jan XXIII, Paweł VI, Jan Paweł II, *Encykliki*, Warszawa, Instytut Wydawniczy PAX, 1981, pp. 22-23.

²¹⁴ Jan Paweł II, *List do rodzin*, „L'Osservatore Romano” (wersja polska). Watykan, 1994; polski przekład wydany w Częstochowie, Edycja Świętego Pawła, 2004, p. 15.

²¹⁵ *Co Jan Paweł II mówi o zjednoczeniu Europy*, Kraków, Wydawnictwo „M”, 2003, pp. 112-239.

²¹⁶ Jan Paweł II, *Musicie od siebie wymagać*, „W drodze”, Poznań, 1984, pp. 301-309.

²¹⁷ Jan Paweł II. *Autobiografia*, Kraków, Wydawnictwo Literackie, 2003, p. 185; Jan Paweł II, *O miłosierdziu – wybór myśli*, Sandomierz, Wydawnictwo Diecezjalne, 2002, pp. 37-38; Jan Paweł II, *Ojczyzna jest naszą matką*, Poznań – Warszawa, Pallottinum, 1985, pp. 3-18.

through social interactions and the gradual acquisition of cultural competences in a complex process of inculturation and socialization²¹⁸.

According to Pope John Paul II, the humanistic spiritual achievements in the field of pro-ecological education for sustainable development concern mainly human subjectivity. Its first social source is a properly functioning family as the most valuable educational environment. The family is the initiation of all human communities, conditions must be created so that mature motherhood and fatherhood, mutual respect between spouses can be realized in social life. In other words, duty is the most complete attitude of responding to value²¹⁹.

John Paul II many times emphasised the importance of the parental right and duty to raise children in truth and in order to achieve the truth. Parents are obliged to notice in children the greatest treasure and do everything they can to make the family a domestic church that protects marriage, love and life.

According to John Paul II, it is necessary to constructively inspire the process of upbringing so that man becomes *more and more human – he is more, and not only has more*, that is, through what he has, he can be a man²²⁰. In order for man to realize this socially desirable virtue – John Paul II emphasized the necessity for humanization of work. Therefore, an employee should be treated honestly, in accordance with interpersonal attitudes affirming human dignity – principles of social life balanced in content and form. A threat to sustainable social development are all social pathologies associated with the moral crisis, starting from malfunctioning families. The crisis of humanity is above all a crisis of the family, especially the nuclear one, which, according to John Paul II, is connected with the genealogy of every person leaving the family, in order to realize their vocation for life in the new family²²¹.

Each educator is a person who “gives birth” in a spiritual sense. Even those people who are not biological parents but still work with children and youth, become mothers and fathers (spiritual parenthood)²²². Mature and responsible parenting, also spiritual, understands young people, promotes comprehensive

²¹⁸ E. Wolter, *Pamięć i tożsamość Jana Pawła II*, in: *Jan Paweł II Wielki 18 V 1920-16 X 1978 – 2 IV 2005*. Olecko, Wydawnictwo Wszechnicy Mazurskiej „Acta Universitatis Masuriensis” („Episteme” nr 50, 2005), 2005, pp. 363-364; Jan Paweł II, *Do młodych całego świata*, Orędzie Jana Pawła II na VI Światowy Dzień Młodzieży, Lublin, Edycja Paulińska, 1991, p. 6; E. Wolter, *O wychowawczym zboczeniu wartości niepodległości wewnętrznej*, in: T. Zaniewska, N. Pospieszny, Z. Stankiewicz (red), *Światło wśród burzy. Szkolnictwo i oświata polska na Zachodzie w czasie drugiej wojny światowej*, Białystok, Wydawnictwo Uniwersyteckie Trans Humana, 2004, pp. 308-316.

²¹⁹ K. Wojtyła, *Zagadnienie podmiotu moralności*, Lublin, TN KUL, 1991, p. 7; *Dekalog. Przemówienia i homilie Jana Pawła II – IV pielgrzymka do Ojczyzny*, Pelplin, Wydawnictwo Diecezjalne, 1991, pp. 100-116; K. Wojtyła, *Człowiek w polu odpowiedzialności*, Rzym – Lublin, Instytut Jana Pawła II KUL, 1991, p. 11.

²²⁰ Jan Paweł II, *Przemówienie w siedzibie Organizacji Narodów Zjednoczonych do Spraw Oświaty Nauki i Kultury (UNESCO) z 2 czerwca 1980 r.*, in: S. Urbański (ed.), *Wychowanie w nauczaniu Jana Pawła II 1978-1999*, Warszawa, Wyższa Szkoła Zarządzania i Przedsiębiorczości im. Bogdana Jańskiego, 2000, p. 130.

²²¹ Jan Paweł II, *List do rodzin*, „L'Osservatore Romano” (wersja polska), Watykan, 1994; polski przekład wydany w Częstochowie, Edycja Świętego Pawła, 2004, pp. 24, 64.

²²² Cz. Drążek, J. Kawecki, *Dziecko w nauczaniu Jana Pawła II. Antologia wypowiedzi*, Kraków, Wydawnictwo Apostolstwa Modlitwy, 1986, pp. 49-50.

development and prevents social pathologies in the social system caused by anxiety about the future. It was human dignity which John Paul II demanded to be effectively protected against humiliation, promiscuity and intoxication. The examples of negative phenomena mentioned above, on a wider social scale, provoke unpredictable consequences²²³.

According to John Paul II, using the human person as a tool introduces social disorder, an atmosphere of dishonesty and threatens sustainable social development. He also believed that everything, what is not confirmed by an objective reality, is socially harmful phenomenon because it is not real²²⁴.

John Paul II postulated the need to make public life more truthful and honest. Especially young people are sensitive to: truth, goodness, justice, beauty – values through which they try to search for themselves. "Let's restore the splendor of the beautiful word honesty" – wrote John Paul II, so that young people could enjoy the joy of inner beauty, courage, strength of virtue, personal dialogue and community. Evil cannot achieve ultimate victory because good, love and life, as the values of ethical reference in social coexistence, ultimately triumph over death and hatred²²⁵.

It should be remembered that scientific and technical progress not only creates hope for a better future for humanity, but when it is not inspired by wise creativity, it threatens constructive and sustainable social development²²⁶.

The circumstances often lead to the conclusion that theory may be something the most practical²²⁷. Also, according to John Paul II, the orthodox source of honest social behaviour – upbringing and pro-ecological education, would be primarily a true view of reality. This view should refer to the reason for the existence of such contemporary phenomena that would be regulators of the principles of human coexistence. Education should be performed in truth and constant rebuilding of memory in the perspective of new goals. In addition, this would be the basic challenge of social culture, not an easy methodological postulate to be implemented connected with the hermeneutic explication of the mystery of man²²⁸.

Pro-ecological education can be extended by discussing the issue of world peace, which John Paul II presented in *the Message for World Day of Peace on January 1, 1979*. In this message, the Pope emphasized the international threat of peaceful coexistence because of the existence of opposing political groups – Western liberal capitalism and Eastern Marxist collectivism²²⁹.

²²³ Jan Paweł II, *Przemówienie na 169 Konferencję Episkopatu Polski w dn. 5 czerwca 1979 r. na Jasnej Górze*, in: I. Makowicz, *Bardzo pragnę przybyć do was. Fragmenty przemówień, listów oraz wyjątki z Encykliki "Redemptor hominis" Ojca Świętego Jana Pawła II*, Częstochowa, Kuria Diecezjalna, 1979, p. 101.

²²⁴ E. Wolter, *Jan Paweł II rozważania o pamięci i tożsamości*, in: „Wychowanie na co Dzień” nr 4-5, 2005, p. 58.

²²⁵ Ibid. p. 59.

²²⁶ E. Wolter, *Historyczne aspekty edukacji ekologicznej w Polsce*, pp. 218-219.

²²⁷ K. Wojtyła, *Elementarz etyczny*, Wrocław, Wydawnictwo Wrocławskiej Księgarni Archidiecezjalnej, 1995, pp. 33-34.

²²⁸ E. Wolter, *Historyczne aspekty edukacji ekologicznej w Polsce*, p. 220.

²²⁹ Jan Paweł II, *Dzieła Zebrane, T. V, Orędzia, przesłania, przemówienia okolicznościowe*, (team ed. P. Ptasznik et al.) Kraków, Wydawnictwo „M”, 2007.

In turn, in the Encyclical "Sollicitudo rei socialis", John Paul II expressed concern over the separation between the prosperous and developed northern part of the world and the poor area of the south, where illiteracy, exploitation prevails as well as economic, social and political oppression. Thus, he condemned imperialism and predatory capitalism. John Paul II, considering the problems of the modern world, also warned of the danger of nuclear weapons and terrorism²³⁰.

The Pope also noticed positive aspects of social development in countries, in which people are aware of their own dignity as well as dignity of every human being, which is expressed in respect for human rights and gives hope for a better future in overcoming the crisis. Additionally, John Paul II recognized ecological care as a positive phenomenon that implies sustainable social development.

In the same period, many international initiatives were undertaken to protect the natural environment as well as the human life environment. In 1969, the report of the UN Secretary General, Sithu U-Thanta, entitled: *Man and his environment*, the most significant and key tasks in the field of environmental protection were presented. In 1972, the 1st World Earth Congress took place in Stockholm which main slogan was: *Only one earth*. Swedish Prime Minister – Olaf Palmer defined the importance of peaceful coexistence in the harmonious development of societies. He postulated that only in a state of peace can one take the challenge of solving complex environmental problems. During the conference, the concept of eco-development (sustainable development) was discussed and an action plan for the natural environment was defined²³¹.

In 1972, during the 17th UNESCO General Conference, the Convention on the Protection of the World Cultural and Natural Heritage was adopted, which entered into force in 1975. The creation of an international list of cultural and natural heritage of the world was initiated. It is constituted by the goods of spiritual and material culture and natural monuments that must be protected against annihilation²³².

The concept of pro-ecological education, environmental protection and publicising ecological issues has been devoted to numerous international conferences. Under the direct influence of as many as 2,200 outstanding scholars who created in 1969, the Report of the ONZ-U-THANTA Secretary General entitled *Man and his Environment*. This report presented environmental protection activities as a priority to avoid world destruction²³³.

²³⁰ Jan Paweł II, *Encyklika "Sollicitudo rei socialis"*, in: http://www.opoka.org.pl/biblioteka/W/WP/jan_pawel_ii/encykliki/sollicitudo.html, downloaded on 05th June 2013.

²³¹ E. Wolter, *Historyczne aspekty edukacji ekologicznej w Polsce*, p. 221; S. Kozłowski, *Rio początek ery ekologicznej. Szczyt Ziemi*, Łódź, Akapit Press, 1993; S. Kozłowski, *W drodze do ekorozwoju*. Warszawa, Wydawnictwo Naukowe PWN, 1997, pp. 15-83; E. Pyłka – Gutowska, *Ekologia z ochroną środowiska. Przewodnik*, Warszawa, Wydawnictwo Oświata, 1996, pp. 240-255; S. Kasprzak, *Normatywny wymiar ekologicznych i sozologicznych idei w systemie prawa państwowego i kościelnego*, Lublin, „BRAMKA” Studio Komputerowo – Wydawnicze, 2003, pp. 499-526.

²³² J. Mrówczyńska, *O konieczności ratowania dziedzictwa kulturalnego i naturalnego*, in: K. Łastowski, M. Rafiński (ed.), *Idea ekologii w świadomości społecznej*, Poznań – Daszewice, Sorus, 1992, pp. 49-53.

²³³ E. Wolter, *Historyczne aspekty edukacji ekologicznej w Polsce*, pp. 221-223; S. Kozłowski, *Rio początek ery ekologicznej. Szczyt Ziemi*, Łódź, Akapit Press, 1993; S. Kozłowski, *W drodze do ekorozwoju*. Warszawa, Wydawnictwo Naukowe PWN, 1997, pp. 15-83; E. Pyłka – Gutowska, *Ekologia z ochroną*

In 1972, the first “Earth Summit” was held in Stockholm under the slogan “Only one Earth”, during which the concept of sustainable development was raised. In turn, in 1975, a UNESCO Conference was held in Belgrade, during which the International Teaching Card (the so-called Belgrade Card) was adopted. This Card specifies the objectives of pro-environmental education and emphasizes the need to be included at all levels of education. In the same year, the International Congress in Kyoto was held, during which the issues of eco-development were considered²³⁴.

Thereafter, in 1977, during the UNESCO (*United Nations Educational, Scientific and Cultural Organization*) and UNEP (United Nations Environmental Program) devoted to environmental education in Tbilisi, the Tbilisi Declaration was adopted, which obliged member countries to implement pro-environmental education programs in educational practice²³⁵.

In 1982, during the International Conference in Nairobi, the problem of activating institutions – including workplaces – for environmental protection was taken up. And it was 1983 when the United Nations World Commission for Environment and Development started to take place. This conference was chaired by Gro Harlem Brundtland from Norway, which prepared and published the report in 1987 entitled *Our common future as a way to harmonious development of societies (the so-called Tokyo Card)*²³⁶.

In 1989, the *Vienna Declaration* was adopted during the International Symposium organized with the support of UNESCO and UN EP. This document emphasized the need for comprehensive cooperation between the authorities and the wider public in the field of environmental education²³⁷.

In 1992, the Second World Earth Summit (UN conference) in Brazil took place. It was entitled *Environment and development* (UNCED – United Nations Conference on Environment and Development). During this summit the *Rio de Janeiro Declaration* was adopted. It constitutes a great humanistic achievement – as it considers all pro-environmental activities in the perspective of man and his right to a healthy, creative life in harmony with nature, with care for present and future generations. Peace, development and environmental protection are interdependent and indivisible, so that the ideals, creativity and courage of young people around the world should be mobilized in order to develop a global partnership – sustainable and balanced development to ensure a better future and cooperation between countries in good faith²³⁸.

środowiska. Przewodnik, Warszawa, Wydawnictwo Oświata, 1996, pp. 240-255; S. Kasprzak, *Normatywny wymiar ekologicznych i zoologicznych idei w systemie prawa państwowego i kościelnego*, Lublin, „BRAMKA” Studio Komputerowe – Wydawnicze, 2003, pp. 499-526.

²³⁴ Ibid.

²³⁵ Ibid.

²³⁶ Ibid.

²³⁷ Ibid.

²³⁸ *Rio Declaration on Environment and Development*, in: S. Kozłowski, *W drodze do ekorozwoju*, Warszawa, Wydawnictwo Naukowe PWN, 1997, pp. 60-62; *Deklaracja z Rio w sprawie środowiska i rozwoju*, in: W. Bołoz (ed.), *Edukacja ekologiczna rodziny, stan, możliwości, programy*, Warszawa, Wydawnictwo Akademii Teologii Katolickiej, 1995, pp. 102-108; S. Kozłowski, *Rio początek ery ekologicznej. Szczyt Ziemi*, Łódź, Akapit Press, 1993; S. Kozłowski, *W drodze do ekorozwoju*, Warszawa, Wydawnictwo Naukowe PWN, 1997, pp. 15-83; E. Pyłka-Gutowska, *Ekologia*

In the course of this conference, the *Agenda 21 (Action Programme)* – global programme of activities was created. This program consists of the most important tasks to be carried out in 1993-2000²³⁹. The *United Nations Framework Convention on Climate Change* and the *Convention on Biological Diversity* were also adopted²⁴⁰. In 1977, a *World Declaration on Animal Rights* was also adopted in Brussels underlining that respect for animals is strictly related to mutual respect for people. Every animal has not only the right to respect but also has the right to expect man to be respected, cared for and protected, and that no animal may be subject to abuse or acts of cruelty²⁴¹.

The postulates of sustainable social development were included in the *Convention on the Child's Rights* adopted by the General Assembly of the United Nations on November 20, 1989. According to this document, every child has the right not only to receive special care and help but also harmonious development in an atmosphere of family happiness, love and understanding as an individually shaped individual²⁴².

From the turn of the 1960s and 1970s, the United Nations Educational, Scientific and Cultural Organisation (UNESCO) started to work, seeking ways to solve formalism and adapt educational institutions to the realities of life. The effect of the meeting and discussions are known educational reports. One of them was developed under the leadership of the French educational politician Edgar Faure and is entitled *Learn to be*²⁴³ (1972). After some time it was edited by James W. Botkin, Mahdi Elmandjr and Mirce Malitz – who entitle it as *Roman Club Report "Learn – Without Borders"* (1979)²⁴⁴.

Then the report of the European Commission of the XXII Directorate-General for Education, Youth Education and V Directorate-General for Employment, Industrial Relations and Social Affairs was published. It was prepared under the leadership of Edith Cresson (Commissioner for Research, Education and Training) and Pdraig Flynn (Commissioner for employment and social affairs) and published as the White Book of Education and Improvement. Teaching and learning on the path to

z ochroną środowiska. Przewodnik, Warszawa, Wydawnictwo Oświata, 1996, pp. 240-255; S. Kasprzak, *Normatywny wymiar ekologicznych i sozologicznych idei w systemie prawa państwowego i kościelnego*, Lublin, „BRAMKA” Studio Komputerowo – Wydawnicze, 2003, pp. 499-526.

²³⁹ S. Kozłowski, *Droga do ekorozwoju*. Warszawa, Wydawnictwo Naukowe PWN, 1994, p. 15; S. Kozłowski, *W drodze do ekorozwoju*, Warszawa, Wydawnictwo Naukowe PWN, 1997, pp. 59-82.

²⁴⁰ Ramowa Konwencja Narodów Zjednoczonych w sprawie zmian klimatu, http://www.mos.gov.pl/g2/big/2009_04/d9a9d8de814cb4af331da22ba819df0d.pdf, downloaded on 12.10.2013; *Konwencja o różnorodności biologicznej* <http://isap.sejm.gov.pl/DetailsServlet?id=WDU20021841532>, downloaded on 20th October 2013.

²⁴¹ Światowa Deklaracja Praw Zwierzęcia, <http://ww.org.pl/data/AKTYPRAWNE/deklaracja.pdf>, downloaded on 20th October 2013.

²⁴² E. Wolter, *Historyczne aspekty edukacji ekologicznej w Polsce*, pp. 223-224.

²⁴³ E. Faure, F. Herrera, A. R. Kaddoura, H. Lopes, A. W. Pietrowski. M. Rahnama, F. Ch. Ward, *Uczyć się, aby być*, Warszawa, PWN, 1975, pp. 84-237.

²⁴⁴ J. W. Botkin, M. Elmandjra, M. Malitza, *Uczyć się – bez granic. Jak zewrzeć „lukę ludzką”?*, Raport Klubu Rzymskiego, Warszawa, PWN 1982, p. 232.

a learning society (1995)²⁴⁵. Additional, it was prepared under the leadership of Jacques Delors a report entitled: Education is a hidden treasure (1996)²⁴⁶.

In these international documents the state of education in the world was assessed as well as the perspectives of its development were determined, so that schools could meet the needs of the student (humanization of the school). The main goal of a school was to prepare pupils for creative existence in society, satisfy own fulfillment as individuals as well as prepare the European community lead a life in the information society. It could be achieved thanks to the mutual recognition of credit points (European Credit Transfer System ECTS) and diplomas²⁴⁷.

The reform of education in Europe was performed in the form of the process of transferring cultural depth, combining high specialization with the creativity of personal initiative, responsibility through understanding that unrestrained technological progress is a threat not only to the ecosystem, but above all to the social system and the biosystem. Teaching is defined in international documents by the art of educating everyone – to the best of the abilities and aspirations of certain people as individuals and at the same time human being living in society. Educational institutions have been obliged to reconcile material progress with respect for human life and natural resources²⁴⁸.

In Poland, the introduction of pro-ecological education and upbringing, after World War II, was very difficult due to adverse political and economic conditions²⁴⁹. Starting from the year 1946, the knowledge about nature protection was presented only in slogans in Polish schools, as part of selected subjects, such as chemistry and geography. However, the process of extending this area of knowledge started in 1963²⁵⁰.

It was Walery Goetel (1889-1972) who in 1966 introduced the term “sozology”²⁵¹. Sozology is a natural science examining the causes and effects of changes in natural

²⁴⁵ *Biała Księga Kształcenia i Doskonalenia. Nauczanie i uczenie się na drodze do uczącego się społeczeństwa*, Warszawa, Wyższa Szkoła Pedagogiczna TWP, 1997.

²⁴⁶ J. Delors (ed.), *Edukacja jest w niej ukryty skarb*, Raport dla UNESCO Międzynarodowej Komisji do Spraw Edukacji dla XXI wieku, Warszawa, Stowarzyszenie Oświatowców Polskich, Wydawnictwa UNESCO, 1998, pp. 11-143.

²⁴⁷ J. Delors (ed.), *Edukacja jest w niej ukryty skarb. Raport dla UNESCO Międzynarodowej Komisji do Spraw Edukacji dla XXI wieku*, Warszawa, Stowarzyszenie Oświatowców Polskich, Wydawnictwa UNESCO, 1998, pp. 11-143.

²⁴⁸ Ibid. pp. 11-143; J. Poczesna, *Obrona idei „być” jako zadanie edukacji XXI wieku*, in: Łomny Z., Marcinowska-Łangowska K. (ed.), *Ku humanistycznej przyszłości świata w nowym stuleciu*, Opole, Wydawnictwo Uniwersytetu Opolskiego, 2001, pp. 29-38; Z. Wiatrowski, *Wyznaczniki powodzenia w edukacji zawodowej pierwszej dekady XXI wieku w Polsce*, in: Karpińska A. (ed.), *Edukacja w dialogu i reformie*, Białystok, Wydawnictwo Uniwersyteckie Trans Humana, 2002, pp. 274-283.

²⁴⁹ S. Kozłowski, *W drodze do ekorozwoju*, Warszawa, Wydawnictwo Naukowe PWN, 1997, pp. 15-21.

²⁵⁰ Z. Wnuk, M. Piasek, *Edukacja ekologiczna – kierunki rozwoju i perspektywy*, in: E. Jońca (ed.), *Edukacja ekologiczna w praktyce szkolnej*, Rzeszów, Wojewódzki Ośrodek Metodyczny, Pracownia Przedmiotów Przyrodniczych, 1995, p. 13; Z. Wnuk (ed.), *Ekologia i ochrona środowiska. Wybrane zagadnienia*, Rzeszów, Wydawnictwo Uniwersytetu Rzeszowskiego, 2010, pp. 352-357.

²⁵¹ J. M. Dołęga, *Znaczenie sozologii ekofilozofii w kształtowaniu świadomości proekologicznej*, „Człowiek i Przyroda” nr 8-9, 1998, p. 219; W. Sztumski, *Wychowanie sozologiczne – pobożne życzenie, utopia, konieczność?* in: J. M. Dołęga, J. W. Czarotowski (ed.), *Edukacja ekologiczna w rodzinie*, Olecko, Wydawnictwo Wszechnicy Mazurskiej Acta Universitatis Masuriensis („Episteme” 9/2000), 2000, p. 243.

systems. As a category, it defines not only the science devoted to changes taking place in the biosphere as a consequence of socio-economic activities and ways of alleviating negative consequences²⁵², but also is synonymous with protecting the human life environment in relation to human ecology²⁵³.

It wasn't until 1974 that special areas and units for environmental protection were introduced in the school curriculum which was obligatory in Polish schools of that period. In contrast, from 1978, in the school's program, in classes I-III, a new subject, "socio-natural environment"²⁵⁴, was introduced.

The basis of pro-ecological education as well as integrated ecological education is the eco-philosophy²⁵⁵ of opposing against the environmental crisis, which occurred at the turn of the sixties and seventies of the twentieth century. This trend appeared thanks to Henry Skolimowski who initiated the establishment of the Department of Ecological Philosophy at the University of Technology (1991) in Łódź and the Society of Friends of Ecological Philosophy in Warsaw (1992). In 1974 he introduced the concept of ecological humanism in the field of socio-natural environment²⁵⁶.

In an ecophilosophical approach, man is part of nature and only wisdom distinguishes him in an ecocentric world in which nature is the mysterious mother of the cosmic whole. Man not carries the "divine spark" of transcendence but also controls human desires for consumption. Due to the concern for the quality of life of future generations, man is able to subordinate economics to qualitative determinants of life, such as vital values (health, clean ecosystem and biosystem, and a healthy – non-toxic social atmosphere) agreements – a healthy social system).

In the service of eco-development, man does not use all the possibilities associated with the development of technology, but only the solutions of so-called soft technology, which remains in harmony with nature²⁵⁷. In such an approach to the issue of ecology, the application of intuitive thinking, putting family values over economic values and promoting local, bioregional communities is assumed to be of great significance²⁵⁸.

In 1981, a *Report on the state of threat to the natural environment in Poland*²⁵⁹ was published. The aforementioned report was prepared by Stefan Kozłowski

²⁵² K. Kowalska, *Zoologia*, in: K. Maślankiewicz (ed.), *Zarys dziejów nauk przyrodniczych w Polsce*, Warszawa, Wiedza Powszechna, 1983, p. 411.

²⁵³ Z. Wójcik, *Czynniki i uwarunkowania rozwoju świadomości ekologicznej człowieka*, in: B. Kuźnicka (ed.), *Ekologia człowieka historia i współczesność*, Warszawa, PAN, 1995, p. 89; N. Wolański *Ekologia człowieka. Podstawy ochrony środowiska i zdrowia człowieka. Wrażliwość na czynniki środowiska i biologiczne zmiany przystosowawcze*, tom 1, Warszawa, Wydawnictwo Naukowe PWN, 2012; N. Wolański, *Ekologia człowieka. Podstawy ochrony środowiska i zdrowia człowieka. Ewolucja i dostosowanie biokulturowe*, tom 2, Warszawa, Wydawnictwo Naukowe PWN, 2012.

²⁵⁴ E. Wolter, *Historyczne aspekty edukacji ekologicznej w Polsce*, p. 228.

²⁵⁵ K. Waloszczyk, *Kryzys ekologiczny w świetle ekofilozofii*, Łódź, Wydawnictwo Politechniki Łódzkiej, 1996, pp. 7-247.

²⁵⁶ W. Sobczyk, *Edukacja ekologiczna i prozdrowotna*, Kraków, NAP, 2003, p. 21.

²⁵⁷ L. Pawłowski, S. Zięba (ed.), *Humanizm ekologiczny*, T. 1, *Jakiej filozofii potrzebuje ekologia, Ochrona przyrody a ochrona człowieka*, Lublin, Wydawnictwo Uczelniane Politechniki Lubelskiej, 1992.

²⁵⁸ E. Wolter, *Historyczne aspekty edukacji ekologicznej w Polsce*, p. 229.

²⁵⁹ S. Kozłowski, *Droga do ekorozwoju*, Warszawa, Wydawnictwo Naukowe PWN, 1994, pp. 9-15.

(1928-2007), together with W. Brzeziński and Z. T. Wierzbicki. They devoted this publication published to the issues concerning the degradation of the natural environment and threats to human health. It was the first call demanding fundamental changes in the approach to environmental protection in Poland²⁶⁰.

As part of the meeting, which took place from February to April 1989, The concept of eco-development as a chance for the survival of civilization was taken up at the Round Table. Conducted discussions implied, among others, the problem of the development of pro-ecological upbringing and education. At the time, both their lack in vocational school programs as well as the deficiency in the teaching staff possessing appropriate competences enabling implementation of ecological issues were criticized²⁶¹.

1.2.2. Pro-ecological values in selected contemporary pedagogical fields

In the European cultural circle, the relationship man – nature emerges under the overwhelming influence of the idea of not only badly understood but sometimes even extreme anthropocentrism²⁶².

With the spread of the Cartesian-Newtonian paradigm in the development of civilization, there was a further change in the attitude of man towards the world of nature. In addition, his attention was focused only on both the cognitive and utilitarian dimension in the perception of either the ecosystem or biosystem. Man taking a clearly dominant position opposed his own world (social system) against to the found world, to nature²⁶³. This caused that the good relations between man and the environment have loosened up²⁶⁴.

The need not only for the proper synthesis in natural sciences was increasing but also for the humanistic perception of the environment, which combining ecological aspects as well as social ones would make it possible to determine the real place of man in the environment and his interactions with nature²⁶⁵ at the level of ecosystem, biosystem and a social system which were considered axiologically and methodically, but above all existentially.

The present human's attitude towards nature remains in connection with the need for upbringing and pro-ecological education. In Western Europe, there we can observe a clash between basically three approaches towards nature:

1. Anthropocentrism, distinguishing two human attitudes:
 - attitude of the conquistador (conqueror);

²⁶⁰ S. Kozłowski, *W drodze do ekorozwoju*. Warszawa, Wydawnictwo Naukowe PWN, 1997, pp. 15-16.

²⁶¹ E. Wolter, *Historyczne aspekty edukacji ekologicznej w Polsce*, p. 229.

²⁶² W. Tyburski, *Pojednać się z Ziemią. W kręgu zagadnień humanizmu ekologicznego*, Toruń, IPIR, 1993, p. 30.

²⁶³ W. Tyburski, *Etyka i ekologia*, Toruń, Wydawnictwo PKE – Oddział Pomorsko-Kujawski, 1995, p. 33.

²⁶⁴ W. Tyburski, *Pojednać się z Ziemią. W kręgu zagadnień humanizmu ekologicznego*, Toruń, IPIR, 1993, p. 30.

²⁶⁵ E. Rawicz-Olędzka, *O dwóch koncepcjach ekologii społecznej*, in: K. Łastowski, M. Rafiński (ed.), *Idee ekologii w świadomości społecznej*, Poznań-Daszewice, SORUS, 1992, p. 64.

- the patron's attitude, implementing the so-called shallow ecology, oriented, for example, at organic farming, establishing landscape parks, and others;
- 2. Biocentrism, focusing human's attention on all forms of life in the sphere of the biosystem and thus suggesting bioegalitarianism. It emphasizes that man is not a privileged species in the natural world, but remains one of the elements of the ecosystem;
- 3. Bioregionalism (as an alternative to the aforementioned approaches) is a carrier of the idea of bioregion protection for both ecological as well as political theory. It may reflect a particular human point of view in which the region – this “closer homeland” – provides a variety of impulses that connect the development of environmental upbringing and education. In this case, upbringing and education balance the current of interaction between universalism and particularism²⁶⁶.

As a consequence, the concepts connected with upbringing in pursuit of pro-ecological values in contemporary pedagogical faculties, in principle, fall into two main trends relating to environmental protection: *shallow ecology* and *deep ecology*.

The ecology characteristic for the dominant mainstream is also called *shallow ecology* or *moderate ecology*. Apart from diagnosing the critical state of the environment, it draws attention to the need to protect the ecosystem, including natural resources, and to avoid soil pollution and contamination. Within the area of interests of shallow ecology the implementation of waste utilization (recycling) and limiting material needs related to the exploitation of the Earth are included²⁶⁷.

Man – in accordance with ecological philosophy – should become aware of the risks and threats of its uncontrolled activities. In addition, man should strive to protect the natural environment²⁶⁸.

When it comes to *shallow ecology* as well as pro-ecological education connected with this field, the main emphasis is put on the effects of the devastation of the natural environment on the human species. In accordance with it, man should carefully manage natural resources, as well as act in such a way as to protect his species from destruction. “Without clean water, fresh air, healthy plants and animals that serve human food – the human race cannot survive” warn environmentalists²⁶⁹.

The main idea of *shallow ecology* is perfectly reflected in one of its concise slogans concerning human behaviour towards the earth: “Use this, not abuse”²⁷⁰. Pro-ecological education in the light of moderate ecology is based on shaping man by achieving substantial knowledge about ecosystems. Additionally, pro-

²⁶⁶ I. Melosik, Z. Melosik, *Edukacja ekologiczna: „antropocentryzm, biocentryzm czy bioregionalizm”*, „Edukacja. Studia. Badania. Innowacje” nr 2, 1995, pp. 46-51.

²⁶⁷ A. Gromkowska-Melosik, *Pedagogika ekologiczna*, in: Z. Kwieciński, B. Śliwerski (ed.), *Pedagogika*, t. 1, Warszawa, PWN, 2008, p. 428.

²⁶⁸ Ibid. p. 428.

²⁶⁹ Ibid. p. 428.

²⁷⁰ A. C. Wentworth, *Shallow ecology, Deep Ecology and Environmental Action*, <http://www.members.adcom/wutsamada2/ethics/esseys/Wentworth.htm>, downloaded on 12th December 2010.

ecological education is characterized by faith that the ecological crisis can be eliminated by means of modern technologies and solutions given by civil law²⁷¹.

Deep ecology, in turn, does not share the optimism of moderate ecology to resolve the ecological crisis. Its supporters believe that change is possible only by changing the awareness of man – his attitude towards nature in a much broader perspective – not only as an ecosystem, but as a biosystem, and as a relation of man to himself in the sphere of the social system. To That is why, it is essential here to reduce human needs with limited interference in ecosystems²⁷².

Arne Naess (1912-2009)²⁷³, who is a co-creator of the deep ecology trend, pays special attention to distinguishing the standard of living from its quality, and therefore, not placing an equal sign between economic growth and the increase in the quality of life. The scholar perceives in here the danger of a continuous increase in human needs which has its roots in the ideology of consumption and its tools, such as media and advertising²⁷⁴.

He distinguishes two basic norms resulting from deep ecological awareness: self-realization and biocentric equality. The concept of self-realization is understood here in a different way comparing to the dominant Western culture, in which it presents itself as the pursuit of hedonistic gratification or the realization of talents and opportunities hidden in the individual. According to A. Naess, real spiritual development usually occurs when we stop perceiving ourselves as isolated and competing individuals and we begin to identify ourselves with other people, starting with our family and friends (social system), and ending up with the entire species (biosystem)²⁷⁵.

It should be noted that the sense of self in *deep ecology* requires greater maturity and development as well as identification that takes into account the non-human world. The achievement of such self-realization is possible through meditation as well as ethical and empathic behaviour. The concept of *self-knowledge* is inherent in this issue this concept is also called the *deep ecological self*. According to Naess, deep ecological self is in every person, but reaching it is hampered by the civilization *hum of mass media* and the pace of life in Western civilization. *Deep ecology* as a philosophy of life can be a bridge connecting what is valuable and important in man with the surrounding nature. It allows you to find a justification for the meaning of existence and can be used to restore a rightful place to man in the universe. This is perfectly illustrated by one of the slogans of *deep ecology*: "We become people most fully when we love everything that surrounds us"²⁷⁶. Naess's

²⁷¹ A. Gromkowska-Melosik, *Pedagogika ekologiczna*, in: Z. Kwieciński, B. Śliwerski (ed.), *Pedagogika*, t. 1, Warszawa, PWN, 2008, p. 428.

²⁷² Ibid. p. 432.

²⁷³ Arne Naess - Norwegian philosopher, who first used the term deep ecology in 1973 in the article *The Shallow and the Deep, Long-Range Ecology Movements*. The creator of deep ecology is also considered a philosophy lecturer at Sierra College – George Sessions.

²⁷⁴ A. Gromkowska-Melosik, *Pedagogika ekologiczna*, in: Z. Kwieciński, B. Śliwerski (ed.), *Pedagogika*, t. 1, Warszawa, PWN, 2008, p. 432.

²⁷⁵ Ibid. p. 432.

²⁷⁶ D. Kiełczewski, *Nurty ekologiczne w filozofii*, in: B. Prandecka (ed.), *Interdyscyplinarne podstawy ochrony środowiska przyrodniczego*, Wrocław, Ossolineum, 1993, p. 40.

intention was to describe a deeper and more human-minded approach to Nature. He believed that this approach results from greater sensitivity of people towards each other and nature²⁷⁷.

The essence of *deep ecology* is a fundamental change in people's lifestyle, acquiring specific awareness and behaviour inspired by the new philosophy of life. According to Naess, it is necessary to constantly ask questions about human life, society and nature, as it was the case in the Socratic tradition. As an example of this in-depth question, we cite the following comparison between Bill Devall and George Sessions, "We ask why and how, where others don't ask questions. For example, as a science, ecology does not ask what kind of society would be best to create a particular ecosystem – which is considered a question of value theory, politics, and ethics. Deep ecology, on the other hand, goes beyond a specific factual scientific level of perception only of the ecosystem and represents the level of human wisdom in the perception of the social system and biosystem at the same time and the wisdom of the Earth"²⁷⁸.

In turn, as Naess writes: "We need to ask basic questions like this for the sense of technology, for the sense and attitude of man to all nature, as well as the question of whether the social and political structures of modern societies are appropriate to face the coming ecological crisis. It's not just about asking academic questions, but about deep inquiry that raises the greatest doubts and leads to the fact that it becomes your personal problem"²⁷⁹.

Therefore, *deep ecology* goes beyond protecting and repairing the ecosystem. Its goal is to change the way of thinking about nature and lifestyle in the social system. In addition, it aims at perceiving the links with us in the biosystem.

A summary of both approaches in *shallow ecology* and *deep ecology*, developed by Agnieszka Gromkowska-Melosik²⁸⁰, is given in Table 1 presented below:

²⁷⁷ A. Gromkowska-Melosik, *Pedagogika ekologiczna*, in: Z. Kwieciński, B. Śliwerski (ed.), *Pedagogika*, t. 1, Warszawa, PWN, 2008, pp. 431-433.

²⁷⁸ B. Devall, G. Sessions, *Radical Environmental Discourses. Deep Ecology*. in: L. M. Benton, J. Rennie Short (ed.), *Environmental Discourse and Practice. A Reader*, Oxford, 2000, pp. 192-194.

²⁷⁹ A. Naess, Rozmowy, „Zeszyty Edukacji Ekologicznej” z. 2, Dolina Wapienicy k. Bielska Białej, Pracownia na rzecz Wszystkich Istot, 1992.

²⁸⁰ A. Gromkowska-Melosik, *Pedagogika ekologiczna*, in: Z. Kwieciński, B. Śliwerski (ed.), *Pedagogika*, tom 1, Warszawa, PWN, 2008, p. 432.

Table 1. A summary of shallow ecology and deep ecology developed by Agnieszka Gromkowska-Melosik

Shallow ecology	Deep ecology
Domination over nature; Natural environment as a source of resources for man; Material, economic development aimed at increasing the human population; Belief in the renewable natural sources; Technology-based and science-based processes and practical solutions; consumerism; National, centralized communities	Harmony with nature; All nature has intrinsic value, all species are equal; Very simple material needs taking into account the goal of self-realization; Including a limited amount of natural resources; Moderate technology, non-dominant form of learning; Action according to moderate needs, recycling; Minority traditions, bioregions

Following the guiding idea of *deep ecology* concerning the need to change lifestyle, we want to emphasize the significant aspects connected with pro-ecological education that ethics as well as ecological philosophy bring into this aspect.

The basis of pro-ecological education becomes the system of pro-ecological values, centred around such problems as: care for nature, respect for the Earth and organisms inhabiting it, justice, action for peace, tolerance and cooperation for the protection of life²⁸¹ taken from ecophilosophy, also called ecological philosophy or philosophy of hope. Elements of eco-ecology in pro-ecological education create the answer to the question about the proper, moral behavior of man towards nature. It can be assumed that the precursors of the moral approach to the ecosystem, biosystem and sociosystem are Saint. Francis from Assisi (1181-1226), Albert Schweitzer (1875-1965) and Aldo Leopold (1887-1948).

The following assumptions of ecological ethics perfectly fit into the concepts of pro-ecological education:

1. Recognition of the limitations concerning natural resources of the Earth and the need for rational human interference in the natural environment (ecosystem);
2. Treating man as one of the elements of nature and striving to preserve species biodiversity (biosystem);
3. Striving to pass on the unspoiled natural environment to future generations and the development of pro-ecological sensitivity (social system)²⁸².

Taking into consideration the aforementioned speculations in regard to the concept of education to achieve pro-ecological values, we can state that there are two main trends in contemporary pedagogical directions related to environmental protection: *shallow ecology* and *deep ecology*. Additionally, it may be concluded that

²⁸¹ Ibid. p. 430.

²⁸² E. Kośmicki, *Podstawowe problemy etyki ekologicznej*. in: B. Andrzejewski (ed.), *Humanistyka i ekologia*, Poznań, Fundacja Warta, 1992, pp. 68-69.

pro-ecological education in our approach, closer to the concept of deep ecology, does not abandon the implementation of the assumptions set by the concepts of "moderate" but also raises philosophical questions for pupils, and even existential.

1.2.3. Axiology of pro-ecological education in Catholic Social Sciences

For many years, as part of pro-ecological education, the need to change the lifestyle has been recognized by promoting an attitude of care and respect for the Earth and its resources – the Church also turns out to be helpful in these aspects. Although ecological issues do not belong to the main fields in the social teaching of the Church, but numerous statements appear in the context of theological considerations about the creation of the world and man, on responsibility for the shape of modern civilization and matters of world development²⁸³.

We are currently attempting to compile several the most (as it seems) characteristic statements presenting the voice of the Church on environmental protection in order to understand the Catholic way of looking at pro-ecological values.

The pro-ecological message, close to the assumptions of the concept of pro-ecological education, is presented in several main directions of special attention of Catholic social teaching, especially such as:

- perception of man and principles of social life;
- opportunities and threats of modern civilization;
- the tension between hypoplasia and hyper development and the concept of real development;
- man and the biosphere as God's creatures;
- style, quality and sanctity of life;
- science-faith relationship;
- example of "ecological man" and patron of environmentalists Saint. Francis from Assisi²⁸⁴.

The papal pro-ecological thought about the human life environment: the biosystem – the ecosystem – the social system, was developed for many years and in the course of the experiments on which also the whole history of Christianity has projected. It arises from the rich tradition of Christian reflection on the problems

²⁸³ P. Krajewski, *Edukacja ekologiczna w dokumentach Kościoła oraz w prawie kanonicznym*, „Paedagogia Christiana”. T.: 28: *Edukacja Ekologiczna*, nr 2, 2011, Toruń, UMK, 2001, pp. 145-163; J. Grzesica, *Ochrona naturalnego środowiska człowieka*, Katowice, Księgarnia Św. Jacka, 1993; A. Mazur, *Nauka społeczna kościoła katolickiego w ochronie środowiska naturalnego*, Warszawa, „Civitas Christiana”, 1993; A. Szafrński, *Chrześcijańskie podstawy ekologii*, *Ekologia Humanistyczna*, t. 3, Lublin, Wydawnictwo KUL, 1993; Z. Świerczek, *Ekologia – Kościół i św. Franciszek*, Kraków, Wyższe Seminarium Duchowne OO. Franciszkanów, 1990.

²⁸⁴ S. Jaromi, Święty Franciszek jako patron ekologów, in: S. Niziński (ed.), *Ekologia a duchowość chrześcijańska*, Biblioteka Zeszytów Karmelitańskich nr 9, Flos Carmeli, Poznań, 2009, pp. 82-93; S. Jaromi OFM Conv.(ed.), „Zielony Zeszyt REFA” 2005 *Pismo Ruchu Ekologicznego Św. Franciszka z Asyżu*, Sandomierz, Wydawnictwo Diecezjalne i Drukarnia Diecezjalna w Sandomierzu, pp. 4-12; Jaromi S. OFM Conv., *Ekologia humana – chrześcijańska odpowiedź na kryzys ekologiczny*, Kraków, Wydawnictwo O. Franciszkanów „Bratni Zew”, 2004, pp. 166-173; S. Jaromi, (ed.) *Rosnąć można tylko z ziemi, Duchowość świata według Sergiusza Riabinina*, Kraków – Lublin, „Zielony Zeszyt REFA” 2006 Biuletyn Ruchu Ekologicznego św. Franciszka z Asyżu, 2006.

of the present day and has been specifically developed consistently both in the strictly scientific messages of the Pope to the Pontifical Academy of Sciences, as well as in general homilies and sermons, expressing the essence of the Christian concept of the human environment.

Although it possesses both holistic as well as great epistemological values, and its author is well known, it is struck by its practical absence in contemporary works in the field of philosophy or ecological politics. Perhaps this is because its basis is the *Christian Gospel of life*. Probably it is well known to most of us, so we will remind Stanisław Jaromi²⁸⁵ only her most important, as it seems, aptly referring to the ecosystem – biosystem – sociosystem:

- life is a gift;
- human life is sacred from conception to the end;
- the family is a special sanctuary of life;
- man's main wealth is the man himself together with the earth (CA 32);
- a proper ecological balance is impossible to achieve until the issue of structural forms of poverty existing in the world is resolved (CA 7);
- protection of life on earth is the main goal of all environmental programs;
- war is the largest social and ecological disaster;
- the biosystem is associated with the sociosystem, and culture co-constitutes nature (as an ecosystem), and these relationships are both negative and positive;
- man's alienation towards nature is, as a consequence, an action against the culture of life, but also all attempts to protect nature (ecosystem, biosystem) must include the social context (sociosystem);
- new ecological solidarity should include relations within the human community, care for future generations, as well as attitude towards the ecosystem and the biosystem.

The most mature form of papal pro-ecological thought is the concept of *ecologia humana*, which is an attempt to universally approach the broadly understood issues of ecology and environmental protection of human life. *Human ecology* is the original proposition of John Paul II (1920-2005), covering a wide range of issues in the vast field of human-nature ties (ecosystem – biosystem – sociosystem). It becomes a harmonious combination of natural and social theories with issues of humanities and culture as well as Christian faith in the Creator, who directs the processes of world evolution. *Ecologia humana* contributes to the interdisciplinary dialogue of philosophy and theology as well as natural and social sciences²⁸⁶.

In the papal considerations we read the concept of *human ecology* (*ecologia humana*) in a broad and narrow sense. In a narrower sense, it refers only to the social environment and postulates responsibility and concern for the good of the family, quality of interpersonal relations, respect for human nature and full human development (social system)²⁸⁷.

²⁸⁵ S. Jaromi OFM Conv (ed.), „Zielony Zeszyt REFA” 2005 *Pismo Ruchu Ekologicznego Św. Franciszka z Asyżu*, Sandomierz, Wydawnictwo Diecezjalne i Drukarnia Diecezjalna w Sandomierzu, pp. 4-5.

²⁸⁶ Ibid. pp. 5-6.

²⁸⁷ Ibid. pp. 6-7.

In turn, a broader understanding of human ecology also refers to the sphere of human responsibility and care, but not only for the man himself or the social environment, but also for the good of the earth, the natural environment (ecosystem) and the cosmic order and ecological balance noticed in the world (biosystem)²⁸⁸.

Following Stanisław Jaromi, we can present the following principles of *human ecology*:

- Respect for the dignity of the human being;
- Solidarity as a response to interdependence in the world;
- Universality of destination of earthly goods;
- Quality of families and all human life;
- Care for cosmic, ecological and moral order between man and nature;
- Responsibility to God, fellow human beings, future generations and all creation;
- War is a great ecological disaster²⁸⁹.

Reading, we can observe that John Paul II does not avoid difficult topics, although he does not give ready-made prescriptions for solving the problems of the modern world. A characteristic feature of the intellectual message contained in his teaching is the vision of great integration, leading to overcoming divisions and building foundations of hope for specific people and the entire civilization²⁹⁰.

The papal message was addressed directly to Poles, who lived, among other, in Zamosc. Will we accept this message? Will we try to implement them in our lives? Do our decision-makers and politicians responsible for implementing the country's development programs want to listen to the voice of the Church and Pope John Paul II? Is the concern of John Paul II for Polish nature and protection of life will stimulate us to greater responsibility for the world in which we live? Are we able to raise responsible people, sensitive to the needs of the world, inspired by the Franciscan tradition in the family and at school and other people? Do we have enough imagination, strength and courage?²⁹¹

At this point, it is worth taking a closer look at the axiology of pro-ecological education, so aptly and extensively included in the encyclicals of John Paul II.

In the Encyclical *Redemptor hominis* (1979), the Pope writes about the condition of man, pointing to his task as "a noble guardian of nature". The Pope indicates that the state of danger of man approaching to him from the products made by man himself has different directions and varying degrees of severity. We should

²⁸⁸ Ibid. pp. 6-7.

²⁸⁹ Ibid. pp. 10-12; też S. Jaromi OFM Conv., *Ecologia humana – chrześcijańska odpowiedź na kryzys ekologiczny*, Kraków, Wydawnictwo O. Franciszkanów „Bratni Zew”, 2004, pp. 166-173; S. Jaromi, (ed.) *Rosnąć można tylko z ziemi, Duchowość świata według Sergiusza Riabinina*, Kraków – Lublin, „Zielony Zeszyt REFA” 2006 Biuletyn Ruchu Ekologicznego św. Franciszka z Asyżu, 2006; S. Jaromi, Święty Franciszek jako patron ekologów, in: *Ekologia a duchowość chrześcijańska*, Biblioteka Zeszytów Karmelitańskich nr 9, Flos Carmeli, Poznań, 2009, pp. 82-93.

²⁹⁰ S. Jaromi OFM Conv. (ed.), *„Zielony Zeszyt REFA” 2005 Pismo Ruchu Ekologicznego Św. Franciszka z Asyżu*, Sandomierz, Wydawnictwo Diecezjalne i Drukarnia Diecezjalna w Sandomierzu, pp. 4-5.

²⁹¹ Ibid. pp. 4-5.

become more and more aware that the exploitation of the Earth, the planet we live on, requires some rational and reasonable planning²⁹².

At the same time, the exploitation of nature for not only industrial but also military purposes, the development of technology uncontrolled by a comprehensive and genuinely humanistic plan, often carries a threat to the natural environment of the human being, alienates him from nature, detaches him from it. Man often seems to overlook other meanings referring to his natural environment other than those that serve the purpose of immediate use and benefits. Meanwhile, the Creator wanted man to develop a close relationship with nature as its rational and noble "master" and "watchman", and not as a ruthless "exploiter"²⁹³.

The development of technology and the development of modern civilization, marked by technology, demand a proportional development of morality and ethics. Meanwhile, the latter seems, unfortunately, still remaining and staying behind²⁹⁴.

The question arises whether this progress, whose author and perpetrator is man, makes human life on earth in every respect "more human", more "worthy of man"? There can be no doubt that in many ways he makes them just like that. However, the question, which persistently returns, concerns the most important thing: does man as a person in the context of this progress become better, spiritually mature, more aware of the dignity of his humanity, more responsible, more open to others, especially for those in need, for the weak. In other words the question arises whether man is ready to support and help everyone?²⁹⁵

In the Encyclical *Sollicitudo rei socialis*, from 1987, John Paul II emphasizes that the moral nature of development cannot ignore the respect for beings that create the visible nature, which the Greeks, alluding to the order that distinguishes it, called "the cosmos". This reality also demands respect for three reasons²⁹⁶ which need to be seriously taken into consideration.

The first consideration is the need to better realize that you cannot use various types of entities, living or inanimate – with natural ingredients, plants, animals – in any way you like, or only according to your own economic needs. On the contrary, it is necessary to take into account the nature of each being and their interrelation in an ordered system that is just a biosystem²⁹⁷.

The second consideration is based on the fact, somewhat more disturbing, about the limitation of the extraction of natural resources, some of which – as is usually said – are not regenerating. Using them as if they were inexhaustible, with

²⁹² Jan Paweł II, *Encyklika "Redemptor hominis"*, 1979, nr 15; S. Jaromi OFM Conv.(ed.), „Zielony Zeszyt REFA” 2005 *Pismo Ruchu Ekologicznego Św. Franciszka z Asyżu*, Sandomierz, Wydawnictwo Diecezjalne i Drukarnia Diecezjalna w Sandomierzu, pp. 7-8; też S. Kozłowski, *W drodze do ekorozwoju*, Warszawa, Wydawnictwo Naukowe PWN, 1997, p. 53.

²⁹³ Ibid.

²⁹⁴ Ibid.

²⁹⁵ Ibid.

²⁹⁶ Jan Paweł II, *Encyklika "Sollicitudo rei socialis"*, 1987, nr 34; S. Jaromi OFM Conv.(ed.), „Zielony Zeszyt REFA” 2005 *Pismo Ruchu Ekologicznego Św. Franciszka z Asyżu*, Sandomierz, Wydawnictwo Diecezjalne i Drukarnia Diecezjalna w Sandomierzu, pp. 8-9; S. Kozłowski, *W drodze do ekorozwoju*, Warszawa, Wydawnictwo Naukowe PWN, 1997, pp. 53-54.

²⁹⁷ Ibid.

unlimited power, exposes them to serious danger of being used primarily by future generations²⁹⁸.

The third consideration relates directly to the effects of some type of quality of life development in industrialized zones. We know that direct or indirect industrialization is increasingly polluting the environment, with serious consequences for people's health as well as their lives²⁹⁹.

Once again it must be emphasized that development, its planning, the use of resources and the way these resources are used cannot be detached from respect for *moral requirements*. One of them undoubtedly sets limits on the use of visible nature. Reign, given by the Creator to man, does not mean absolute power, nor can there be any question of the freedom to "use" or voluntarily dispose of things. Restriction imposed from the beginning on man by the Creator himself and expressed symbolically in the prohibition of "eating the fruit of the tree" (cf. Gen 2: 16-17) clearly shows that in relation to visible nature we are subject not only to biological, but also to moral laws, which cannot be exceeded with impunity. The Pope emphasizes that environmental protection, including an ecosystem – a biosystem – a sociosystem, is necessary for true development of a human being³⁰⁰.

In the *Encyclical Centesimus Annus*, published in 1991, John Paul II explains that the desire to live a better life is nothing wrong, but the wrong lifestyle is the one that sets the aspiration to have more than to be and wants more not to be more, but in order to have as much pleasure in life as possible. Therefore, it is necessary to create lifestyles in which the search for truth, beauty and good, and a community of people striving for joint development, would be the elements determining the quality of consumption, savings and investment³⁰¹.

In this context, I cannot limit myself to recalling the duty of mercy, that is, the duty to assist with what is "disposed of" and sometimes even with what is "needed" to give the poor what is necessary for him. I am referring to the fact that also a decision on such and no other investment in a given field of production, about such and not another, is always a *moral and cultural choice*. In the presence of certain economic conditions and political stability, which are absolutely necessary, the decision to invest, that is, to give some community the opportunity to value its work, also flows from the attitude of human sympathy and trust in Providence, which reveals the human qualities of the one who decides³⁰².

In addition to the problem of consumerism, the ecological issue is closely related to it. Man, controlled by the desire to possess and use, rather than be and

²⁹⁸ Ibid.

²⁹⁹ Ibid.

³⁰⁰ Ibid.

³⁰¹ Jan Paweł II, *Encyklika "Centesimus Annus"*, 1991, nr 37; S. Jaromi OFM Conv.(ed.), „Zielony Zeszyt REFA" 2005 *Pismo Ruchu Ekologicznego Św. Franciszka z Asyżu*, Sandomierz, Wydawnictwo Diecezjalne i Drukarnia Diecezjalna w Sandomierzu, pp. 9-10; S. Kozłowski, *W drodze do ekorozwoju*, Warszawa, Wydawnictwo Naukowe PWN, 1997, pp. 55-56.

³⁰² Jan Paweł II, *Encyklika "Centesimus Annus"*, 1991, nr 37; S. Jaromi OFM Conv. (ed.), „Zielony Zeszyt REFA" 2005 *Pismo Ruchu Ekologicznego Św. Franciszka z Asyżu*, Sandomierz, Wydawnictwo Diecezjalne i Drukarnia Diecezjalna w Sandomierzu, pp. 9-10; S. Kozłowski, *W drodze do ekorozwoju*, Warszawa, Wydawnictwo Naukowe PWN, 1997, pp. 55-56.

grow, consumes excessively and disorderly resources of the earth, thereby also threatening his own life³⁰³.

Anthropological mistake is deeply rooted in an mindless destruction of the environment, which unfortunately is widely spread in our times. A man who discovers his ability to transform and, in a sense, create the world with his own work, forgets that it always happens on the basis of the first gift received from God. At the beginning, this gift is given to man in the form of things created by him. Man thinks that he can arbitrarily dispose of the earth, subordinating it to his own will, as if it did not have its own shape and the previous destiny designed by God, which man, of course, can develop, but which cannot be used in an appropriate way³⁰⁴.

John Paul II points out that instead of fulfilling the role of God's collaborator in creation, man takes His place and eventually provokes the rebellion of nature, which is tyrannized rather than ruled. This is primarily seen in spiritual poverty, or rather the wrong way of looking at a man, driven by the desire to possess things, rather than a desire to relate them to the truth. In this aspect, man doesn't only show an attitude free from interest but also attitude lacking in noble, sensitive approach to aesthetic values, which is born out of delight for existence and for beauty, and allows us to read in visible things the message of the invisible God who created them. Contemporary humanity should be aware of its duties and tasks in this area that lie within it towards future generations³⁰⁵.

In addition to destroying the natural environment, it is worth recalling the more dangerous forms of destruction of the human environment, which is not given the necessary attention. While it is right, though it is not yet sufficient, to show concern for the preservation of the natural "habitat" of various endangered animal species. Despite knowing that each of them contributes to the overall balance of the earth, still too little importance is attached to protecting the moral conditions of real "human ecology". Not only was the earth given to man by God to use it with respect for the originally intended good for which it was given to him, but also man is for himself a gift received from God, and therefore he must respect the natural and moral structure in which he has been equipped. In this context, one should mention the serious problems of modern urbanization, the need for urban planning caring for the life of a person, as well as remember to pay due attention to the "social ecology" of work³⁰⁶.

Man receives from God his essential dignity, and along with it the ability to rise above all social order in the pursuit of truth and goodness. However, he is also conditioned by the social structure in which he lives, the education he has received and the environment. These elements can make living according to truth much easier or more difficult. Decisions, thanks to which a certain human environment is created, can create specific structures of sin, hindering the full realization of

³⁰³ Ibid.

³⁰⁴ Ibid.

³⁰⁵ Ibid.

³⁰⁶ Jan Paweł II, Encyklika *"Centesimus Annus"*, 1991, nr 37; S. Jaromi OFM Conv. (ed.), *"Zielony Zeszyt REFA" 2005 Pismo Ruchu Ekologicznego Św. Franciszka z Asyżu*, Sandomierz, Wydawnictwo Diecezjalne i Drukarnia Diecezjalna w Sandomierzu, pp. 9-10; S. Kozłowski, *W drodze do ekorozwoju*, Warszawa, Wydawnictwo Naukowe PWN, 1997, pp. 55-56.

themselves, especially for those who are oppressed by these structures in various ways. Destroying such structures and replacing them with more authentic forms of co-habitation is a task that requires courage and patience³⁰⁷.

The first and the most essential cell of "human ecology" is a family in which a person receives the first and decisive images of truth and goodness, learns what it means to love and to be loved, and therefore what it means to be a person. It is a family based on marriage, where a mutual gift of self, from a man and a woman, creates such a living environment in which a child can be born and be able to develop its abilities, where a child can acquire the awareness of their own dignity and prepare to take on their unique and only destiny.

It is necessary to rediscover that the family is the sanctuary of life. Indeed, it is sacred: it is a place where life, the gift of God, can be properly received and protected against the numerous attacks which it is exposed to. In addition, life can develop in accordance with the requirements of true human growth. Contrary to the so-called death culture, the family is the centre of the culture of life³⁰⁸.

In the Encyclical "*Evangelium Vitae*" published in 1995, John Paul II pointed to the growing interest in the *quality of life* and *ecology*, which occurred especially in societies with a high level of development, in which people strive not so much to provide themselves with basic necessities of life, but try to achieve global improvement of living conditions³⁰⁹.

A particularly important phenomenon in human ecology, by means of protecting the ecosystem – the biosystem – the social system, is the revival of ethical reflection around life: the emergence and growing development of ecological ethics promotes reflection and dialogue – between believers and non-believers, as well as between the followers of different religions – about basic ethical problems related to human life. This image, which is full of lights and shadows, should make us fully aware of the fact that we are facing a superhuman, dramatic struggle between evil and good, between death and life, between the "culture of death" and "culture of life." We are not only the witnesses, but inevitably we are drawn into this struggle: we all participate in it and hence we cannot avoid the obligation to unconditionally take the side of life³¹⁰.

*To defend and strengthen life, honour and love it – this is the task that God entrusts to every man, calling him – as his living image – to participate in his dominion over the world: "After which God blessed them, saying to them: "Be fruitful and multiply, that you may populate the land and make it subjugated; that you would rule over sea fish, aerial birds and all animals crawling on the ground"(Gen 1:28)*³¹¹.

The biblical text shows in full light the extent and depth of the reign that God gives man. It is all about ruling over the earth and every living being, as the Book of Wisdom

³⁰⁷ Ibid.

³⁰⁸ Ibid.

³⁰⁹ Jan Paweł II, Encyklika "*Evangelium Vitae*", 1995, nr 27,28, 42; S. Jaromi OFM Conv. (ed.), „Zielony Zeszyt REFA" 2005 *Pismo Ruchu Ekologicznego Św. Franciszka z Asyżu*, Sandomierz, Wydawnictwo Diecezjalne i Drukarnia Diecezjalna w Sandomierzu, pp. 11-12; S. Kozłowski, *W drodze do ekorozwoju*, Warszawa, Wydawnictwo Naukowe PWN, 1997, pp. 56-57.

³¹⁰ Ibid.

³¹¹ Ibid.

reminds us: "God of ancestors and Lord of Mercy, (...) in your wisdom you have created man to rule over creatures that have become through you, to rule the world in holiness and justice" (9, 1-3)³¹².

Also in the poetry of psalms from the Old Testament, the domination of man over the world is celebrated, as a sign of the glory and dignity bestowed on him by the Creator: "You gave him power over the works of your hands; you laid everything under his feet: sheep and cattle of all kinds, and flocks and field birds, aerial birds and sea fish, everything that travels the sea" (Ps 8: 7-9)³¹³.

Man was called to cultivate and guard the garden of the earth (cf. Gen 2:15). Therefore, he is in a special way responsible for the living environment, that is, for the created reality, which on the basis of God's will is to serve his personal dignity and his life: responsible not only in the present era, but also in future generations. This is the ecological issue with all its aspects – from the protection of natural "habitats" of various animal species and life forms to "human ecology" in the strict sense; the way to its solution that respects this great good, which is life, every life, is indicated by ethical principles, clearly and firmly formulated on the pages of the Bible³¹⁴.

In fact, the "domination" passed on to man by the Creator does not mean absolute power, nor can there be any question of the freedom to "use" or freely dispose of things. The restriction imposed from the beginning on man by the Creator himself and expressed symbolically in the prohibition on "eating the fruit of the tree" (cf. Gen 2: 16-17) clearly shows that in relation to visible nature we are subject not only to biological but also to moral laws which cannot be exceeded with impunity³¹⁵.

The protection of the ecosystem – the biosystem – as well as the social system focuses on human's responsibility for health and life and on the pro-ecological attitude towards the environment. In addition, this attitude involves not only the responsibility for the protection of future generations against the effects of environmental pollution but also the protection of the human life environment by protecting the family more than anything else.

These trends of the Church's ecological reflection were profoundly collected in the encyclicals, exhortations and messages of John Paul II entitled "true human ecology" and they have become one great appeal to humanity for the victory of the civilization of life and love over the civilization of death. The protection of life should be an important human vocation. Stanisław Zięba in his works also promotes and develops the issue of protecting life in an ecological dimension³¹⁶.

³¹² Ibid.

³¹³ Jan Paweł II, Encyklika "Evangelium Vitae", 1995, nr 27,28, 42; S. Jaromi OFM Conv. (ed.), „Zielony Zeszyt REFA” 2005 *Pismo Ruchu Ekologicznego Św. Franciszka z Asyżu*, Sandomierz, Wydawnictwo Diecezjalne i Drukarnia Diecezjalna w Sandomierzu, pp. 11-12; S. Kozłowski, *W drodze do ekorozwoju*, Warszawa, Wydawnictwo Naukowe PWN, 1997, pp. 56-57.

³¹⁴ Ibid.

³¹⁵ Ibid.

³¹⁶ S. Zięba, *Religia a ekologia*, in: S. Zięba (ed.) *Konferencje ekologiczne, ekologia humanistyczna tom 4*, Lublin, KUL, 1995; S. Zięba, *Życie w aspekcie ekologicznym*, „Człowiek i Przyroda” nr 2, Lublin, KUL, 1995; S. Zięba, *W poszukiwaniu podstaw odpowiedzialności za przyrodę*, „Człowiek i Przyroda”

In turn, the Catholic University of Lublin also publishes the quarterly-journal "Man and Nature" as well as studies such as: Ecological Guidebook (1993), Ecological Catechesis (1993), Ecological Conferences (1995). At the same time, the Ecological Movement of St. George operates in Lublin while in Kraków functions Ecological Movement of Francis of Assisi (REFA), issuing the REFA newsletter. The ecological mainstream is also being developed at the Academy of Catholic Theology in Warsaw (Józef M. Dołęga³¹⁷, 1993)³¹⁸.

The continuator of the social and ecological thought of Saint John Paul II today is Pope Francis, who particularly emphasized the importance of this issue in the encyclical *Laudato si*; at the Amazon Synod in 2019.

1.3. Values versus pro-ecological methods

There are many studies and research papers devoted to the issues the values preferred by modern youth or contemporary people in general, as well as methods of ecological education. They bring great support in understanding today's trends in choosing a lifestyle and can constitute an important source for axiological research in not only pedagogy but also those regarding the axiology of pro-ecological education. Such research should be carried out continuously, and the hierarchy of values, as well as pro-ecological ones, should be constantly refined and perfected. Many values that have been of great significance for one generation, may fall into a secondary position, while new values may emerge. It seems, however, that in such changes in the hierarchy of values, great caution and multi-

nr 4, Lublin, EkoKUL, 1996; S. Zięba *Natura i człowiek w ekologii humanistycznej*, Lublin, KUL, 1998; S. Zięba, *Historia myśli ekologicznej*, Lublin, KUL, 2004; S. Zięba, *Perspektywy ekologii człowieka*, Lublin, KUL, 2007; S. Zięba, Wróblewski Z. (ed.), *Ekologia a transformacje cywilizacyjne na przełomie wieków*, Lublin, Zakład Ekologii Człowiek KUL, 2000.

³¹⁷ J. M. Dołęga, *Troska Jana Pawła II o środowisko*, in: S. Urbański (ed.), *Duchowość współczesnego człowieka w świetle globalizacji i edukacji*, Warszawa, Wydawnictwo Uniwersytetu Kardynała Stefana Wyszyńskiego, 2003, pp. 135-147; J. M. Dołęga, *Człowiek w zagrożonym środowisku*, Warszawa, Wydawnictwo ATK, 1998; J. M. Dołęga, *Ekologia w teologii i filozofii chrześcijańskiej*, in: A. Papużyński (ed.), *Wprowadzenie do filozoficznych problemów ekologii*, Bydgoszcz, Wydawnictwo Uczelniane Wyższej Szkoły Pedagogicznej w Bydgoszczy, 1999, pp. 133-165; J. M. Dołęga, *Koncepcja sozologii systemowej*, Warszawa, Wydawnictwo UKSW, 2001; J. M. Dołęga, *Miejsce problematyki etycznej i ekonomicznej w ekofilozofii*, in: W. Tyburski (ed.), *Ekologia – Ekonomia – Etyka*, Toruń, UMK, 1997; J. M. Dołęga, *Nauki środowiskowe na początku XXI wieku*, „Paedagogia Christiana”. *Edukacja Ekologiczna* nr 2/28 (2011), Toruń, UMK, 2001, pp. 11-38; J. M. Dołęga, *Ochrona środowiska społeczno – przyrodniczego w filozofii i teologii*, Warszawa, Wydawnictwo UKSW, 2001; J. M. Dołęga, *Ochrona środowiska w filozofii i teologii*, Warszawa, Wydawnictwo Akademii Teologii Katolickiej, 1999; J. M. Dołęga, *Znaczenie nauk ekologicznych w ochronie środowiska i edukacji ekologicznej*, in: Z. Ciećko, J. M. Dołęga (ed.), *Ochrona środowiska i edukacja ekologiczna w Unii Europejskiej i Polsce*, Olecko, Wydawnictwo Wszechnicy Mazurskiej, 2003, p. 23; J. M. Dołęga, *Znaczenie sozologii ekofilozofii w kształtowaniu świadomości proekologicznej*, „Człowiek i Przyroda” nr 8-9, 1998, p. 219; J. M. Dołęga (ed.), *Podstawy kultury ekologicznej. Bases of ecological culture*, Warszawa, Wydawnictwo Acta Universitatis Masuriensis, 2002; J. M. Dołęga, J. W. Czartoszewski (red.), *Edukacja ekologiczna w rodzinie*, Olecko, Wydawnictwo Wszechnicy Mazurskiej Acta Universitatis Masuriensis („Episteme” 9/2000), 2000; J. M. Dołęga, J. Sandner (ed.), *Świadomość i edukacja ekologiczna*, Warszawa, Wydawnictwo ATK, 1998.

³¹⁸ S. Kozłowski, *W drodze do ekorozwoju*, Warszawa, Wydawnictwo Naukowe PWN, 1997, pp. 55-57.

dimensional approach are always necessary³¹⁹. At the same time, it is important to choose the right methods or strategies for upbringing in pursuit of pro-ecological values, because often the methods of ecological education focus only on the transmission of natural content with a weak emphasis on environmental valuation in a not only functional dimension.

As it is pointed out by Marian Nowak, discovering genuinely human goals cannot be conditioned only by fashion or ideas of certain ideological circles. Both a starting point as well as access point should involve a human person. It would be advisable to particularly respect those values that we consider to meet the needs of genuinely human, as well as those that in some way constitute the essence of our culture and civilization, while being a guarantee of a healthy development of the human person³²⁰.

1.3.1. Determinants of axiology and methodology of pro-ecological education in Poland

In Poland, closer attention to axiological problems in pedagogy was drawn in the 1980's, which should be combined with systemic changes and so-called systemic transformation process. Therefore, there were numerous educational innovations that resulted in changes in the hierarchy of values, associated with a greater than ever need to justify the goals of education³²¹. In the process of education we participate in the transmission of values³²². It also seems that the issue of pro-ecological values is also subject to all these conditions and can be analyzed in a similar way.

Roger Sperry emphasized that it is significant from the point of view of natural sciences to develop, precisely with values in mind, an extended reference framework focused on the good of humanity and at the same time the biosphere³²³.

Many contemporary publications discuss the problems of pro-ecological education, but they most often provide information in the aspect of knowledge, either referring to the natural environment or describing the methods of transferring relevant natural knowledge in the course of ecological education. One of the important areas of the presence of pro-ecological issues is university education and universities in general.

In connection with higher education we have a wide range of models and positions. It was Zbigniew Wierzbicki, who already in the eighties of the twentieth century on the pages of *Catholic Life*, in the article entitled *Sozo-eco-pedagogy – a new social sub-discipline* from 1988³²⁴, stated, based on his own research, that the level of ecological awareness of Polish society is far from satisfactory. At the same

³¹⁹ M. Nowak, *Teorie i koncepcje wychowania*, p. 371.

³²⁰ Ibid. p. 371.

³²¹ Ibid. p. 499.

³²² Ibid. p. 346.

³²³ R. Sperry, *Naturwissenschaft und Wertentscheidung*, Munchen – Zurich, Piper, 1985, p. 37.

³²⁴ Z. Wierzbicki, *Sozo-ekopedagogika – nowa subdyscyplina społeczna*, „Życie Katolickie” nr 7, 1988, p. 142.

time (in the nineties of the twentieth century), Wanda Hemmerling emphasized that ecological issues are too weakly exposed also in higher education³²⁵.

Also Krystyna Dubel emphasized the need for pro-ecological education conducted at universities, analyzing ecological education – its condition and needs³²⁶. There were also aspects directly related to the content and methods of ecological education directed both at teachers and students (Ligia Tuszyńska)³²⁷.

Nowadays, most of the approaches towards the issue of pro-ecological education usually focus only on methods, measures and practical applications of ecology in relation to the world of nature. On the other hand, the social dimension of this education is ignored, as well as theoretical orientations currently appearing in the literature³²⁸.

An exception is Stanisław Dziekoński, who discusses the issue of pro-ecological education in a personalistic perspective. Namely, he puts ecological education as the goal of personalism and the human person as the basic criterion for ecological education. He also defines the specificity of pro-ecological education in Christian personalism³²⁹.

In accordance with S. Dziekoński's approach, we consider it reasonable to continue the considerations on the axiology of pro-ecological education which is anthropologically oriented in a personalistic perspective.

Ecological ethics is becoming more and more important in present times, as many contemporary philosophers such as Zbigniew Łepko and educators, among others, Dariusz Sarżała think that the source of the ecological crisis lies in man himself, including how he understands himself and the world in which he lives, and what values he follows in his behavior³³⁰.

Then, following M. Nowak, we want to place pro-ecological education in the pedagogical realism that brings Christianity with its Spirit revolution, opening the perspective of later focus on the pupil himself. Additionally, the motives for his life choices and attitudes he adopts are taken into consideration. Due to the fact

³²⁵ W. Hemmerling, *Edukacja ekologiczna – problemy „wychowania do środowiska”, oraz Edukacja ekologiczna studentów pedagogiki*, in: *Edukacja ekologiczna społeczeństwa. Ochrona środowiska życia a kształtowanie świadomości i odpowiedzialności ekologicznej społeczeństwa*, Warszawa, Wydawnictwo PAX, 1988, pp. 39-54.

³²⁶ K. Dubel, *Edukacja ekologiczna w szkołach wyższych – stan i potrzeby*, „*Aura Ochrona środowiska*” 10, 1993, pp. 4-6.

³²⁷ L. Tuszyńska, *Edukacja ekologiczna dla nauczycieli i studentów*, Warszawa, WSP TWP, 2006, pp. 5-112.

³²⁸ S. Dziekoński, *Wychowanie ekologiczne w perspektywie personalistycznej*, „*Studia Ecologiae et Bioethicae*” Nr 1/2003, Warszawa, Wydawnictwo Uniwersytetu Kardynała Stefana Wyszyńskiego, 2004, pp. 455-456.

³²⁹ Ibid. pp. 445-456.

³³⁰ D. Sarżała, *Koncepcja zrównoważonego rozwoju w aspekcie pedagogicznym*, in: J. W. Czartoszewski, E. Grzegorzewicz, A. W. Świderski (ed.), *Problemy XXI w., prawo ochrony środowiska, edukacja środowiskowa i agrobiznes*, Warszawa, Wydawnictwo Uniwersytetu Kardynała Stefana Wyszyńskiego, 2005, p. 183; Jan Paweł II, *Centesimus annus*, Wrocław, 1991, p. 37; M. Krąpiec, *Osoba ludzka i błędy w jej rozumieniu*, in: A. Maryniarczyk, K. Stępień (ed.), *Błąd antropologiczny. Zagadnienia współczesnej metafizyki*, Lublin, Polskie Towarzystwo Tomasza z Akwinu, 2003; S. Nowosad, *Antropologiczno-etyczny wymiar ekologii*, in: J. Nagórny, J. Gocko (ed.), *Moralne przesłanie Kościoła*, Lublin, KUL, 2002, p. 71; Z. Łepko, *Antropologia kryzysu ekologicznego*, Warszawa, Wydawnictwo Uniwersytetu Kardynała Stefana Wyszyńskiego, 2003.

that, starting from the laws of nature (laws of nature), it is not possible to infer regularities applicable in the implementation of education, we reject both extreme positions of optimism and pedagogical pessimism³³¹.

We reject pedagogical pessimism, concentrated on doubts concerning the possibilities of education and therefore postulating the exclusion of external influences on upbringing and teaching, but at the same time emphasizing only the determining role of the natural factor on everything.

At the same time, we reject today, among others, behaviorism based on pedagogical optimism in education and teaching, which is associated with the belief in great possibilities in this regard, as Socrates (470 BC – 399 BC) believed in Ancient Times, or the majority of representatives of the Enlightenment: John Locke (1632- 1704) and Immanuel Kant (1724-1804)³³².

Speaking of environmental education, in the present publication, we want to place this education in a personalistic concept of education, which sets itself the primary goal of serving the integral development of man as a person, taking place on an individual and social level.

In this context, pro-ecological education of man, next to moral, social, patriotic, health or physical education, appears to be an important field of integral education focusing on comprehensive human development and supporting the juvenile on the way to achieve full humanity – in the harmonious development of his/her potentials, inherent in individual spheres of his/her personality: physical, mental, social, spiritual, religious as well as their integration with each other³³³.

The integral education described by John Paul II means “taking care of the physical, moral and intellectual welfare of the pupils, so that they can acquire an increasingly better sense of responsibility and actively participate in social life”³³⁴.

Stefan Kunowski (1909 – 1977) perfectly presented the process of educational development of man in the so-called contour theory, referring to the concept of Wilhelm Flitner (1889–1990) and Sergius Hessen (1887–1950)³³⁵. Contour theory does not separate itself from natural reality, it counts on current educational systems of society, takes into account the state of action of educators, and random difficulties along with the historical conditions of civilization and the era, such as the destruction of the natural life environment of a human being. This theory treats it as a task to be performed by a personal effort made by a learner with the encouragement of educators and with the help of the progress of pedagogical knowledge. Contour theory is an important element of this progress, because it

³³¹ M. Nowak, *Pedagogiczny profil nauk o wychowaniu*, p. 465.

³³² Ibid. p. 465.

³³³ K. Chałas, *Wychowanie ku wartościom wiejskim jako szansa integralnego rozwoju wychowanka*, Lublin, KUL, 2007, p. 11.

³³⁴ Jan Paweł II, *Audiencja dla biskupów ze Stanów Zjednoczonych Ameryki, przybyłych z wizytą „ad limina Apostolorum”*, Watykan, 28 października 1983, in: S. Urbański (ed.), *Wychowanie w nauczaniu Jana Pawła II. (1978-1999)*, Warszawa, Wyższa Szkoła Zarządzania i Przedsiębiorczości im. Bogdana Jańskiego, 2000, p. 235.

³³⁵ S. Kunowski, *Podstawy współczesnej pedagogiki*, pp. 164-259; K. Braun, M. Łobacz, A. Rynio (ed.), *Wczoraj, dziś i jutro pedagogiki uniwersyteckiej w świetle twórczości Stefana Kunowskiego*, Lublin, Wydawnictwo KUL, 2010.

results from the phenomenological analysis of the reality of modern education and is based on pedagogical experience³³⁶. We see clear implications of the contour theory also for pro-ecological education as a field of integral education.

Therefore, taking up the issue of axiology of pro-ecological education is justified by many reasons:

- concern for man – for his integral development, for his humanity;
- the importance of pro-ecological values in human life and the entire human community, in particular the value of life as a basic human good;
- the role of pro-ecological education, and, in particular, its axiological foundations in the face of the deteriorating state of the ecosystem, the biosystem and, above all, the social system.

The study of the values and methods connected with pro-ecological education implemented in higher vocational schools is dictated, among others, by:

- unsatisfactory state of research in regard to the university of higher education in the field of implementing pro-ecological education;
- the need to develop a pro-ecological education model in a higher vocational school;
- the need to shape the value system, as well as the location of pro-ecological values in this system of values, especially among students what will play a significant role in their later social and professional functioning;
- the requirement of education which imposes an obligation on students to take responsibility for the state of the ecosystem, the biosystem and, above all, the social system and the quality of life in them.

1.3.2. The significance of values in pro-ecological education

Increasing sensitivity in the era of the ecological crisis directed at this group of values, which we define as “pro-ecological” and, in other words, the values of pro-ecological education. Therefore, it leads to an increase in awareness of the risks associated with them.

This awareness is well reflected in the call of the Holy Father John Paul II which was included in the *Encyclical “Cenetsimus annus”*. There, in the context of just protecting the ecosystem, the biosystem and the social system, he notes “dangerous destruction of the human environment”³³⁷, which was not usually given sufficient attention in the past. The progressive degradation of the human environment is, above all, the reason for the emergence of new thinking and as well as the effect of specific thinking and the adopted system of values³³⁸.

The values of pro-ecological education exposed in such a context mitigate the negative effects of civilization on man and his living environment. The process of transferring these pro-ecological values, the choice of methods and strategies

³³⁶ S. Kunowski, *Podstawy współczesnej pedagogiki*, pp. 202-203.

³³⁷ M. Wyrostkiewicz, *Ekologia ludzka. Osoba i jej środowisko z perspektywy teologicznomoralnej*, Lublin, Wydawnictwo KUL, 2007, p. 16.

³³⁸ N. W. Skinder (ed.), *Postawy proekologiczne u progu XXI wieku, Materiały VII Sympozjum*, Sułków k/ Milicza 1 października, ZP Tomasz Kuliński, Brzeg Dolny, 2005, p. 1.

of educational interactions become the key to the necessary changes in the relationship between man and his living environment, to the change of lifestyles, respecting and integrating a pro-ecological approach to the ecosystem, the biosystem and the social system. Values are necessary for human to open him to the possibilities of becoming more self-fulfilled. It should be emphasized that pro-ecological values meet these requirements if they are open to man and anchored in anthropological foundations. Therefore, they are characterized by a pedagogical view of the person and an attempt to formulate objective standards related to him³³⁹.

Therefore, pro-ecological education goes beyond the knowledge accumulated by sciences devoted to education, because it not only focuses on man, but also takes into account his life environment, and in him also the nature that surrounds him. Man is increasingly threatened by the loss of a life-sustaining relationship with nature. From the perspective of pro-ecological education, our concern is caused by the fact that in its assumptions the utilitarian growth-oriented positivist-materialist welfare system devalues the value of even human life.

From the perspective of biological anthropology, the human relationship towards other living creatures is a unique system. "System – man" works at full capacity in all stages of its development³⁴⁰.

Undertaking the "biological and anthropological question" is intended, above all, to understand biological dependencies and evolutionary processes from the perspective of human subjectivity. Man is no longer satisfied with the reductionist explanation according to which his existence would be an accidental result of the genetic conditioning and the very process of survival, adaptation and homeostasis, based on selection³⁴¹.

If behavior biology explains that the process of evolution is based on its own dynamics, which cannot be reduced to simple cause-and-effect mechanisms, if this process can be explained to a much greater extent as a progressive, constantly evolving system³⁴² in which material, biological, social and spiritual system dynamics are inseparable forms of dynamics, always operating in a hierarchical order, then it becomes possible to explain another sense of life, an explanation indicating going beyond only what is physically given, an explanation enabling self-realization and realizing the sense of one's own life through transcendence³⁴³.

³³⁹ Ibid. p. 367.

³⁴⁰ A. Portmann, *Biologie Und Geist*, Getynga Burgdorf, 2000, p. 29.

³⁴¹ O. Speck, *Niepełnosprawni w społeczeństwie. Podstawy ortopedagogiki*, przekład: W. Zeidler, A. Skrzypek, D. Gącza, D. Szarkowicz, Gdańsk, GWP, 2005, pp. 147-148.

³⁴² H. Zeier, *Zur Evolution von Gehim und Geist*, in: J.C. Eccles, H. Zeier (ed.), *Gehim und Deist. Biologische Erkenntnisse uber Vorgeschichte, Wesen und Zukunft des Menschen*, Munchen, 1980, p. 20.

³⁴³ O. Speck, *Niepełnosprawni w społeczeństwie. Podstawy ortopedagogiki*, pp. 147-148.

Chapter 2

The process of pro-ecological education

The process of education, as one of the forms of human activity, has a specific ontical structure (like all other forms of interpersonal relations). This creates the need to recognize "pro-ecological education" from the perspective of various sciences. The ontic perspective in the process of education, including pro-ecological, can be considered from the point of view of biological and social anthropology, cultural anthropology and philosophical anthropology, as well as from the perspective of axiology and teleology, but also theology³⁴⁴.

Therefore, in the following chapter of the present work we undertake considerations concerning the ontology of the reality of pro-ecological education in the following aspects: biological, psychological, socio-cultural and spiritual.

The relationship between the axiology of pro-ecological education and philosophy is significant, because philosophy answers questions about the basics of existence, provides knowledge on the values and goals of education and directions of human development. At the same time, it is visible in their assumptions of a similar nature. Ontological assumptions connected with pro-ecological education proclaim social reality, including educational reality.

In turn, epistemological assumptions set the boundaries and chances of scientific cognition while the methodological assumptions show ways of collecting and developing empirical material, substantiating claims and building judgments while maintaining continuity and hierarchical arrangement of content. Three areas of philosophy in the process of pro-ecological education are particularly significant:

- firstly, philosophical anthropology defines the essence of man, explains his role in the world, at the same time it defines the directions of development of forms of human existence;
- secondly, axiology indicates values, including the really significant value of life, health, and others., it also shows their ontological status and values

³⁴⁴ M. Nowak, *Podstawy pedagogiki otwartej*, pp. 273-274.

preferred by people. In axiology, two subdisciplines are distinguished: ethics that considers moral values, which are the core of the axiology of pro-ecological education, and aesthetics that takes into consideration aesthetic values, also significant in pro-ecological education;

- thirdly, theology of education, which provides the necessary knowledge about the aims of education, is an important field of philosophy in pro-ecological education³⁴⁵.

In a scientific way, learning about the axiology of pro-ecological education occurs initially on the path of pre-scientific cognition (feelings), deepened by philosophical and empirical knowledge. Ecological education covers various spheres of human reality: from biological (in shallow ecology), through psychological, social, cultural and spiritual cognition (like deep ecology). It is impossible to reduce human behaviour to purely behaviorist approaches, as is the case in natural science (even because of the rationality of human behaviour)³⁴⁶.

Pro-ecological education does not exclude knowledge of the natural sciences, but also cares about solid knowledge of the humanities, extended by philosophical knowledge. Philosophy and history, as well as psychology, sociology, anthropology, geography, semiotics, hermeneutics, phenomenology, economics, law, political science, architecture and urban planning, met with pedagogical knowledge, create a very interesting range of approaches to education problems.

In addition, general pedagogy in particular, undertook the research into the relationship between the sciences on education and natural sciences, including human biology and ecology as well as medicine and psychiatry. Without any prejudices, educational sciences can conduct a dialogue and cooperate with one or other disciplines of the humanities and natural sciences with a typical pedagogical effort to make the acquired knowledge relate to human education and training, also with the conviction that they will bring irreplaceable and not possible to be ignored by anyone own contribution into human culture.

At present, however, there is a need for something more, namely, on the one hand, we are talking about transformation, the complexity of contemporary social problems, paying attention to the person and his dignity and interest in quality of life, which raises new challenges for pedagogy, and in it for pro-ecological education.

As a result of these tendencies, there arises the need to emphasize the anthropological dimension of pedagogy, as well as not so much knowledge that we would call multidisciplinary, but it would be interdisciplinary or even transdisciplinary knowledge in the service of education. All these conditions have an unquestionable impact on pedagogy, as well as included in it pro-ecological education, constituting a particularly important contemporary challenge connected with the proposals of the so-called general system theories (OTS)³⁴⁷.

General System Theory (OTS), developed by Ludwig von Bertalanffy (1901-1972) is a kind of introduction to the scientific approach to the complexity of the

³⁴⁵ M. Nowak, *Pedagogiczny profil nauk o wychowaniu*, p. 159.

³⁴⁶ *Ibid.* p. 172.

³⁴⁷ M. Nowak, *Pedagogiczny profil nauk o wychowaniu*, pp. 175-176.

issues of pro-ecological education as a system and as an activity inscribed in certain systems and processes that express the words: *change, growth and development*³⁴⁸.

The basis of the concept of general system theory is the holistic idea of living organisms, which can be briefly compared to the example of the life of an organism, which all his parts are responsible for its functioning as a whole. It becomes important to know their place in its completeness. It is already clear at this point that this is a completely opposite view of the mechanistic concept of functioning and exploring the world.

The general theory of systems gives rise to the search for many different disciplines such as biological cybernetics as well as humanities and even philosophy in the context of interpreting thinking, consciousness, social life³⁴⁹, and for us in ecological education, living in a socio-natural environment. The reflection of this state of affairs in the Polish context is the concept of systemic personalism prepared by the priest Czesław Stanisław Bartnik³⁵⁰.

According to the theory of systems, the studied reality presents itself as a kind of chain of relations with individual elements interacting with each other³⁵¹. In the overall approach, also called holistic, there is a requirement to include all the conditions of the reality of education, and especially pro-ecological education included in it, which thus allows better understanding and harmonious shaping of the reality that surrounds us³⁵².

In such a systemic approach, discovering the dimensions of our thinking, its dialogical and complex nature, became an important impulse for the development of not only science, but also social life as well as education and upbringing, and pro-ecological approach included in it, referring to both the social system and the ecosystem, co-creating the biosystem in a holistic sense³⁵³.

The increasingly complex reality of pro-ecological education and not only requires taking into account the complexity in interpreting the opinions of respondents on the basis of detailed qualitative research accurately capturing such relationships. There is a growing need to incorporate multiple disciplines and research approaches in the analysis and creation of pedagogical knowledge and its implications for implemented educational practice.

Qualitative research also influences educational activities and upbringing in regard to achieve this complexity. In this sense, we can speak about the need for upbringing, education to complexity discovered by pedagogy and comprehensiveness in the social system and ecosystem that creates a common reality – a biosystem that would raise awareness of the aspectiveness or partiality of one's own thinking (both from a personal and and pro-ecological

³⁴⁸ Ibid. pp. 178-184; L. Bertalanffy von, *Ogólna teoria systemów. Podstawy, rozwój, zastosowania*, Warszawa, PWN, 1984.

³⁴⁹ M. Nowak, *Pedagogiczny profil nauk o wychowaniu*, pp. 178-179.

³⁵⁰ M. Nowak, *Pedagogiczny profil nauk o wychowaniu*, p. 179; Cz. S. Bartnik, *Szkice do systemu personalizmu*, Lublin, Wydawnictwo KUL, 2006; K. Gózdź, *Personalizm systemowy ks. Czesława Stanisława Bartnika*, in: M. Rusecki (ed.), *Personalizm polski*, Lublin, KUL, 2008.

³⁵¹ M. Nowak, *Pedagogiczny profil nauk o wychowaniu*, p. 179.

³⁵² Ibid. p. 180.

³⁵³ Ibid. p. 180.

education). On the other hand, the need to take into account multiple points of view and interpretation, with the aim of being as complex as possible as well as a comprehensive approach to their presence.

This emerges the need to move towards a greater commitment in order to respect differences, take into account the originality and uniqueness of the situation and facts, and responsibilities which are connected with this approach³⁵⁴.

In the systemic approach, the theoretical (philosophical) and practical (empirical) approaches should be combined, as well as the theoretical approach – the basics of general pedagogy with a detailed approach – in this case with pro-ecological education.

Faithfulness of reality requires a multidisciplinary and even interdisciplinary approach, also in developing the foundations of pro-ecological education, including the contribution of biology, psychology, sociology, anthropology of philosophy, theology, environmental law as well as ecology. This postulated loyalty to reality requires commitment and responsibility to direct its actions towards the integrity of the person and not some selected aspects or alienation. Integral approach to education and the so-called integral pedagogy can initiate a search for the multiplicity and complexity of education³⁵⁵.

The educational process according to Roman Guardini opens us to the pedagogy of the subject, with the category of “image” and “formation”, in the form of realizing one’s own image, with the support of others (in upbringing and education). These categories, by referring to the pedagogy of essence and existence, have brought us closer to the reality of the educational process carried out in a specific experience of life, as well as in dialogue and meeting with others³⁵⁶.

Then, the pedagogy of the subject educated in order to properly adopt an attitude open to values and to educate to adopt the subject reality surrounding us in an appropriate way³⁵⁷.

This approach is part of an important message for the implementation of multidimensional or even integral education, capable of accepting a person – the subject of education in its originality and uniqueness, while designing its mental, social, emotional, ethical-aesthetic, physical and thus pro-ecological education, not so much privileging only one dimension, but just opening to each of them. On the other hand, we write this multidimensionality and integrity into individual development periods and, ultimately, throughout life in which people are recognized as constant progress³⁵⁸.

According to Stefan Kunowski, who quotes Saint Thomas Aquinas, we distinguish three basic development directions in the educational sense: *educational progress*, *educational degression* and *educational regression*.

Educational progression involves development towards a higher level, in which each subsequent state becomes more perfect and better than the previous one

³⁵⁴ Ibid. pp. 180-181.

³⁵⁵ Ibid. p. 182.

³⁵⁶ M. Nowak, *Pedagogiczny profil nauk o wychowaniu*, pp. 182-183.

³⁵⁷ Ibid. pp. 182-183.

³⁵⁸ Ibid. pp. 182-183.

– up to the ideal of a new man (Tomaszów’s “ecstasy upwards”). This approach leads man “on the degrees of virtue to heroism.” In turn, *educational degression* is a development that maintains a certain level of its predispositions. Next, *educational regression* is the development pushing man to lower levels. Namely, it is the process of derailment, leading to developmental alienation, to the perversion of man as well as to his bestiality³⁵⁹.

It was S. Kunowski, who as the representative of the mainstream promoting the search for an integral concept of education, noticed the multi-faceted and multi-directional changes taking place in education, from the biological development layer, through the psychological, sociological, cultural and spiritual one³⁶⁰.

There emerges the need for a more systemic and open approach taking into account such aspects as: dynamism, unpredictability, possibility as well as probability of education. It was this integral approach that allowed S. Kunowski to express the belief that “even in the event of the greatest derailment of a person, suddenly he can revive, turn back, suddenly change and shake off evil”³⁶¹. This open and integral approach to education means that we do not stop trying to influence the learner, even in situations of degression or educational regression.

Only in the symbiosis of specific disciplines with general pedagogy, also ecological education will allow for more competent and comprehensive implementation of both practice and research on education taking place in various environments, ranging from family, society, school, but also in after school reality, during fun activities, at work, in free time, in the media or in the state. We can talk here about a specific model of cooperation, which we can call “intra-disciplinary” between subdisciplines of a specific discipline of knowledge – we are thinking here about the dialogue of pro-ecological education with general pedagogy within pedagogy itself. At the same time, interdisciplinary dialogue is also important – between pedagogy and other disciplines of human knowledge³⁶².

Therefore, environmental education, lies at on the border of the natural sciences and humanities as well as social and philosophical. Pedagogy adopts the specific nature of anthropological science, because it places man and his creation in the center of his interests³⁶³.

2.1. Pro-ecological education from an ontological perspective

The approach to “education as a system” has become enriched in our times with new aspects. We are becoming increasingly aware of the increasing role of the so-called “agencies” (institutions, education centres) and the so-called “educational situations.” Education is no longer obtained only in the family or at school, but also

³⁵⁹ S. Kunowski, *Podstawy współczesnej pedagogiki*, pp. 181-182.

³⁶⁰ Ibid. p. 197.

³⁶¹ Ibid. p. 185.

³⁶² M. Nowak, *Pedagogiczny profil nauk o wychowaniu*, p. 191.

³⁶³ K. Ablewicz, *Teoretyczne i metodologiczne podstawy pedagogiki antropologicznej. Studium sytuacji wychowawczej*, Kraków, Wydawnictwo UJ, 2003.

in the parish or in some associations but also in youth organisations. It can even be seen that upbringing, and in it pro-ecological education, takes place largely on the street, in the life of the district, in peer groups (usually through spontaneous and informal interactions), in free time, while going for a walk, or at a disco and a cinema and theater, also through sport and recreation, or reading magazines and books, and through mass media³⁶⁴.

It is also worth undertaking a content and purposeful analysis of contemporary approaches to education, including pro-ecological education. The legitimacy and need for this type of analysis is indicated by the specific *transdisciplinary* nature of science pedagogy and the sought model of *interdisciplinary dialogue*. In particular, it is possible to point to the approaches to "education" taking into account biological, psychological, socio-cultural and spiritual approaches, which become particularly present in disciplines using the methods and techniques of the above-mentioned sciences, namely in the so-called "pedagogical sciences": educational biology, educational psychology, educational sociology for which education becomes the subject of research³⁶⁵.

However, these approaches need to be supplemented and supported with humanistic disciplines and ideologies, which by being interested in this subject of research, also affect the understanding of the content of the concept of "education", and in particular the contribution of cultural anthropology. It is worth recalling that the role of these perspectives: cultural and ideological view, emphasizes S. Kunowski in his analysis of the "contour theory of comprehensive human development"³⁶⁶. Therefore, it becomes justified to consider pro-ecological education in the perspective of the contour theory developed by S. Kunowski.

"Ontology of education" is a science that researches and analyzes the reality (fact) of education. Authentic "ontology of the reality of education", including pro-ecological education, which as "reality" is divided into a number of aspects and separated from others, includes in its semantic scope all this, what exists.

In our approach, "education" is not only a "pure act", but also a diligent effort of a certain being to remain himself and grow at the same time in existence. At the level of becoming, "education" cannot be understood in the absolute perspective, as a transition from one act to another, but as a process of transition from positive desires to their realization, from the developmental good seen in the perspective of the future to its fulfillment. It is a transition from potency to act, that is, the acquisition of real perfection that did not exist before³⁶⁷.

Thus, it does not mean growing from nothing, but it assumes a real opportunity for development and ontological enrichment. In order to describe the "reality of education", it should be emphasized, above all, that it is a "human fact" (namely concerning man) and at the same time "existential fact" (namely regarding the essence of human existence). We must, however, take into account that "education",

³⁶⁴ M. Nowak, *Podstawy pedagogiki otwartej*, p. 240.

³⁶⁵ M. Nowak, *Dyskusje nad pedagogiką jako nauką*, „Roczniki Nauk Społecznych KUL”. Lublin, 2 (XVIII), 1990, p. 77.

³⁶⁶ S. Kunowski, *Podstawy współczesnej pedagogiki*, pp. 194-228.

³⁶⁷ M. Nowak, *Podstawy pedagogiki otwartej*, pp. 291-294.

although related to human existence, expresses and embraces its specific aspects, takes on specific features, aims at specific goals and covers specific ways of human existence³⁶⁸.

2.1.1. Biological basis of pro-ecological education

The role of biological aspects was particularly recognized in education since the times of J. J. Rousseau (1712-1778). Scholars even began to speak about "natural education" and the educational circumstances related to nature.

M. Nowak, referring to H. Hannoun, refers to the issue of "natural education" along with the proposal of "natural education", trying to combine "nature", "culture" and "practice" and based on new achievements of psychology, sociology, genetics and anthropology³⁶⁹.

J. J. Rousseau wrote in *Emil* about the educational influence that flows by our nature and depends on people and surrounding things. According to him, nature means mental life, our psyche and not only the life of the body. He judges the dependence on people as depraving the nobility of the child's nature through his courtly and urban culture. In turn, by the influence of the surrounding things, it expresses the beneficial, corrective influence of nature and the countryside in which *Emil* is to develop freely³⁷⁰.

As M. Nowak points out, the thought of J. J. Rousseau arose on the basis of pedagogical reflection since his participation in the competition announced by the Academy in Dijon on the role of the development of science and art in the "cultivation and moral progress of humanity" (1750). Rousseau did not agree with the understanding of this role, thus opposing the universal beliefs of the Enlightenment. He claimed that man created by God is good, but it is degenerated by human activity, it becomes bad on regard to social conditions³⁷¹.

Rousseau's attitude has been repeatedly commented and in many cases expressed in ethical categories, ascribing to the great thinker the preaching of the morally "good man by nature". Rousseau clearly identifies the state of being "good by nature" with the original state of nature that can be attributed to a "wild loner", living in the "pre-human" and "pre-social" era.

According to M. Nowak, J. J. Rousseau intended to help modern man clearly recognize categories such as "nature" and "culture", what is natural and what is artificial, as well as support modern man in the assessment of those born with the development of technology and real civilizations threats. So it became rather a prophetic direction of development.

Educational activities and human activity in general, in his opinion, can lead to the destruction of the original properties of man, but can not destroy them. So there is a need to rediscover them and guarantee growth opportunities, especially

³⁶⁸ Ibid. pp. 291-294.

³⁶⁹ Ibid. p. 241; H. Hannoun, *L'éducation naturelle*, Paris, PUF, 1979.

³⁷⁰ S. Kunowski, *Podstawy współczesnej pedagogiki*, p. 186.

³⁷¹ M. Nowak, *Podstawy pedagogiki otwartej*. p. 241.

through “natural education”, which can be a way to escape from the crisis, when it comes to a corrupted community³⁷².

The thought of Rousseau was taken in the 19th century by the German educator Beneke, who calls the nature that surrounds us, the fate of man and other people *human educators*³⁷³.

From a practical approach, these are valuable indications, encouraging adaptation of education to the stage of development, needs and interests of the pupil. Many educators have understood these ideas in this way. Especially they were an inspiration for the so-called “Pedagogical movement” and all reformist aspirations generally referred to as “new schools” and “new education”. M. Nowak claims that in this sense we should see the development of research in order to learn about the stages of child’s development and the sciences of its biological and psychological development³⁷⁴.

In addition, many Catholic pedagogues such as S. Kunowski or M. Nowak point to the need to respect the rights that govern life, the so-called “Laws of nature”. Also J. Woroniecki relies on innate skills “almost infinite differentiation striking us in people: there are no two the same, even the twins differ from each other”³⁷⁵.

At the same time, Christian pedagogues point to the need to respect human development rights. M. Nowak, quoting R. Guardini, emphasizes that one cannot put pressure on living existence, because we will reduce it. Any life takes time. To serve life means, above all, to be able to wait. Indeed, you should know when it is time to make a decision, because today the fruit is ripe and can be harvested, and tomorrow it may be too late³⁷⁶.

In the Universal Declaration of Human Rights (1948), as well as in other many church documents, among others in the Encyclical of Pope Paul VI, *On Human Life (Humanae vitae)*, 1968) and in the Encyclical of John Paul II, *Gospel of Life (Evangelium vitae)*, 1995) the natural law and its respect are emphasized.

As M. Nowak points out, Rousseau was often interpreted in a really radical way. We see it, among others, about 150 years later in the writings of the Swedish educator Ellen Key (1849-1926), who in the book *Child's century* (1900) radically interprets the understanding of upbringing: “only to see if the surrounding relationships support the work of nature”. After it, about 50 years later, we find this kind of attitude in the beliefs presented by A. Neill (1883-1972), who together with his anti- authority movement, returns to Rousseau’s radically understood attitude³⁷⁷.

We can also, following M. Nowak, point to the originality of J. J. Rousseau. This uniqueness involved the fact that he was able to highlight what we can define as *il primum*, basis and justification for the education attributing an active role to the pupil who himself becomes the protagonist of his development and education.

³⁷² M. Nowak, *Podstawy pedagogiki otwartej*, p. 242.

³⁷³ S. Kunowski, *Podstawy współczesnej pedagogiki*, p. 186.

³⁷⁴ M. Nowak, *Podstawy pedagogiki otwartej*, p. 242.

³⁷⁵ J. Woroniecki, *Katolicka etyka wychowawcza*, T. I, *Etyka ogólna*, Lublin, RW KUL, 1986, p. 350.

³⁷⁶ M. Nowak, *Podstawy pedagogiki otwartej*, p. 242.

³⁷⁷ *Ibid.* p. 243.

He is not seen as the one who receives education, but as a certain person with his interests and goals, entering into relations with the environment and with the educator, whose task is not to adapt him to the world, but to arouse in him the desire to "realize his humanity" ("being-man")³⁷⁸.

In modern pedagogy, the concept of "natural education" that arose thanks to Rousseau was often seen as a negation of education. "Natural education" was then understood as a postulate not to "educate", namely in the form of so-called "negative education"; "education" understood in this way, was separated from understanding him as human-to-human actions³⁷⁹.

Sometimes they were also seen as so-called "Unintentional education", namely education without any goal, fulfilling within social and family life etc. (being a specific function of social life). For greater conceptual precision, after the 1920s, educators began to distinguish between intentional "education" and "functional education". The latter means various influences on the developing personality. They come from the environment, socio-cultural, political, economic or environmental forces, but without a plan or explicit educational purpose³⁸⁰.

This is how broadly understood "education" as it is pointed out by M. Nowak, would involve getting used to life in the community and entering into it by looking at adults, imitating them and undertaking independent actions by means of trials and mistakes. This type of education can be found everywhere where all the attitudes occupied by adults are stable and there are no surprising events. In other words, where there are no rapid changes (this happens, for example, in tradition based communities³⁸¹.

In turn, "intentional education" was treated as a series of intended and specific actions and interventions that shape the personality of the learner, introduced consciously and fully responsibly³⁸².

Such distinctions are rather neglected, however, according to M. Nowak, we postulate that this should not lead to the disappearance of the concept of education developed under the so-called "Natural education". Especially in modern times with the rank of growing problems of pro-ecological education, issues of biological nature of man, his relation to the ecosystem, biosystem and the social system should even be a separate subject of study³⁸³.

2.1.2. Psychological basis of pro-ecological education

S. Kunowski also emphasizes the role of psychological foundations of education in his analysis of the "contour theory of comprehensive human development"³⁸⁴. M. Nowak indicates that man is, above all, a "person", discovering himself as

³⁷⁸ M. Nowak, *Podstawy pedagogiki otwartej*, p. 243.

³⁷⁹ Ibid. p. 243.

³⁸⁰ Ibid. p. 243.

³⁸¹ Ibid. p. 244.

³⁸² Ibid. p. 244.

³⁸³ Ibid. p. 244.

³⁸⁴ S. Kunowski, *Podstawy współczesnej pedagogiki*, pp. 194-228.

a “separate” being, able to understand himself in his uniqueness, in originality and unchangeability with others³⁸⁵.

Man, as a person, has the ability to define himself in action, and not just simply adapt to external conditions. He also has the ability to create a “life situation”, and not just a simple “adaptation to the environment.” He can take a distance from himself and his environment, he is characterized by the freedom to decide and accept or reject offers of a given culture, community or environment. Therefore, it seems very important to emphasize the so-called “educational situation”, which is sometimes distinguished from the concept of “educational environmental”³⁸⁶.

In education, the “educational situation” involves a combination of such conditions and the facts on which the educational impact process takes place. Although the education process always takes place on the basis of the actual “educational situation”, it is difficult to define it as an “environment”, because man always influences this situation and is subject to its own influence³⁸⁷.

When determining the “educational situation”, also in pro-ecological education, one must take into account its complexity in the context of cultural, religious, ideological, axiological pluralism, diverse impacts of modern mass media on man. Man becomes obliged to critical analysis and difficult choices. Therefore, with the beginning of modern times in Europe, there is a need for a significant change in the concept of education – a turn towards subjectivity³⁸⁸.

*In pro-ecological education, we should take into account all the conditions and dependencies that contribute to the contemporary “educational situation” and strive to harmonize with them every educational effort. The essence of this would be the “art of education”, which involves adapting known and accepted educational content to the given situation in which the educator and the learner currently find themselves*³⁸⁹.

However, it should always be remembered that the subjective core of education is the personal, human “I”. It is a lasting foundation and source from which flows both human behavior, his attitude and participation in social life, as well as views, beliefs and world-view. All decisions and the individual’s deeds should, therefore, be his own actions and flow out, as R. Ingarden emphasized, from the “I”, which is the “dispositional centre” of our actions³⁹⁰.

By pointing to the personal “I” in man as the subject of education, we can also more thoroughly understand the process of education, its content and methods, as well as show more fully the significance of education of the adopted hierarchy of values, also in ecological education.

The fact of “being a person” means that man always has his own value and cannot be considered as a means to achieve something. Shaping this individual identity, creating our own “being a person” in which man learns to understand and accept himself as an individual, we call “personalization”³⁹¹.

³⁸⁵ M. Nowak, *Podstawy pedagogiki otwartej*, p. 251.

³⁸⁶ Ibid. p. 251.

³⁸⁷ Ibid. pp. 251-252.

³⁸⁸ Ibid. pp. 251-252.

³⁸⁹ Ibid. p. 252.

³⁹⁰ Ibid. p. 252.

³⁹¹ Ibid. p. 252.

Education as a support for a learner, as well as the learner's work on himself, is significant in the selection and acceptance of a given hierarchy of values, but above all in the very conduct of the learner in accordance with them. Creative subordination of your personal "I" to the values to which we educate and the ability to respond to deeds arising from it and resolutions become most important also in pro-ecological education. Therefore, we can define pro-ecological education as a process of achieving specific pro-ecological values³⁹².

2.1.3. Socio-cultural basis for pro-ecological education

The socio-cultural background of education is analyzed in detail by S. Kunowski in the contour theory of human development³⁹³ as well as M. Nowak³⁹⁴.

Education also includes the task of introducing the pupil into social and cultural life, because man is not only a social being, but a cultural being as well.

The problem, however, lies in the very essence of this introduction. Is it supposed to be an ordinary, even mechanical "adaptation" or something more? The mere transfer of the concept of "adaptation" to the social sciences demanded to include an anthropological context in it. Man has not only the ability to adapt, but also the need to change his living environment. When it comes to the problem of human adaptation, we deal not only with hereditarily determined processes, but also with the dynamics of socio-cultural relations, in which problems of sense and decision making as well as moments of reflection and critical distance also play an important role³⁹⁵.

In relation to "education" in particular, it is emphasized that it is to serve not so much to lead a human individual to mechanically repeat certain activities (as in training or ordinary training), but as the primary task of education its function is to expand in man, with his active participation, the range of his behaviours³⁹⁶.

With such an understanding of "education" as (even with the participation of) the inclusion of the learner in social and cultural life, many identified him with "adaptation". Among others, for example, a sociologist R. Tartler believed that the highest and main goal of education, which should be subordinated to all other means of education, is to introduce and adapt the young generation to social life³⁹⁷.

In the contrary to the beliefs of sociologists, we find also critical statements about "adaptation" in relation to education. A. Fischer in the early thirties of the twentieth century warned against identifying the concept of "education" with the term "adaptation" because it could then become a basic concept in pedagogy and at the same time a fundamental mistake of pedagogical sociology³⁹⁸.

³⁹² Ibid. p. 252.

³⁹³ S. Kunowski, *Podstawy współczesnej pedagogiki*, pp. 194-228.

³⁹⁴ M. Nowak, *Podstawy pedagogiki otwartej*, pp. 245-250.

³⁹⁵ Ibid. p. 245; M. Nowak, *Pedagogika adaptacji w społeczności pluralistycznej*, in: B. Suchodolski, I. Wojnar (ed.), *Adaptacja – Ucieczka – Twórczość, Materiały z Konferencji*, Jachranka – Warszawa, 1992, p. 14.

³⁹⁶ M. Nowak, *Podstawy pedagogiki otwartej*, p. 245.

³⁹⁷ Ibid. p. 245.

³⁹⁸ Ibid. p. 246.

In connection with the above, other terms were sought that could more accurately reflect this fact of combining with the education of the need to introduce a young pupil in social life. This is how the concept of "socialization" came about, which also gained its significance in pedagogical thought. Sometimes even the concept of "education" and "socialization" were identified. That is why it is essential to take a closer look at the issues of "socialization" and its relationship with "education"³⁹⁹.

Following M. Nowak's attitude and approach, we claim that in order a pupil were to adopt social attitudes, he or she should first learn the values and norms of a given community (group). The problem of values is a vast philosophical problem and can be seen in many aspects⁴⁰⁰. Not taking into consideration philosophical discussions, it is worth turning to values perceived in a phenomenal sense, noticed at the time of evaluation, which is only characteristic of man. They express what should be, they are a grasp of what we expect, they show what is most worthy of human aspiration. They are the solid grounds on which social life is based. Values constitute a basic element of human attitudes and interpersonal relations. Man acts, chooses or rejects certain actions depending on the chosen and experienced values⁴⁰¹.

Nowak also emphasizes that our perceptions of values, which we also assimilate in the process of education, function as common (generally important) attitudes and beliefs proper to members of a given community or group. Values, however, can be interpreted in a variety of ways and the very concept (term) of "values" does not say anything about how to implement them or how to apply them specifically in life. Such implementing rules, illustrating in a specific way how members of a given community see the possibilities of realization of certain values, we often recognize as "social norms"⁴⁰².

Social norms "are rules of behaviour, they point to specific attitudes and ways in which members of a given community want to fulfill (realize) specific values. In this way, "education" as "support in socialization" should be an introduction to the implementation of social norms. Therefore, education must lead the pupil to acquire the ability to distinguish between value and what is not value, to choose one or other values and to understand them in the context of *social norms*⁴⁰³.

The specific implementing provisions of the values, shown by social norms, are associated with certain expected relationships. We can define these expectations as referring to performing specific social roles or to undertaking social functions (for example, related to the profession of a teacher, a doctor or a role of mother and a father). If the person performing these functions does not meet the requirements, in a sense "falls out of the role", then it brings disappointment to the community, and his improper conduct leads to the act of drawing appropriate consequences.

³⁹⁹ Ibid. p. 246.

⁴⁰⁰ M. Nowak, *O wartościach chrześcijańskich w wychowaniu*, „Kultura i Edukacja” 2 (2) Toruń, 1992, pp. 41-43; W. Stróżewski, *Istnienie i wartość*, Kraków, Znak, 1981.

⁴⁰¹ M. Nowak, *Podstawy pedagogiki otwartej*, p. 246.

⁴⁰² Ibid. p. 246.

⁴⁰³ Ibid. p. 247.

Therefore, “education” is understood as an intentional “support in socialization”. It may also prove useful in adopting social roles that are to be undertaken in a given community and in one or another life situation every human being faces. Education should serve to cause and sustain the learning process of fulfilling social roles and entering a settled social life. In this case, it is very essential to evaluate and show valuable social functions. Never can personality development be an aim in itself, or at least the ultimate goal of education. The destiny of a person’s development involves social life and enriching this life with its own contribution⁴⁰⁴. Thus, education becomes a support in learning social values and norms as well as in preparation for undertaking and fulfilling social roles.

“Education” as a purposeful and conscious “help in socialization” also plays a special role in shaping the moral consciousness of the learner, in the so-called “forming a conscience”, which tends to regulate the human attitude from the inside in terms of its compliance with values and norms as well as expected attitudes and behaviours. Such attitudes are often given to the learner from the outside. Their role is to enable a person, who is a free being, to base his action on some solid foundations⁴⁰⁵.

Studies conducted by modern psychologists such as Lawrence Kohlberg (1927-1987) and Jean Piaget (1896-1980) clearly show that even if a person assimilates a certain *list* of cases “I am allowed – I am not allowed”, it is unlikely that this list will be automatically internalized. Therefore, if we consider achieving moral maturity as a value in moral education, the most appropriate way would be to stimulate a person to raise their own level of thinking about moral problems⁴⁰⁶.

The emergence of moral concepts is evolutionary – it is not a process of introducing given principles, values, norms or virtues, through modeling, teaching, as well as educational measures (rewards and punishments). The aforementioned process is rather conceptual reorganisation⁴⁰⁷.

Analyses conducted by, for example, Kohlberg focus not only on moral principles in general (as is the case with Piaget), but by referring them to specific situations, they are guided by the search for moral values in individual thinking⁴⁰⁸.

Man is not only a social unit but also a cultural being, because he always lives in a certain culture. Human development is also dependent on many environmental and cultural factors. An important factor in education is culture and its forms.

According to Gordon Willard Allport (1897-1967), man develops in himself unique ways of adapting to and mastering the environment. These ways create the personality of man. Therefore, a human person enters social life responding to his needs in a dynamic way⁴⁰⁹.

In turn, Mieczysław Gogacz points out that psychology, especially experimental, identifies man with a set of his actions that are recognized in a proper way in regard

⁴⁰⁴ M. Nowak, *Podstawy pedagogiki otwartej*, p. 247.

⁴⁰⁵ Ibid. p. 248.

⁴⁰⁶ Ibid. p. 248.

⁴⁰⁷ Ibid. p. 248.

⁴⁰⁸ Ibid. p. 248.

⁴⁰⁹ Ibid. p. 248.

to natural sciences. In pedagogy, however, this kind of method would lead to the reduction in educational activities so as to influence only desires and reaction in order to lead to appropriate social and cultural behaviour. It is incorrectly assumed here that man is only a body in which the influence of culture affects the formation of personality⁴¹⁰.

In general, the process of learning, assimilating and actively entering the cultural life of a given community is termed "inculturation." According to the pedagogy of culture, "education" should be an intentional, conscious and purposeful help in learning culture. That is why it should be, among others, "support in inculturation"⁴¹¹.

The complexity of problems referring to contemporary culture and its crises, which particularly affect young people, require a new style of cultural work rich in educational significance. It is sometimes referred to as the so-called "culture animation"⁴¹².

Therefore, education is to lead to the transmission of moral values and concepts, and at the same time it involves enabling people to change their life relationships or to shape them. Support in shaping criticism, creativity, commitment, a sense of responsibility and the ability to recognize wrong directions of cultural development becomes important⁴¹³.

Education and educators should, on the whole, perform a dual function: on the one hand, they should be resistant to society and its culture but on the other, they should stimulate a positive response to the socio-cultural requirements of the modern world. Both aspirations are not mutually exclusive, but should coexist indicating the dual task of education: "transmission of tradition" and "education for the future"⁴¹⁴. Therefore, pro-ecological education should perfectly fit in the field of "education for the future" both in the social and cultural perspective of the modern social system.

2.1.4. Spiritual basis for pro-ecological education

In contrast to the biological, psychological and socio-cultural approaches, the spiritual background of pro-ecological education is a concept that complements the overall understanding of education in this publication. It exceeds partial and one-dimensional perspectives, with the emphasis on living, psychological, axiological, ethical, and above all existential dimensions.

Therefore, it is indispensable to recognize the transcendent dimension of man and his relationship also with God, without obviously blurring the multi-faceted connection of man with the natural world⁴¹⁵.

⁴¹⁰ M. Gogacz, *Podstawy wychowania*, Niepokalanów, Wydawnictwo Franciszkanów, 1993, pp. 7-9; J. Koziński, *Koncepcje psychologiczne człowieka*, Warszawa, Wydawnictwo Akademickie „Żak”, 1997.

⁴¹¹ M. Nowak, *Podstawy pedagogiki otwartej*, pp. 248-249.

⁴¹² Ibid. p. 249.

⁴¹³ Ibid. p. 250.

⁴¹⁴ Ibid. p. 250; M. Nowak, *Pedagogika adaptacji w społeczności pluralistycznej*, p. 14.

⁴¹⁵ J. Maritain, *Humanizm integralny*, Warszawa, Wydawnictwo Krąg, 1981, p. 119.

Human spirituality becomes the most significant element when it comes to a learner. It is determined by nature that everyone develops as a person -as a rational and free being. Therefore, he strives to achieve the completeness of humanity as a comprehensively developed personality influenced by internal (genetic) and external (environmental) factors, and most importantly by spiritual factors (personality). Internal factors include, above all, biological heredity, while external factors include all external influences of the environment, both unintentional as well as intentional⁴¹⁶.

Unintended influences come from the ecosystem and the biosystem in which we live (climate, natural landscape, living organisms) and from the local environment (countryside, city) (social system). However, intentional influences come from the social system: social environment (family, school, church) and cultural (press, radio, television). All these environmental influences form the learner's acquired characteristics, expressed in his attitudes towards life and people, in his opinions and beliefs, as well as in habits and customs⁴¹⁷.

Finally, personality factors create human spirituality, which is recognized by all educational systems in contemporary world, despite being differently presented and interpreted.

The system of modern pro-ecological education is consistent with dualistic assumptions of perpetual, Christian philosophy (a non-material soul separate from the body).

It was Boethius who emphasized the substantive reason in the human person. Following S. Kunowski, we define the following features of human spirituality:

1. Human spirituality is rational, that is, able to objectively recognize reality in the process of mental abstraction which detaches significant features from the perceived material and thus creating the content of a real concept, consistent with the actual condition;
2. Human spirituality is capable of appreciating and evaluating all objects of experience in relation to each other (subjectively) as good, beautiful and true, noble, etc., therefore, valuation affects the ability to love and connect with good, beauty, truth in their experience. In this regard, spirituality can create the highest ideals of Good, Beauty, Truth, Holiness and living according to these ideals;
3. Human spirituality is free. The reflection of it is freedom of wil in choosing good and being given the ability to take moral responsibility for oneself, one's life and behaviour, as well as being responsible for other people, for example, spouses in a marriage or other family members family and nation as well;
4. Human spirituality is creative, hence it is not content only with receiving and experiencing the history of culture, but attempts to seek freedom either through creative work on the nobility of the matter for the good of people, or through original creativity, through invention and novelty in the creation of technology, science and culture which transform natural reality;

⁴¹⁶ S. Kunowski, *Podstawy współczesnej pedagogiki*, pp. 188-189.

⁴¹⁷ *Ibid.* pp. 188-189.

5. Human spirituality is open to metaphysical depth, transcends the boundaries of sensual experience (transcendence) and reaches to know the sources of being, the Absolute and God. Therefore, human spirituality has a religious attitude in its depths, seeks God and wants to unite with it. Christianity included these aspects in the term *anima humana naturalite christiano*. The personality factors of spirituality understood in this way, together with their rationality, valuation, freedom, creativity and religious openness create human species characteristics (Homo Sapiens) and ultimately decide on the development of the pupil, breaking and opposing the convergence of internal and external factors. However, the proper task of educators as the agos force is to properly shape the spiritual factors of the pupil, awakening his spirituality so that he can control the whole as well as forming on this basis the completeness of humanity in the comprehensively developed man's personality⁴¹⁸.

Spirituality as the third factor of development is substantial for human nature, namely it is constant in man, exists by itself, is the subject of spontaneous expressions of thoughts, speech, assessments, aspirations, creativity and impulses above the earthly life and sensuality. When it comes to the spiritual aspect, personality elements require not only personal development, namely mental through school education or revalidation and rehabilitation thanks to which they gain fitness in the event of underdevelopment and impairment, but also their appropriate attitude formed by the well-mannerism of their educators towards the Logos of truth and grace that enlightens all earthly reality⁴¹⁹.

The layered educational theory, as a theory of multi-dimensional shaping of human personality, which was initiated by Wilhelm Flitner, speaks of four situations or development lines:

1. social passing on the culture;
2. the historical process of introducing the pupil into the world of values;
3. the spiritual process of the creation of moral and religious life in the pupil⁴²⁰.

Afterwards, this theory was extensively developed by Sergiusz Hesses by means of differentiating in education four separate layers: psycho-physical, social, cultural and moral. The scholar explained that a human individual exists as though it was on four levels of existence, which correspond to four layers in education: as a psycho-physical organism, as a social unit, as a personality included in the cultural tradition and as a member of the ghost kingdom⁴²¹.

According to Stefan Kunowski, the arrangement of overlapping contour lines is as follows:

1. first is the biological layer that creates our body;
2. then is the psychological layer, developing the whole of the psyche;
3. then is the sociological layer forming the pupil as a social person;
4. finally a cultural layer that shapes a cultural creator in man;

⁴¹⁸ S. Kunowski, *Podstawy współczesnej pedagogiki*, pp. 189-191.

⁴¹⁹ Ibid. p. 193.

⁴²⁰ Ibid. pp. 194-195.

⁴²¹ Ibid. p. 195.

5. a purely spiritual or ideological layer, fully shaping spirituality and its religious and moral side⁴²².

Each layer has its own development time, requires appropriate external factors as educational influences, and comes to maturity in the process of joining together, namely integration⁴²³.

In the purely spiritual layer, a world-view synthesis is created. That is why the name "world-view layer" can be read as the completeness of developed human spirituality, thanks to which reason becomes the wisdom in seeking good and truth. The ability to evaluate creates love of the highest ideal of Truth, Good and Beauty. At the same time the freedom to choose the right path, shapes the life plan with full responsibility for my and other people's behaviour⁴²⁴.

The theory of education in contour terms indicates the conditions for the development of an individual as well as society:

1. Healthy *bios* of the individual;
2. The moral *ethos* of the social environment and national culture, conveying general human moral principles, natural law in accordance with the conscience of the individual and embodying his experience, attitudes and acquired qualities;
3. Ideal agos of cooperating educators;
4. *Fate* – favorable arrangement of random situations *Los*⁴²⁵.

In the spiritual sphere, the most visible is the significance of the presence of the "new man" ideal guiding man in every socially defined system of modern pro-ecological education. This ideal indicates that in the development of personality (in the process of personalization, awareness of oneself, who one really is) as well as in preparation for social life (in the process of socialization, social adaptation) the "old man" is defeated and sublimated to a higher level of his natural attitudes towards life and other people⁴²⁶.

Therefore, during the proces of human's education, the pupil is taken from the natural state and brought into a higher cultural state, and this is performed as a result of the internal transformation of human psychological disposition that causes a change in the egoistic attitude to the exceeding altruistic attitude in the process of personalization. At the same time, within the socialization process the *initial nostic attitude* (Latin nose – we) concedes. Nostic attitude opposes the we and them groups in favor of an illistic attitude (Latin illi, they), and thus to a serviceable commitment to others in the community⁴²⁷.

Pro-ecological education placed in the service of a man's personal life and the development of his personality should pay attention to the natural basis (especially biological) and the whole range of relationships in which human life is embroiled. In this sense, the goals of education will be placed in a relationship and constant

⁴²² S. Kunowski, *Podstawy współczesnej pedagogiki*, p. 196.

⁴²³ Ibid. p. 197.

⁴²⁴ Ibid. p. 198.

⁴²⁵ Ibid. p. 201.

⁴²⁶ Ibid. p. 170.

⁴²⁷ Ibid. p. 171.

interaction with these goals that inspire the entire social context and with instances of social values and norms contained in it, but not entirely subordinated to them. Therefore, it should be acknowledged that we will be able to understand better and more adequately the specific meaning of education only through in-depth research devoted to the issues of person's ethics, especially in the context of the current pluralism of lifestyles and behavioural models.

A truly educational activity will be an action only when it supports the pupil in growing in "humanity" (in "humanitas") and in performance to stimulate a personal way of life, so "excite a person" ("maieutics of a person"). Therefore, education will be an activity for initiation, implementation as well as free and responsible conduct.

Similarly, as ethical action gives form and human dignity to all other spheres of value. Thus, education perceived in the indicated sense will also give an educational character to all other individual activities and social (including socialization, inculturation, etc.) in favor of growth in one or another sphere of personal life.

In this kind of approach to the concept of "education" is growing in significance what we can define as the "burden of life in the modern world", and thus the burden of specific and social existence, in which pro-ecological education also plays an important role. Such an understanding of education requires a multitude of criteria in its study and implementation in practical educational activities.

That is why, at present, we turn to the living dimension of education as a fact immersed in a specific individual and collective existential situation⁴²⁸. It is only when these aspects and dimensions are taken into account that we can talk about the possibility of bringing out the sense and meaning of education⁴²⁹, as well as pro-ecological education included in it. Education according to our understanding is the influence of one man on another aiming to shape a healthy, educated, social and cultural man who is a *person* and lives an authentic life⁴³⁰.

2.2. Anthropological basis of pro-ecological education

The aforementioned approach to pro-ecological education directed us clearly to the need of paying attention to human understanding.

We also understand pro-ecological education as one of many forms of human expression and realization. That is why it becomes indispensable to take up the anthropological issue that will complete our search for the foundations of pro-ecological education. Attention focused on the specific existence of man will also allow us to specify "the reality of pro-ecological education"⁴³¹.

⁴²⁸ M. Nowak, *Podstawy pedagogiki otwartej*, pp. 270-271.

⁴²⁹ S. Kowalczyk, *Założenia chrześcijańskiego personalizmu*, in: M. Barlak (ed.), *Personalistyczna wizja sportu*, Warszawa, Wydawnictwo Salezjańskie, 1994, p. 12.

⁴³⁰ M. Nowak, *Od tradycyjnej pedagogiki ogólnej ku nowym wyzwaniom dla badań nad podstawami edukacji*, in: T. Hejnicka-Bezwińska (ed.), *Pedagogika ogólna. Tradycja – terażniejszość – nowe wyzwania*, Bydgoszcz, WSP, 1995, pp. 107-126.

⁴³¹ M. Nowak, *Podstawy pedagogiki otwartej*, p. 292.

Mieczysław Gogacz, writes about the need for compatibility of human theory with the very existence structure of man. Therefore, we should aim to combine education with “a well-recognized man”⁴³². Similarly, M. Nowak, from the position of open pedagogy, emphasizes that human theory should be appropriate to the realities of human life⁴³³.

Different sciences are taking an attempt to characterise man and his existential situation facing with the fact that it is difficult to describe man and his existence. This was also the reason why new attempts at such description have emerged and are constantly emerging. Its various aspects are studied by various sciences such as biology, physiology, anatomy, cultural sciences, sociology, psychology, pedagogy and, above all, philosophy. Mieczysław Albert Krąpiec (1921-2008) emphasizes that the philosophy is based on the “fact of being human” experienced in direct experience, which is accompanied by a reflection revealing the self-existing subject: “I”, who speaks about his action – “my acts”⁴³⁴.

The reflection of ancient anthropology focused on man as an individual, a specific copy of his species. Along with Christianity, this concept is expanded to include a dimension of unity, uniqueness as well as subjectivity and transcendence. Among Christian thinkers there was also formed a certain conception of man, but this concept was still rather interested in the ways of reaching the truth (following Plato) and achieving eternal salvation, in relation to which the concept understood the essence of man. Its other words it was a theological concept that was not intended to isolate some specific anthropological issues in philosophy. However, the concept was not insignificant, but – as it was emphasized by Stanisław Kamiński (1919-1986) – the foundations were also formulated there for the modern theory of being and action, and the place was prepared for accepting the dignity of a person⁴³⁵.

Particularly in the nineteenth century, there is a great variety of approaches towards the issue of a human being: from German idealism, treating man as an absolute reason, to the approach towards human issues through detailed sciences, especially humanities, naturalism and evolutionism. These trends, generating a reaction against rationalism and idealism, led to the emergence of ontological anthropocentrism and, finally, philosophical anthropology as an autonomous discipline of knowledge (as it is seen in Max Scheler’s works (1874-1928).

According to Scheler, human philosophy neither synthesizes the results of specific sciences nor interprets them, but rather studies ontical human nature. The phenomenological method the scholar used allowed him to capture man in all spheres of his activity: learning, living, acting, experiencing, and others. As M. Nowak notes, when it comes to Scheler’s approach, human philosophy is thus a philosophical “self-awareness” which is not an element of the organic world or a product of biological development but of a unique spiritual personality⁴³⁶.

⁴³² M. Gogacz, *Podstawy wychowania*, Niepokalanów, Wydawnictwo Franciszkanów, 1993, pp. 7-9.

⁴³³ M. Nowak, *Podstawy pedagogiki otwartej*, p. 295.

⁴³⁴ M. A. Krąpiec, *Kim jest człowiek?*, in: M. A. Krąpiec, *Wprowadzenie do filozofii*, Lublin, RW KUL, 1996, p. 269.

⁴³⁵ M. Nowak, *Podstawy pedagogiki otwartej*, p. 297; S. Kamiński, *Z metafizyki człowieka*, in: M. A. Krąpiec, *Dzieła*, t. IX: *Ja-człowiek*, Lublin, RW KUL, 1991, pp. 12-13.

⁴³⁶ M. Nowak, *Podstawy pedagogiki otwartej*, pp. 297-298; A. Siemianowski, *Antropologia filozoficzna*, Gniezno, Gaudetinum, 1996, pp. 39, 54.

According to M. Nowak, full philosophical anthropocentrism is clearly visible in existentialism, in which the very way of human existence is already considered to be philosophizing and perceives philosophical anthropology as a theory of authentic human existence. Of course, various aspects of human existence are often analyzed here, which makes the whole human philosophy interpersonal (Martin Buber (1878-1965)), personalistic, hermeneutic or referring to the ontology tradition (Mieczysław Gogacz)⁴³⁷.

It still seems that the most effective human concept referring to classical philosophy allows to achieve complementarity of conceptualization. Only the theory that studies man in terms of his being and indicates the final arguments contained in its ontical structure, is likely to give grounds to capture the rich human reality⁴³⁸.

What distinguishes a human being the most is the *external* conceptualization in which we perceive him as a "tool maker" ("homo faber")⁴³⁹. This approach is particularly important nowadays, although it has always shown the transcendence of man towards the determined world of nature. Man uses even the simplest tools not only for biological purposes, but also for non-biological ones⁴⁴⁰.

In connection with the use of specific tools, even the names of individual epochs were shaped: from tools that were an extension and specialization of the hand, through tools in the form of machines, to robots. This development can also be analyzed from the perspective of ways of communicating with others. Similarly to tools, we can talk about the era of manuscripts (handwritten language), then the printing machine and finally the electronic word⁴⁴¹.

The "human fact" is subject to various interpretations, which can be divided into two main groups. On the one hand, we have its approaches and interpretations as a *creation of nature*, while it is emphasized that man is the most perfect stage of nature's evolution. In this approach, man is explained by reference to the laws of nature and its development (especially the attitude of evolutionism presented by Julian Huxley (1887-1975) or Pierre Teilhard de Chardin (1881-1955)), the attitude of Marxism, psychoanalytical approaches as well as structuralism⁴⁴².

The second type of "human fact" approach, clearly visible, according to M. Nowak, from Descartes (1596-1650), exposes the subjectivity and spirituality of man, and especially his consciousness. We can point here to the "post-cartesian heritage" (following the achievements of David Hume (1711-1776), Immanuel Kant (1724-1804), Johann Ficht (1762-1814), Friedrich Schelling (1775-1854) and Georg Hegl (1770-1831), focused on existential concepts of man (Martin Heidegger

⁴³⁷ M. Nowak, *Podstawy pedagogiki otwartej*, p. 298; S. Kamiński, *Z metafizologii człowieka*, in: M. A. Krąpiec, *Dzieła*, t. IX: *Ja-człowiek*, Lublin, RW KUL, 1991, pp. 13-16.

⁴³⁸ M. Nowak, *Podstawy pedagogiki otwartej*, p. 299; S. Kamiński, *Z metafizologii człowieka*, pp. 23-25; M. Gogacz, *Podstawy wychowania*, pp. 9-19.

⁴³⁹ M. A. Krąpiec, *Kim jest człowiek?*, p. 270.

⁴⁴⁰ M. Nowak, *Podstawy pedagogiki otwartej*, p. 299.

⁴⁴¹ Ibid. p. 300.

⁴⁴² Ibid. p. 300; A. M. Krąpiec, *Ja-człowiek*, in: M. Krąpiec, *Dzieła*, t. IX, Lublin, RW KUL, 1991, pp. 67-99.

(1889-1976), Karl Jaspers (1883-1969)), or even anthropology proclaimed by Max Scheler (1874-1928)⁴⁴³.

Both interpretations are of great importance. Man, as it is stated by M. A. Krąpiec, can be considered as both "res naturae", and thus as a specific biological specimen in its development, environmental conditions and manifestations of action, as well as from the side of his being, which shapes the spiritual face from the inside. Therefore, one should look at a human being as a "person"⁴⁴⁴.

Therefore, all human theories should aim at realism, defending themselves against the dualistic concept of man, in which there is always an emphasis on either his spiritual dimension ("homo spiritualis"), or the biological or economic ("homo biologicus or oeconomicus"). Both of these approaches are alien to integral humanism and a realistic interpretation of "human fact"⁴⁴⁵.

From the perspective of philosophical anthropology, the possibilities and internal causes of development and education are perceived in the fact that man is an imperfect as well as potential being, which requires help and education in order to update its own humanity⁴⁴⁶.

That is why we share M. Nowak's approach that in this respect a realistic attitude, taking into account a specific human being (person) and influencing it and surrounding external conditions, would be desirable. This attitude and the concept of education associated with it, M. Nowak defines as "open". Generally speaking, it involves the attitude towards educational action which is characterised by realism. When it comes to pedagogical approaches, it is sometimes referred to as "pedagogical realism"⁴⁴⁷.

Taking into account the requirements of the presented "multidimensional realism" approach, makes it necessary to pay attention to the living dimension of education, including pro-ecological education. This requires affirmation and openness to all levels of human existence: from material and biological to psycho-spiritual. It also imposes the need to take into account certain specific requirements⁴⁴⁸.

Transferring these remarks to the ground of pro-ecological education, we can point to the need of taking into account a specific human being and his innate and acquired characteristics, regarding his attitudes and relations with the environment which is nature and the so-called objective reality.

⁴⁴³ M. Nowak, *Podstawy pedagogiki otwartej*, p. 300; A. M. Krąpiec, *Ja-człowiek*, in: M. Krąpiec, *Dzieła*, t. IX, Lublin, RW KUL, 1991, pp. 99-117.

⁴⁴⁴ M. Nowak, *Podstawy pedagogiki otwartej*, p. 300; A. M. Krąpiec, *Ja-człowiek*, in: M. Krąpiec, *Dzieła*, t. IX, pp. 418-420.

⁴⁴⁵ M. Nowak, *Podstawy pedagogiki otwartej*, p. 300; W. Granat, *Personalizm chrześcijański. Teologia osoby ludzkiej*, Poznań, Księgarnia Św. Wojciecha, 1985, pp. 143-144.

⁴⁴⁶ M. A. Krąpiec, *Dzieła*, T. IX: *Ja-człowiek*, pp. 293-309.

⁴⁴⁷ M. Nowak, *Podstawy pedagogiki otwartej*, p. 282.

⁴⁴⁸ Ibid. p. 291.

2.2.1. Human and his place as well as role in pro-ecological education

Pro-ecological education depends mainly on the previously adopted concept of man.

In our considerations devoted to the understanding of the concept of "person", which affects specific approaches to pro-ecological education, we rely on an analysis conducted by M. Nowak⁴⁴⁹ on the basis of, among others, the works of Romano Guardini (1885-1968)⁴⁵⁰ and Jacques Maritain (1882-1973)⁴⁵¹.

The first understanding of the concept of "person" as a certain "ontological category" perceives the person as an independent being, existing in itself in a substantive sense. This understanding of the "person" gives us the first understanding of "education", characterized by the desire to transfer knowledge in a general sense (general education), knowledge that exceeds the horizons of only one's profession (specialization). In contemporary world, education and upbringing, aiming at educating only specialists, "dehumanize human life".

The next understanding of the concept of "person" as a "relational being" refers to the essence of human existence (and therefore, the essence of the fact of "being-human"), emphasizing the dialogical nature of the relationship between the individual and the community ("dialogical personalism" or "philosophy I-you").

Another perception of the concept of "person" in ethical and moral terms indicates the highest good, the fact of remaining himself and the uniqueness of each person. This understanding of "person" is associated with the adoption of the possibility of expressing what is ethical. In education, the interpenetration of reason and will becomes necessary.

In turn, understanding the concept of "person" in a psychological sense as well as socio-psychological takes into account the individual nature of human psychological acts as a person, and at the same time its social character. The problem of development and "becoming" of a person is also emphasised here.

In all the concepts of "person" quoted by M. Nowak, we note a constant concern about extracting what would be specifically human and what characterizes man and humanity the most. The aim is to show man's special place and value. All ways of seeing "the fact of the personal existence of man" are accompanied also by a specific and dependent concept of education, based on this goal, the "ideal of man" (his "image"), which can be achieved through education. It includes the desire to fully realize man's humanity and a picture of the intended state of his development. It is also an important stage in the search for educational work on how to properly respond to the identified living situation of a human⁴⁵².

⁴⁴⁹ Ibid. pp. 313-317.

⁴⁵⁰ R. Guardini, *Grundlegung der Bildungslehre. Versuch einer Bestimmung des Pädagogisch-Eigentlichen*, Würzburg, Verbund-Verlag, 1953, pp. 21-25 (fragment tego traktatu w polskim tłumaczeniu: *Podstawy pedagogiki*, in: R. Guardini, *Bóg daleki – Bóg bliski*, Poznań, „W drodze”, 1991, pp. 270-278).

⁴⁵¹ J. Maritain, *Pour une philosophie de l'éducation*, Paris, Librairie Arthème Fayard, 1959, pp. 17-39 (fragmenty w polskim tłumaczeniu: *Od filozofii człowieka do filozofii wychowania*, in: F. Adamski (ed.), *Człowiek – Wychowanie – Kultura. Wybór tekstów*, Kraków, WAM, 1993, pp. 61-79).

⁴⁵² M. Nowak, *Podstawy pedagogiki otwartej*, pp. 313-317.

Therefore, in the present subchapter we will turn to human's existence subject to pro-ecological education, directed towards man, "the human person." M. A. Krąpiec emphasizes that looking at the human's existential structure as well as living conditions and the forms of his activity, is "also necessary to treat man himself as a goal, not as a means of his activity"⁴⁵³. This basic experience of himself as existing ("being human") is also the experience of the fact of personal existence ("being a person"), namely "being an entity existing in oneself"⁴⁵⁴.

M. Nowak notices a really interesting approach to the structure of personal existence in the R. Guardini treatise entitled *World and a person*. This approach takes into account three basic levels of a person's existence. Thus, the "person" is above all a "form" (a certain form, shape), recognizable as a shape among other shapes, as a form among other forms. However, the elements constituting it are acknowledged in its completeness, whereas the whole is acknowledged in every element". On the other hand, the second level of the "person" phenomenon is represented by "individuality" the centre of which is "not spatial" but "vital" and constituted by "interiority". Whereas the third level is located in the so-called "personality", defined as such a form of individuality that lives as much as it is determined by the spirit. The "person" here shows his "inner" through "self-awareness". "Innerness of the person" is also expressed by "freedom"⁴⁵⁵.

In connection with the aforementioned approach, M. Nowak, following R. Guardini, considers a person as an existence formed on the basis of interiority, determined by the spirit and acting according to the spirit. "I", as a formed, internal, creative existence, if it is in itself and possesses itself. The internal structure of the person is important, but above all his dynamics. The person belongs to himself, he cannot be possessed by someone else, he cannot be represented (replaced) by others, or even more threatened in his existence as a "person"⁴⁵⁶.

Guardini writes that a person is the most recognisable thing in the most literal sense of the term. The truth, absolutely understandable within itself, is that I am I (me). At the same time, it is an infinite secret that "I am I"; that I cannot be thrown out of me, that I cannot be replaced even by the most noble existence; that I am the centre of existence because it is me, as well as you there and others⁴⁵⁷.

We strive to present a realistic concept of man, characteristic of anthropological thought of Christian inspiration, in which even taking into account the "world of the spirit" (as it was claimed by Wilhelm Dilthey (1833-1911)), not only does not exclude, but emphasizes the personal reality, manifesting itself on different levels – from physical and material to sensual, from biological to psychological⁴⁵⁸.

This realism is also visible in the recognition of the realities of the environment in which personal existence takes place, and which also has some vital meaning for the individual. Such realism does not allow to speak of a "person" as some

⁴⁵³ M. A. Krąpiec, *Kim jest człowiek?*, in: *Wprowadzenie do filozofii*, Lublin, RW KUL, 1996, p. 269.

⁴⁵⁴ M. Nowak, *Podstawy pedagogiki otwartej*, p. 313.

⁴⁵⁵ Ibid. p. 301.

⁴⁵⁶ Ibid. p. 301.

⁴⁵⁷ Ibid. pp. 301-302.

⁴⁵⁸ Ibid. p. 302.

kind of “monad” absolutely introverted and self-sufficient (and not only because everyone’s real relationship with other people like him is taken into account), but also because the unity-uniqueness of the person appears in the specifically taken into account personal history of each man and entire groups (and therefore in their time continuity)⁴⁵⁹.

M. Nowak emphasizes that the unity and uniqueness of a person appear more frequently in a dialogue. The person who says “I” turns to “you”, which by the way is “I” for the other “you”. Only by adopting an attitude of openness to another human being (as a person) a person makes this move towards another person and expects an answer. In this reciprocity, which creates a dialogue, in this meeting of people, a person “born” as “I” realizes himself, becomes, is educated. Therefore, the transmission of culture is realized through the fact of meeting, in mutual exchange of words and signs, in communication (verbal and without words), in the “I-you” relationship, which is always the first, even before further subject-object relationship (e.g. subject of teaching.) This involves the requirement to take into account the specific existence of a person in such a way as to know, respect and consider him not as an instrument of my life, but as an aim in itself⁴⁶⁰.

The concept of “person” can also be considered following M. Nowak in not only a static but also a dynamic aspect. The scholar emphasizes, like Joseph Ratzinger, a novelty in the sense of the concept of “person”, seen not so much as substance but rather existentially (in the sense of mutual openness to each other, mutual relations and coexistence). M. Nowak considers a “person” as an existence being in relationship. This concept also appeared on the basis of philosophical reflection and was closely related to such basic philosophical categories as “nature” and “substantia” and up to our times we can talk about the role of these categories in the understanding of the term “person”. The implications of the aforementioned concepts referring to the understanding such concepts as “nature” or “substantia” affect the understanding of the term “person”. A person in himself and with himself is the *ontic* existence of the person and his *deontic* existence, namely the *existence for*, as long as the person is able to, thanks to his improvement and contact with the other being, remain himself⁴⁶¹.

Following M. Nowak, we distinguish the further development connected with the understanding of the term “person”, leading to the emergence of two main traditions. The first tradition is more concentrated on the substance and personality in the concept of “person” (AM Boecius, scholasticism, St. Thomas Aquinas, neo-scholasticism) whereas the other one is more concentrated on a more existential attitude (St. Augustyn, Ryszard from St. Victor, J. Duns Szkot, M. Luter, B. Pascal, S. Kierkegaard and in contemporary world so-called „dialectic theology”)⁴⁶².

⁴⁵⁹ Ibid. p. 302; też M. Gogacz, *Podstawy wychowania*, Niepokalanów, Wydawnictwo Franciszkanów, 1993, pp. 7-19.

⁴⁶⁰ M. Nowak, *Podstawy pedagogiki otwartej*, pp. 301-302.

⁴⁶¹ Ibid. pp. 304-305.

⁴⁶² Ibid. pp. 305-306.

Understanding the concept of “person” on the basis of M. Nowak’s considerations, as an existing being in itself (in ontic categories) and a relational being (in deontic categories) is also very important for the whole concept of the pro-ecological education process, which task is to “stimulate a person” to support his development and in this plane, level⁴⁶³.

As M. Nowak points out, even the Catholic Church concentrated on the concept of the “person”, extensively lecturing its anthropology at the Second Vatican Council, in accordance with the tradition of theological reflection and with faith, as well as with many modern trends⁴⁶⁴.

In the *Pastoral Constitution on the Church in the modern world* we read, among others: “According to the almost unanimous view of believers and non-believers, all things that are on earth should be directed to the man constituting their centre and summit” (KDK, No. 12). Church points at the extraordinary *dignity of the human being* and reminds of the need to direct the entire social order to the “good of persons” (KDK, No. 26). It also indicates its inviolability of the whole of the human person (KDK, No. 27 and 40), his happiness in marriage and family (KDK No. 47 and 49), as well as in the Church’s community, as we can read in the *Declaration on Religious Freedom* (DWR, No. 4)⁴⁶⁵.

In the concept of pro-ecological education, the “individual” is embraced in the individual as well as community dimension, emphasizing the spiritual dimension through openness to transcendence, and at the same time examining in its specific existence saturated with values and pro-social and pro-ecological involvement at the same time.

The so-called “personalistic norm” formulated by I. Kant, thought over by K. Wojtyła⁴⁶⁶, considers a person as the highest good. This norm considers the life of a human person in the whole range of his psychological and physical differences resulting from the diversity of sex, age and others. Considering a particular person as the highest good (“personalistic norm”) extends the understanding of the purposefulness of education. It is necessary to take into account the very value of the human person, which allows him to properly appreciate his “developmental good”⁴⁶⁷.

Personalistic norm “is understood as a exceptional method of justifying norms of morality and, above all, becomes the guiding principle of human deeds, according to which all human activity, in any field, must be equalled”⁴⁶⁸.

⁴⁶³ Ibid. p. 306.

⁴⁶⁴ Ibid. p. 307.

⁴⁶⁵ Ibid. p. 307.

⁴⁶⁶ K. Wojtyła, *Miłość i odpowiedzialność*, Lublin, KUL, 1982, p. 30; K. Wojtyła, *Osoba i czyn oraz inne studia antropologiczne*, Lublin, Towarzystwo Naukowe KUL, 2000, pp. 198-199; M. Nowak, *Norma personalistyczna w edukacji*, in: Z. Uchnast (ed.), *Norma psychologiczna. Perspektywy spojrzeń*, Lublin, Towarzystwo Naukowe KUL, 1997, pp. 90-100; M. Nowak, *Znaczenie “normy personalistycznej” w działalności wychowawczej*, in: J. Kostkiewicz (wybór tekstów), *Wprowadzenie do pedagogiki ogólnej*, Stalowa Wola, Oficyna Wydawnicza Fundacji Uniwersyteckiej w Stalowej Woli, 1997, pp. 187-215.

⁴⁶⁷ M. Nowak, *Podstawy pedagogiki otwartej*, pp. 289-290.

⁴⁶⁸ K. Wojtyła, *Człowiek w polu odpowiedzialności*, Rzym – Lublin, Instytut Jana Pawła II KUL, 1991, pp. 84-86.

Education is also one of the varieties of human action. Therefore, it is purposeful to present, following M. Nowak, the concept of K. Wojtyła's "personalistic norm" on the basis of pedagogy. Wojtyła in his study started from the analysis of this interpersonal reality, which is called "love". In this relationship, Wojtyła points to the basic truth involving that man as a personal being is a special value, which entails certain ethical requirements. In addition, the commandment of love of fellow creature he expresses in the form of the principle of proper reference to a person by loving him⁴⁶⁹.

According to the "personalistic norm", the most important thing is the full recognition of the values and dignity of a person which are connected with the biblical commandment of love of fellow creature. Referring this norm to education, we point to the obligation of affirmation of trans-consumer and supra-consumer (extra-consumer) value of a human person⁴⁷⁰.

The "personalistic norm" prohibits the use of a *person* as a means to an aim, as some impersonal tool, that is in a way that would contradict his personal character. The person has supra-use character and in this spirit must be affirmed, which requires that appropriate limits must be maintained. Unacceptable from the point of view of the "personalistic norm" is an attempt to subordinate the human person, leading to a reduction of his value. In education, such a reduction would manifest itself in object-oriented treatment, in putting a person on an equal position with the world of things and taking advantage of them just as we have these things at our own disposal⁴⁷¹.

Therefore, following M. Nowak we perceive education as a special interpersonal relationship in which the subject and, at the same time, the object of education is a person. Hence, the moral obligation to respect human dignity and values that are seen as appropriate to a person emerges. It can be stated following Wojtyła that also in the area of education, ethical life at the personal level means compliance with the requirements of "true love"⁴⁷².

Therefore, in all activities that have as its object a human person, it is essential to respect his dignity and special value what acquires significance especially in relation to the issue of education. It also provides the basis for the specific requirements of cross-sectional, supra-consumer and supra-utilitarian reference to the other man⁴⁷³.

M. Nowak, quoting the anthropological assumptions of A. Paré, emphasizes the importance of the person, because every human being is the most valuable of all that we have in the world; each person is unique; man is constantly changing for the better throughout his life; growth is not possible without in-depth commitment; feelings are as important as knowledge; the realization of man demands freedom;

⁴⁶⁹ M. Nowak, *Podstawy pedagogiki otwartej*, pp. 319-320; K. Wojtyła, *Miłość i odpowiedzialność*, Lublin, Towarzystwo Naukowe KUL, 2001, pp. 69-112.

⁴⁷⁰ K. Wojtyła, *Miłość i odpowiedzialność*, Lublin, Towarzystwo Naukowe KUL, 2001, pp. 23-32, 109-112.

⁴⁷¹ M. Nowak, *Podstawy pedagogiki otwartej*, p. 320; K. Wojtyła, *Miłość i odpowiedzialność*, Lublin, Towarzystwo Naukowe KUL, 2001, pp. 23-45, 109-112.

⁴⁷² M. Nowak, *Podstawy pedagogiki otwartej*, pp. 320-321; K. Wojtyła, *Miłość i odpowiedzialność*, pp. 23-45, 109-112.

⁴⁷³ Ibid. pp. 320-321; K. Wojtyła, *Miłość i odpowiedzialność*, pp. 23-112.

all forms of segregation and rejection are an obstacle when it comes to growth while the educational task is to optimize growth⁴⁷⁴.

At the same time, M. Nowak quotes more specific proposals suggested by C. Paquette, who wrote that in open and informal pedagogy the learner is considered to be someone who has a kind of internal apparatus that allows him to undertake efforts for autonomous and personal growth. This increase will be realized to the extent that there will be interaction between him and his surroundings⁴⁷⁵.

The aforementioned statements, following M. Nowak, can be considered as combined with general characteristics of "open dynamic systems". Z. Uchnast also emphasises that "the subject of research [...] are not so much some mental processes or personality traits, but a human person in a specific life situation, namely interested in something due to the fact that it contains some special meaning for this unique situation"⁴⁷⁶.

2.3. Pro-ecological education in axiological approach

Pro-ecological education becomes a support for the pupil to understand, accept and realize pro-ecological values in relation to others and the world in which he lives. Respecting the catalog of values built on the basis of environmental (ecological) ethics is to allow:

- resolving conflicts between man and the natural environment;
- moral evaluation of human actions directed towards the environment;
- motivating to perform actions for the preservation and protection of the environment, and thus maintaining such a state that is safe, beneficial both for the human world and for animal and plant species⁴⁷⁷.

By fulfilling this role, the values of environmental ethics become guardians of natural goods, become pro-ecological values *par excellence*⁴⁷⁸.

Within the matrix of our values there is a solution to ecological problems as well as preventive activities minimising the effects of the ecological crisis. Henryk Skolimowski claims that unless we are able to look closely at what values we recognize and how they determine our behavior, in other words, unless we are able to establish a new, reasonable, healthy and supportive basis in the form of appropriate values, all the brilliant expertise (based on limited and fragmentary vision), all technical solutions will be useless and unnecessary⁴⁷⁹.

The problem of values in ecological education will be presented from the perspective of two complementary approaches.

⁴⁷⁴ M. Nowak, *Podstawy pedagogiki otwartej*, pp. 321-322.

⁴⁷⁵ Ibid. pp. 321-322.

⁴⁷⁶ Ibid. pp. 321-322; Z. Uchnast, *Kierunki badań w psychologii twórczości*, in: A. Januszewski, P. Oleś, T. Witkowski (ed.), *Wykłady z psychologii w KUL*, t. 7, Lublin, RW KUL, 1994, p. 24.

⁴⁷⁷ Z. Hull, *Problemy filozofii i ekologii*, in: A. Papużński (ed.), *Wprowadzenie do filozoficznych problemów ekologii*, pp. 113-114.

⁴⁷⁸ H. Skolimowski, *Nadzieja matką mądrych. Eseje o ekologii*, Warszawa, Biblioteka Ery Ekologicznej TP Filozofii Ekologicznej, 1993, p. 189.

⁴⁷⁹ H. Skolimowski, *Filozofia żyjąca. Ekofilozofia jako drzewo życia*, Warszawa, Wydawnictwo Pusty Obłok, 1993, p. 189.

One of them indicates the goal. It says what is beneficial to be wanted, desired what you should strive for. From this point of view, the basic pro-ecological values include life and health⁴⁸⁰.

The second one shows the way to achieve the goal. It tells how to act, what to do, so that life and health do not remain empty words, so that they protect and enrich man and the natural world. In turn, from this point of view, the main pro-ecological values include: responsibility, restraint (moderation) and community – solidarity⁴⁸¹.

2.3.1. Values of pro-ecological education

Modern times have experienced a crisis of its own values, proposing instead pseudo-values that go only towards vitality and pure voluntarism. In turn, philosophies that assumed eternal significance as well as consistency of values opposed against it, placing them in their ontology and existence understood in an absolute sense⁴⁸².

In education, the concept of values should be fully individual, autonomous and clear, free from all conditions and relativisms. These values should focus primarily on man as they are born in man as the fruit of his feelings and experiences. In addition, these values give shape to his own formation, as well as give the meaning to the essence and existence of man. In this way, apart from feelings, there is reason and its task is not to combat feelings, but to adapt them to human life, and thus relate them to the world, to the body, to gender, to nature, to freedom, to thinking, and to death⁴⁸³.

Following M. Nowak, we emphasize that values are such a problem, “which we cannot go too carelessly and interpret it in one aspect. This is a problem that should be recognized interdisciplinary and continually placed in an anthropological context”⁴⁸⁴.

Every person getting to know the world, is able to accumulate everyday knowledge. Then, in the course of scientific proceedings is able to describe, explain, classify and assess – namely evaluate, and thus can fulfil some aspect of the quality of one's own life. Man evaluates things, phenomena and experiences (e.g. works of nature, other people, ethical attitudes, etc.). The process of evaluating activates man as the subject of action and evaluation, which makes him more capable of accepting values and realizing them, as not only an actor, but also a creator of his own life⁴⁸⁵.

Values express what should be and what we strive for, they ascribe some ultimate sense to reality as well as they show what is important and what is worth pursuing. They are the pillars on which social, personal and community life

⁴⁸⁰ Z. Hull, *Problemy filozofii i ekologii*, in: A. Papuźński (ed.), *Wprowadzenie do filozoficznych problemów ekologii*, p. 114.

⁴⁸¹ Ibid. p. 114.

⁴⁸² M. Nowak, *Pedagogiczny profil nauk o wychowaniu*, p. 397.

⁴⁸³ Ibid. pp. 397-398.

⁴⁸⁴ M. Nowak, *Podstawy pedagogiki otwartej*, p. 383.

⁴⁸⁵ M. Nowak, *Pedagogiczny profil nauk o wychowaniu*, p. 398.

is based. Basic human behaviours are motivated and regulated by values. They constitute the basic element of human attitudes and beliefs (the internalized value manifests itself as a certain attitude which, depending on whether it is adopted by members of a given social group, becomes a more or less social attitude)⁴⁸⁶.

There are values which are connected with man and which he fulfils and realizes in himself as well as in relation to the social and natural environment. Man constantly exceeds himself and goes beyond himself, always towards and always for the realization of values. Man reflects his axiological interior through external beauty⁴⁸⁷. Every human being in relation to the social and natural environment is guided by specific values. We can feel, interiorize, realize or experience them. Values determine our attitude to the world around us⁴⁸⁸. Man gets to know the values when he experiences them, when he comes in direct contact with them, and when he responds to them with feelings, acts of will, attitude and behavior. Man consciously accepts and gets to know the values in experience⁴⁸⁹. Man always acts in harmony with values that determine its functioning in reality⁴⁹⁰.

It is worth paying attention to the basic value in human life, namely his dignity, which is associated with the personal dimension of man. The aspect of human's dignity becomes the basis of human functioning in social reality and nature. Dignity should be treated as one of the moral values defining a man acting in accordance with universal human values.

At the same time, it is difficult to consider dignity without human's feeling of freedom or justice, because a free, fair man lives with dignity. Freedom is not assigned to a man from the outside, but is a source where the capacity for interpersonal relations emerges. Other values such as responsibility and conscience are based on it⁴⁹¹.

Within the framework of pro-ecological education, issues of ethical protection of the natural environment are raised. Man's attitude towards nature is expressed in terms of moral good and evil, duty and responsibility⁴⁹². There is a tendency to develop a specific ethos of using the natural environment, because nature, ceasing to be something obvious, unchangeable, certain and non-depletable, began to be treated as something needed and desired, it became a good. And not only economically valuable good – it was always for man – but also good considered in ethical terms⁴⁹³.

⁴⁸⁶ Ibid. p. 399.

⁴⁸⁷ A. Molesztak, *Godność jako fundament rozwiązywania dylematów moralnych*, in: K. Kalka, A. Papuziński (ed.), *Etyka wobec współczesnych dylematów*, Bydgoszcz, Wydawnictwo Uniwersytetu Kazimierza Wielkiego, 2006, p. 45.

⁴⁸⁸ Ibid. p. 46.

⁴⁸⁹ A. Siemianowski, *Człowiek a świat wartości*, Gniezno, Gaudentinum, 1993, p. 16.

⁴⁹⁰ A. Molesztak, *Godność jako fundament rozwiązywania dylematów moralnych*, in: K. Kalka, A. Papuziński (ed.), *Etyka wobec współczesnych dylematów*, pp. 45-46.

⁴⁹¹ M. Nowak, *Podstawy pedagogiki otwartej*, p. 337.

⁴⁹² M. Bonenberg, *Etyka środowiskowa. Założenia i kierunki*, Kraków, Wydawnictwo Uniwersytetu Jagiellońskiego, 1992; W. Tyburski, *Etyka i ekologia*, Toruń, Wydawnictwo PKE Toruń, 1995; H. Rolston III, *Conserving Natural Value*, New York, Columbia University Press, 1994.

⁴⁹³ Z. Hull, *Problemy filozofii i ekologii*, in: A. Papuziński (ed.), *Wprowadzenie do filozoficznych problemów ekologii*, p. 71.

To sum up, pro-ecological values refer to everything what exists in nature, human's behaviour, his social and material activity as well as all human products since its main function is to maintain the balance between the social system and the biosystem and ecosystem as well⁴⁹⁴.

On the basis of the source literature, one can distinguish the following pro-ecological values, which are sought in pro-ecological education:

- life;
- human's life and health;
- natural environment;
- social environment;
- socio-natural environment as a common wealth
- anthropological system of values (peace, solidarity, justice, freedom, beauty, kindness, truth, love)⁴⁹⁵.

2.3.2. Goals of pro-ecological education

Man acts in order to achieve the goal – this is what Alfred Adler (1870-1937) in his theory of individual psychology states. In turn, values are inseparably connected with the goal. Experiencing given needs and relevant motivation directs people to focus on the values that they find attractive. Therefore, the man decides to implement them in his life. In result, human life gains such a meaning that is shaped by man himself, consciously managing his own life. If we accept the understanding of education as a social assistance in assimilating the values and norms of a given community, we can talk about a certain process of their internalization. This process is defined differently. we often talk about is as forming conscience as this instance in a person, which due to its consent to given values, norms and social expectations connected with them, transforms into an internal voice regulating the behaviour of the individual⁴⁹⁶.

⁴⁹⁴ Z. Hull, *Problemy filozofii ekologii*, in: A. Papużiński (ed.), *Wprowadzenie do filozoficznych problemów ekologii*, p. 71; R. Nazar, S. Popławski, *Wartości i ekologia*, in: Z. Hull, W. Tulibacki (ed.), *Człowiek wobec świata*, Olsztyn, Wydawnictwo PTF Oddział w Olsztynie, 1996, pp. 272-280; Z. Hull, *Człowiek i biosfera – wymiar aksjologiczny*, in: Z. Hull, W. Tulibacki (ed.), *Człowiek wobec świata*, Olsztyn, Wydawnictwo PTF Oddział w Olsztynie, 1996, pp. 81-90; Włodzimierz Tyburski, *Główne kierunki i zasady etyki środowiskowej*, in: A. Papużiński (ed.), *Wprowadzenie do filozoficznych problemów ekologii*, pp. 97-132.

⁴⁹⁵ J. M. Dołęga, *Ekologia w teologii i filozofii chrześcijańskiej*, in: A. Papużiński (ed.), *Wprowadzenie do filozoficznych problemów ekologii*, pp. 161-164; E. J. Pałyga (ed.), *Ekologia społeczna i współpraca międzynarodowa w zakresie ochrony środowiska*, Warszawa, AKEE, 1992, pp. 18-53; L. Ostasz, *Ku etyce uniwersalistycznej i zarys teorii wartości*, Kraków, WM, 1994; K. Kłoskowski, *O naczelnej zasadzie etycznej relacji: człowiek-środowisko*, in: J. Dębowski (ed.), *Człowiek i środowisko. Humanistyka i ekologia. Prace I Olsztyńskiego Sympozjum Ekologicznego, Olsztyn 5-6 maja 1994 roku*, Olsztyn, Wydawnictwo WSP w Olsztynie, 1995, pp. 107-112; B. Hałaczek, *Aksjologiczna koncepcja nauki podłożem postulatów etyki uniwersalnej*, in: J. Sekuła (ed.), *Czy jest możliwa etyka uniwersalna – materiały Ogólnopolskiej Konferencji Naukowej*, Warszawa, WSRP, 1994, pp. 129-140; S. Dziamski (ed.), *Aksjologia, etyka, samookreślenie*, Poznań, WF Humaniora, 1996; J. M. Dołęga, *Miejsce problematyki etycznej i ekonomicznej w ekofilozofii*, in: W. Tyburski (ed.), *Ekologia – Ekonomia – Etyka*, Toruń, UMK, 1997.

⁴⁹⁶ M. Nowak, *Pedagogiczny profil nauk o wychowaniu*, p. 408; J. Koziński, *Człowiek wielowymiarowy*,

The goals of education determine the educational activity, both when it comes to educators, pupils and educational institutions as well. They inform us about how the learner should behave now and in the future, what he should learn, and how he should act. At the same time, it familiarises us with what the educator should aim at in the process of education. The goal of education also contains a point of reference for the educator himself and becomes a specific support while determining his work and attitude⁴⁹⁷.

According to M. Nowak, man seeks the experience of his life in his consciousness. If this awareness can be critical – thanks to thinking, man can reject false values and search for real life values, rejecting fictitious or deceptive ones. A man who forms himself in his humanity, seeks in his deepest essence the feeling that gives rise to values, which in turn become his possibility of life and the way of acting as a human being⁴⁹⁸.

The significance of values lies in their meaning. Only mankind and humanity in man can in complete freedom from all systems, authorities or traditions, confirm the significance and importance of all values, or state the lack of value in all anti-values. The interiorization of values through objective reality enters our self and is also the reason for this identification. In this aspect, man in the process of formation, upbringing and education, changes the reality that surrounds him, including values by an act of his free will. He also evaluates the values and takes over their meaning, making them his own values⁴⁹⁹.

In the formation of one's own humanity, man can seek strength to dominate circumstances, tendencies, dispositions, so that harmony, feelings, values and virtues become leaders of his life, his history and his world⁵⁰⁰.

The goals of education, including pro-ecological education, are derived from consciously set and selected "values" and "norms"⁵⁰¹.

Man is connected with the social and natural environment in regard to many values as well as emotional acts⁵⁰², but the most important value is life, and especially human life. In turn, the value that significantly affects the quality of life is health.

Life as the basic value of pro-ecological education.

In the normative dimension, environmental ethics and thus pro-ecological education proclaim the postulate of respect for life. All people have the right to live and its protection. It is good to maintain life, to support life, to give the highest value to a life that is capable of developing. However, it is detrimental to destroy

Warszawa, Wydawnictwo Akademickie „Żak”, 1996; E. Fromm, *Niech się stanie człowiek. Z psychologii etyki*, Warszawa – Wrocław, PWN, 1999; J. Daszykowska, *Jakość życia w perspektywie pedagogicznej*, Kraków, Oficyna Wydawnicza „Impuls”, 2010.

⁴⁹⁷ M. Nowak, *Pedagogiczny profil nauk o wychowaniu*, p. 411.

⁴⁹⁸ Ibid. pp. 414-415.

⁴⁹⁹ Ibid. p. 415.

⁵⁰⁰ Ibid. pp. 415-416.

⁵⁰¹ M. Nowak, *Podstawy pedagogiki otwartej*, pp. 398-399.

⁵⁰² W. Tyburski, *Główne kierunki i zasady etyki środowiskowej*, in: A. Papużński (ed.), *Wprowadzenie do filozoficznych problemów ekologii*, p. 120.

life or to harm life. In relation to the biosystem, it is not allowed to thoughtlessly, without explicit necessity, destroy anything from the world of animals and plants.

The eminent ecologist and philosopher Jean Dorst (1924-2001) writes: "we must include in our rules behaviours calling for the respect of all forms of life, because they are all due to the fact that we come from a common source"⁵⁰³.

Health as the elementary value of pro-ecological education.

The purpose of protective measures is not only to maintain various life forms, but also to counteract the deterioration of its quality. Therefore it is essential to take actions aimed at maintaining and ensuring good health condition of humans, animal organisms and the entire biosphere.

The awareness of the relationship between human's health and the good condition of his natural surroundings was close to people of different eras and cultures. Hippocrates (460 – 377 B.C.) already pointed out this fact when he argued that "we cannot understand the body without knowing everything." In the dissertation *On air, waters and the surroundings*, he showed the influence of environmental factors on health as well as mental condition of man. In addition, he explained how health and well-being are conditioned by environmental influences, especially the quality of air, water, food, and place of residence.⁵⁰⁴

In the Renaissance era, the idea of the dependence of human's health on environmental and even cosmic conditions was particularly clearly displayed by Theophrastus Bombastus von Hohenheim, known as Paracelsus (1493-1541), whose name is associated today with "natural medicine". He called for respect for the order and harmony prevailing in nature as manifestations of her health, vigor, and exuberance in life. Nature heals us – he argued – because it is endowed with health.

With the development of civilization diseases, we are becoming more and more aware of the fact that the health of man and all living organisms depends, to a large extent, on whether we can respect the laws of the natural world, read and understand its proper rhythms and mechanisms of survival. Any imbalance in the natural world becomes a great threat to human's health. Therefore, in order to preserve the value of health it is essential to take care of the maintenance of ecological balance, cleanliness of air, water and soil⁵⁰⁵.

The fact that health is not only widely spread but also highly appreciated value in the social consciousness of present times, can be an important factor motivating to take actions aimed at environmental protection. Aldo Leopold (1887-1948) defines health as the ability to conduct to self-protection, environmental protection; as our joint effort to understand and preserve this ability⁵⁰⁶.

We are becoming increasingly aware that in our efforts to preserve our health, it is not only significant how we relate to ourselves as psychophysical entities, but also to other animate entities and the entire natural environment. Julian

⁵⁰³ J. Dorst, *Siła życia*, Warszawa, PIW, 1987, p. 199.

⁵⁰⁴ W. Tyburski, *Główne kierunki i zasady etyki środowiskowej*, in: A. Papużyński (ed.), *Wprowadzenie do filozoficznych problemów ekologii*, pp. 118-120.

⁵⁰⁵ Ibid. pp. 118-120.

⁵⁰⁶ A. Leopold, *Sand County Almanac*, New York, Ballantine Books, 1981, p. 262.

Aleksandrowicz, an recognised and appreciated physician and ecologist, often pointed out this when he emphasized that our fight for health begins with the realization of this truth that specific environmental conditions are responsible for every life process⁵⁰⁷.

In turn, we pay our attention to those values which environmental education refers to, which have a regulatory function in human contacts with nature and determining us to think and behave in accordance with the good of nature. These values include above all: responsibility, restraint, community and solidarity⁵⁰⁸.

According to Włodzimierz Tyburski, responsibility takes a particularly high place in the hierarchy of values, and thus becomes indispensable in achieving the goals of ecological ethics and pro-ecological education. The relationship between this value and many others determines the importance and specificity of responsibility. Responsibility accompanies not only the realization of other values but also the observance of other values or their negation, namely situations when certain values are not respected and valuable things are not created. The concept of *responsibility* includes a sense of commitment to take responsibility for the effects of one's own deeds, attitudes, and behaviours⁵⁰⁹.

According to W. Tyburski, the sense of responsibility appears together with an attempt to cross the barrier between the "I" and the outside world. It can be another person, family, group, homeland and also the natural world. Responsibility is to open myself to what is outside me, to the world, to freely accept the world, to make contact with it, to hear it, as well as to understand it and to give the world an answer⁵¹⁰.

The subject of human's responsibility from the perspective of environmental ethics, which we base pro-ecological education on, is also nature, and not only man himself. A broader approach to the issue of responsibility appears in the works of an increasing number of authors, such as Carl Amery (1922-2005), who writes about the need to build a "planetary ethics of responsibility", making joint responsibility not only for their own group and own species, but for the entire planet as all.

Then, it was Claude Levi-Strauss (1908-2009) who appealed to the man for the responsible exercise of possessed rights, the border of which becomes the threat of extinction of some animal species or even plants. The German ethicist Hans Jonas (1903-1993), on the other hand, considers the category of responsibility in the future perspective, emphasizing the fact that we are not only responsible for what we have already done – in the dimension of the past, but we are also responsible when it comes to planning the future – responsible for what else we can make⁵¹¹.

⁵⁰⁷ Julian Aleksandrowicz (1908-1988) rightly wrote: „it is justified to look for new rational proposals that would allow to implement a higher form of treatment, i.e. prophylaxis based on nature protection, adding that it will only serve such patterns of cultural behavior”, which - combining biological knowledge about the environment with ethical knowledge on its protection - they will be the basis for survival science”.

⁵⁰⁸ W. Tyburski, *Główne kierunki i zasady etyki środowiskowej*, in: A. Papuziński (ed.), *Wprowadzenie do filozoficznych problemów ekologii*, p. 120.

⁵⁰⁹ Ibid. p. 120.

⁵¹⁰ Ibid. pp. 120-121.

⁵¹¹ W. Tyburski, *Główne kierunki i zasady etyki środowiskowej*, in: A. Papuziński (ed.), *Wprowadzenie*

W. Tyburski believes that responsibility is usually perceived in individual and group terms. In case of an individual, it relates to this area of its activity in which it may have a positive or negative impact on the environment⁵¹².

In turn, collective as well as generational responsibility involves respecting the obligation to leave the natural environment in a state that will not reduce the chances of survival for future generations⁵¹³.

John Feinberg also reasonably claims that the responsibility of the modern generation is associated with the obligation towards our descendants who have the right to inherit the world in a certain shape⁵¹⁴.

Responsibility in pro-ecological education is closely associated with restraint, otherwise moderation, because these values perform regulatory functions in the relationship of man with the natural environment and determine a pro-ecological lifestyle consistent with the good of the entire biosystem.

W. Tyburski believes that restraint and moderation together with responsibility are one of the most significant values – measures useful to achieve the objectives of ecological ethics in pro-ecological education, and thus to shape and protect the natural environment⁵¹⁵.

According to Tyburski, the renewal of both social and economic life should be based on the foundation of the ethical value of restraint. Changes in thinking about the world around us require changes in existing behavioural patterns and current lifestyle.⁵¹⁶

Hans Jonas emphasizes that the threat of the oncoming ecological disaster “requires a change in our consumption habits, and thus the lifestyle of all of us”⁵¹⁷. The chance to solve ecological problems exists in bringing about “fundamental changes in the philosophy of life and behavior patterns”⁵¹⁸. That is why the need to reorganise the concept of social and economic development from material growth towards the quality of life and a radical transformation of the consumption structure is increasingly being recognized in line with the value of restraint⁵¹⁹.

do filozoficznych problemów ekologii, p. 121; H. Jonas, *Zasada odpowiedzialności. Etyka dla cywilizacji technologicznej*, tłum. M. Klimowicz, Kraków, Wydawnictwo Platan, 1996; H. Ciążęła, *Etyka odpowiedzialności Hansa Jonasa a „trwały i zrównoważony rozwój”* (Imperatywy i dylematy), „Problemy ekorozwoju” 2006, vol. 1, No 2, pp. 107-114; H. Ciążęła, *O etyce odpowiedzialności globalnej – perspektywa historyczna i stan współczesny*, „Kultura i Edukacja” 2009, nr 2 (71), Wydawnictwo Adam Marszałek, pp. 7-26.

⁵¹² W. Tyburski, *Główne kierunki i zasady etyki środowiskowej*, in: A. Papuziński (ed.), *Wprowadzenie do filozoficznych problemów ekologii*, p. 121.

⁵¹³ Ibid. p. 122.

⁵¹⁴ J. Feinberg, *Obowiązki człowieka i prawa zwierząt*, „Etyka” nr 18, 1980, p. 35.

⁵¹⁵ W. Tyburski, *Główne kierunki i zasady etyki środowiskowej*, in: A. Papuziński (ed.), *Wprowadzenie do filozoficznych problemów ekologii*, pp. 122-125.

⁵¹⁶ Ibid. p. 123.

⁵¹⁷ E. Nowicka-Włodarczyk, W. Sztombka (ed.), *Prawda moralna, dobro moralne. Księga jubileuszowa dedykowana prof. Iji Lazari-Pawłowskiej*, Łódź, Wydawnictwo Uniwersytetu Łódzkiego, Łódź, 1993, p. 163.

⁵¹⁸ Z. Sadowski, *Przedmowa do książki D. H. Meadows, D. L. Meadows, J. Randers, Przekraczanie granic. Globalne załamanie czy bezpieczna przyszłość*, Warszawa, CUUW i PTWKR, 1995, p. 19.

⁵¹⁹ W. Tyburski, *Główne kierunki i zasady etyki środowiskowej*, in: A. Papuziński (ed.), *Wprowadzenie do filozoficznych problemów ekologii*, p. 124; A. Papuziński, *Etyka środowiskowa a ekonomia środowiska*, in: W. Tyburski (ed.), *Ekologia – Ekonomia – Etyka*, Toruń, UMK, 1997, pp. 77-90.

In the name of preserving life, its richness and diversity, one should strive for consumer restraint, moderation and reduction of needs. Respecting restraint in the use of natural resources and civilization achievements will allow technological and economic development to give a balanced direction "that will lead us back to the real needs of man"⁵²⁰.

Therefore, the value of community – solidarity is an important component of modern ecological thinking. Tyburski claims that with the help of this value, ecological ethics and pro-ecological education want to shape and promote awareness of the community of the human world with the natural world⁵²¹.

According to Tyburski, the idea of community and solidarity with the natural world, proclaimed by ecological ethics, on the basis of which pro-ecological education is organised, has two dimensions: normative-persuasive and cultural-civilizational:

- the first of these dimensions is intended to change the individual's attitude towards beliefs and behaviour regarding man's attitude towards the natural environment;
- the second one provides a specific vision of civilization, based on the assumption that human views and modes of action are a function of the possibilities provided by culture as a specifically human world of life. It is a programme for the development of human civilization capable of approving and respecting the needs of the non-human world, treated as community needs of the whole world of life and a harmonious fulfillment of human needs⁵²².

Tyburski emphasizes that in our age the idea of a relationship between man and nature as well as solidarity of all living things was exhibited in the statements of many recognised representatives of the circle of European culture. As one of the first modern western thinkers, it was strongly emphasized by co-creator of phenomenology and sociology of knowledge Max Scheler (1874-1928). Based on the analysis of the relationship between the development of the bourgeoisie, science and contemporary modern culture, he came to conclusion that "the one-sided idea of the exclusive dominion of man over nature", which is "somewhat axiom of the western ethos of the world [...] must be overcome in the future"⁵²³.

Scheler was not limited to sociological and historical analyses only. He did not hesitate to make judgments about the facts he discovered. He believed that in modern culture man was detached from "the great eternal mother of nature, which contradicts his essence"⁵²⁴. His conclusions are in full consistency with the theses of environmental ethics. According to the philosopher, it is high time for human beings to "develop the cosmic sense of unity again, awaking them from a sleeping western man"⁵²⁵.

⁵²⁰ E. F. Schumacher, *Małe jest piękne*, Warszawa, PIW, 1981, p. 181.

⁵²¹ W. Tyburski, *Główne kierunki i zasady etyki środowiskowej*, in: A. Papużyński (ed.), *Wprowadzenie do filozoficznych problemów ekologii*, p. 124.

⁵²² Ibid. pp. 124-125.

⁵²³ M. Scheler, *Istota i formy sympatii*, Warszawa, PWN, 1980, p. 171.

⁵²⁴ Ibid. p. 171.

⁵²⁵ Ibid. p. 170.

The idea of community and the ethics of solidarity with all manifestations of life are also the basic idea of normative proposals made by Albert Schweitzer (1875-1965). The scholar in his writings showed how far the fate of man is correlated with the fate of other people, as well as the whole nature⁵²⁶.

In the context of the above-mentioned values, humanistic and social ecological sciences are developed. Therefore, it is believed that environmental ethics and pro-ecological education are closely related to these values, while deepened ecological awareness can become the basis for eco-development⁵²⁷.

Following Józef Marcel Dołęga (1940-2014), among the fundamental philosophical foundations of pro-ecological education the following can be enumerated:

- recognition of the socio-natural environment as a common good for all humanity;
- recognition of life as the highest value in general;
- recognition of human life and health as primary values;
- recognition of the system of universal anthropological values (peace, solidarity, justice, freedom, truth and love)⁵²⁸.

Awareness of the significance of these values should be derived as a result of education obtained primarily in the family and at school. According to J. M. Dołęga, at the basis of ecological education and pro-ecological education understood in this way there is the recognition of life in general as well as human life and health as the highest values⁵²⁹.

The state of modern ecological awareness is unsatisfactory, which is why the responsibility and liability for pro-ecological education and upbringing rests properly on all people aware of ecological issues, and above all on family and school⁵³⁰.

2.3.3. Principles of pro-ecological education

We derive the principles of pro-ecological education from open pedagogy. We place their sources, in particular, in the concept of personalistic education and in the Christian inspiration of subjective reference to pupils.

According to the approach to Christian personalism, the source principle is the good of the individual people creating this life (social system). In connection with this, following Mariusz Cichosz, we derive specific principles of education, which should protect both the common good and the good of the person.

The main idea of all these principles is love. Properly understood love should embrace all human existence. It should manifest itself through justice, solidarity, support, the need for truth and freedom, as well as the pursuit of peace. The life of

⁵²⁶ W. Tyburski, *Główne kierunki i zasady etyki środowiskowej*, in: A. Papuziński (ed.), *Wprowadzenie do filozoficznych problemów ekologii*, pp. 126-127.

⁵²⁷ J. M. Dołęga, *Ekologia w teologii i filozofii chrześcijańskiej*, in: A. Papuziński (ed.), *Wprowadzenie do filozoficznych problemów ekologii*, p. 161.

⁵²⁸ Ibid. pp. 161-163.

⁵²⁹ Ibid. pp. 133-164.

⁵³⁰ Ibid. p. 162.

every human being and all his activity in the human community is to be permeated with love, especially in case of a Christian⁵³¹.

By referring to love as the foundation of community life, it is possible to define certain ethical guidelines which should be followed by the participants of social life.

The ideal of love should lead to genuine care for each person and for the common good, which is the social environment (social system) as well as natural environment (ecosystem, biosystem).

These include, above all:

1. *The principle of personalism*⁵³², emphasizing the primacy of man as a person over the social and natural environment, used in pro-ecological education for the sake of contemporary and future generations of the human race;
2. *The principle of the common good*⁵³³ as the principal good towards which social life is heading for, also in the field of pro-ecological education, treating the socio-natural environment (ecosystem – biosystem – social system) as a common good;
3. *The principle of justice*⁵³⁴, regulating life in a social environment (social system), defining the minimum level of mutual care and respect that all people owe each other. At the same time, it requires resisting the temptation to constantly strive for “have more” at the expense of others, not “to be”.
4. *The subsidiarity principle*⁵³⁵ – for others in need for the sake of the common good, which is the social (social system) and natural environment (ecosystem, biosystem).
5. *The principle of solidarity*⁵³⁶, in other words community with others in need for the common good, which constitute both social environment (social system) and natural (ecosystem, biosystem) as well.

The principle of support and solidarity are the principles of joint actions in the field of protection of the social (social system) and natural (ecosystem, biosystem) environment.

The most important issues in pro-ecological educational behaviour are the acceptance of the learner as well the treatment of the pupil as an entity and resignation from an attitude of domination, manipulation and autocracy. At the same time, it is the pursuit of a partner-like educational relationship, indispensable especially for mutual respect for one's feelings, expectations and needs. It is important to initiate maximum involvement on the part of both partners of the educational relationship in the process of pro-ecological education, leading to

⁵³¹ M. Wyrostkiewicz, *Ekologia ludzka. Osoba i jej środowisko z perspektywy teologiczno-moralnej*, Lublin, Wydawnictwo KUL, 2007, p. 153.

⁵³² Cichosz M., *Aksjologiczny wymiar życia społecznego w ujęciu pedagogiki społecznej*, p. 86.

⁵³³ Ibid. p. 86.

⁵³⁴ M. Wyrostkiewicz, *Ekologia ludzka. Osoba i jej środowisko z perspektywy teologiczno-moralnej*, p. 155.

⁵³⁵ Ibid. p. 158.

⁵³⁶ Ibid. p. 157.

a two-subject relationship. This is possible in the form of active dialogue based on empathic verbal contact⁵³⁷.

The principles of pro-ecological education should include the following issues:

1. Autonomous, free selection of the content of pro-ecological education should be associated with paying attention to the relationship between the pupils' needs and the local as well as social environment in the perspective of environmental protection. Thus, the cooperation of the school with the local community in promoting an environmentally friendly lifestyle becomes significant⁵³⁸.
2. Continuity and comprehensiveness of pro-ecological impacts on learners are another important principles of pro-ecological education. Individual pro-ecological actions alone are not sufficient, they provide fragmentary knowledge transformed only into shallow ecological awareness. The systemic approach in pro-ecological education in order to shape pro-ecological attitudes is becoming significant⁵³⁹.

A lot depends on the attitude of the tutors and learners themselves⁵⁴⁰. The educator's openness to the needs of the pupils is important. At the same time, acquiring ecological information, including practical skills and social competences, by pupils in the field of pro-ecological lifestyle is a priority. The principle of co-participation significantly affects the process of pro-ecological education.

3. The principle of various methods and forms of pro-ecological impact on learners affects the use of numerous methods of expression and impression of ecological messages, personal patterns as well as the natural environment – which are really significant components of the pro-ecological education process. Therefore, pro-ecological education should be closely and directly connected with the local natural environment⁵⁴¹.

The principles of teaching about the environment in pro-ecological education, according to E. Korczak, can be related to three levels: 1) environmental education, 2) education through environment – in the environment and 3) education for environment – for the sake of environment⁵⁴². We will make a more detail specification of the aforementioned levels:

⁵³⁷ B. Dymara, S. Michałowski, L. Wollman-Mazurkiewicz (ed.), *Dziecko w świecie przyrody*, Kraków, Oficyna Wydawnicza „Impuls”, 2009.

⁵³⁸ A. Budniak, *Edukacja społeczno – przyrodnicza dzieci w wieku przedszkolnym i młodszym szkolnym, Podręcznik dla studentów*, Kraków, Oficyna Wydawnicza „Impuls”, 2010, pp. 9-43.

⁵³⁹ Ibid. pp. 9-43; B. Dymara, S. Michałowski, L. Wollman-Mazurkiewicz (ed.), *Dziecko w świecie przyrody*, Kraków, Oficyna Wydawnicza „Impuls”, 2009.

⁵⁴⁰ S. Dziekoński, *Wychowanie ekologiczne w perspektywie personalistycznej*, „Studia Ecologiae et Bioethicae” Nr 1/2003, Warszawa, Wydawnictwo Uniwersytetu Kardynała Stefana Wyszyńskiego, 2004, p. 446; J. Homplewicz, *Etyka pedagogiczna*, Warszawa, Wydawnictwo Salezjańskie, 2000, p. 114.

⁵⁴¹ A. Budniak, *Edukacja społeczno – przyrodnicza dzieci w wieku przedszkolnym i młodszym szkolnym, Podręcznik dla studentów*, pp. 9-43; B. Dymara, S. Michałowski, L. Wollman-Mazurkiewicz (ed.), *Dziecko w świecie przyrody*, Kraków, Oficyna Wydawnicza „Impuls”, 2009.

⁵⁴² E. Korczak, *Edukacja środowiskowa w klasach 1-3 szkoły podstawowej*, in: J. Gzyl, E. Jarosz, E. Korczak, E. Kulka, Z. Nowińska, *Nasze środowisko – jak w nim żyć. Podstawy teoretyczne edukacji ekologicznej uczniów klas 1-3 szkoły podstawowej*, Katowice, Instytut Ekologii Terenów Uprzemysłowionych, 1996, pp. 17-19.

Ad. 1) Environmental education – according to E. Korczak, is a direct message of ecological content. Pro-ecological education is closely related to environmental education – ecological, and therefore plans to acquire by the pupils objective scientific knowledge about the surrounding social and natural reality in an interdisciplinary and holistic approach⁵⁴³.

Educators should indicate mutual relationships in the biosystem as well as cause-and-effect relationships of ecological problems in ecosystems. In addition, they should pay more attention to the relations in the social system and methods of solving them in various aspects: not only economic or political but above all in social and ethical aspects.

Ad. 2) Education through the environment – implemented in the environment, includes all ecological impacts on learners by direct actions in contact with the social and natural environment⁵⁴⁴.

Ad. 3) education for the sake of environment – concentrates on shaping pro-ecological attitudes observed at learners, and above all, on shaping responsibility while acting in the environment – corrective or preventive for the sake of it⁵⁴⁵.

2.4. Pro-ecological education in Christian approach towards personalism

In Christian personalism, following the theoreticians we search for Christian education as a condition of good and effective upbringing, also in an environmentally-friendly dimension. Characterizing this approach to education, we will first present the general assumptions of the personalistic concept of education. We will also point to the basic criterion of pro-ecological education, which is the human being.

2.4.1. Assumptions of personalistic concept of education

Presenting the general assumptions of personalist education seems to be the thing of utmost importance in understanding the significance of this concept for pro-ecological education of man. The value of man as a person is highlighted in pedagogical personalism. The basic and autonomous value as well as the goal of activities is the development of his personality. Man – a human being is not only a subject, but also a norm, a criterion for other values. As Stanisław Dziekoński reports, in this approach to education, a human being is a goal and a good for himself. In the ethical perspective, it is an unconditional value. The good of the human person, his safety and development are the superior moral principle, which must be subordinated to other values, even if they were recognized as fundamental to the development of society and the economy. The primacy of personal values

⁵⁴³ Ibid. pp. 17-19.

⁵⁴⁴ Ibid. pp. 17-19.

⁵⁴⁵ Ibid. pp. 17-19.

opposes the approach of individualism and sociology⁵⁴⁶. Personalism tries to show in the right proportions the rights of the individual and the importance of society in its individual development⁵⁴⁷.

The personalistic approach to environmental issues refers to a broader category. Firstly to "a community of people", diverse, autonomous towards each other and social institutions, and then to relations with the entire natural environment (ecosystem, biosystem) or cultural in social system⁵⁴⁸.

According to Dziekoński, in the personalistic concept of education the act of looking at the world is performed through the value of the human being. The pupil becomes the goal of education, and even the purpose of his educational activity. Upbringing is about enabling the pupil to comprehensively develop his own personality by engaging his activity to the extent that a human, conscious and free person can be really active⁵⁴⁹.

The formation of the learner's personality, taking place on the way of shaping his own experiences and life values, self-realization, freedom, is the natural goal of personalistic education. Therefore, any manipulation or instrumental treatment of a human being is excluded. Regardless of age, knowledge and skills acquired, the learner is a person who must be taken into account by the educator. An attitude of respect, openness, honesty towards the learner, personal contact, voluntariness and persuasion are the canon of personalistic pedagogy⁵⁵⁰.

Personal approach in education received special emphasis in the teaching of the Second Vatican Council and in the post-Vatican II pedagogical thought, developed primarily by John Paul II. The Holy Father says that education is about "(...) so that man becomes more and more human – that he is more" and not just "had" – so that through everything that "has", "possesses", that he could more more fully be a human – that is, he could be more not only with others but for others as well"⁵⁵¹.

This thought is developed in subsequent statements in which John Paul II notices that "education is, above all, endowing with humanity – bilateral bestowal"⁵⁵² or

⁵⁴⁶ S. Dziekoński, *Wychowanie ekologiczne w perspektywie personalistycznej*, in: „*Studia Ecologiae et Bioethicae*” Nr 1/2003, p. 445; J. Homplewicz, *Etyka pedagogiczna*, pp. 113-114.

⁵⁴⁷ S. Dziekoński, *Wychowanie ekologiczne w perspektywie personalistycznej*, in: „*Studia Ecologiae et Bioethicae*” Nr 1/2003, p. 445; Z. Marciniak, *Zarys historii wychowania*, Warszawa, PWN, 1978, p. 159; R. Proietti Segnalini, *La pedagogia personalizzata e l'azione pedagogico – pastorale nella scuola*, Roma, Pontificia Università Lateranense, 1990, pp. 91-92.

⁵⁴⁸ S. Dziekoński, *Wychowanie ekologiczne w perspektywie personalistycznej*, in: „*Studia Ecologiae et Bioethicae*” Nr 1/2003, p. 446; J. Homplewicz, *Etyka pedagogiczna*, p. 116.

⁵⁴⁹ S. Dziekoński, *Wychowanie ekologiczne w perspektywie personalistycznej*, „*Studia Ecologiae et Bioethicae*” Nr 1/2003, p. 445; Z. Marciniak, *Zarys historii wychowania*, Warszawa, PWN, 1978, p. 159; R. Proietti Segnalini, *La pedagogia personalizzata e l'azione pedagogico – pastorale nella scuola*, p. 97.

⁵⁵⁰ S. Dziekoński, *Wychowanie ekologiczne w perspektywie personalistycznej*, „*Studia Ecologiae et Bioethicae*” Nr 1/2003, p. 446; J. Homplewicz, *Etyka pedagogiczna*, p. 114.

⁵⁵¹ Jan Paweł II, *Przemówienie w siedzibie Organizacji Narodów Zjednoczonych do spraw Oświaty, Nauki i Kultury (UNESCO)*, (Fragmenty, nn. 11-14), Paryż 2 czerwca 1980, in: S. Urbański (ed.), *Wychowanie w nauczaniu Jana Pawła II*. (1978-1999), Warszawa, Wydawnictwo Szkoły Wyższej im. Bogdana Jańskiego, 2000, p. 130.

⁵⁵² Jan Paweł II, *List do Rodzin z okazji Roku Rodziny 1994*, (fragmenty, n.16), Rzym, 2 lutego 1994, in: S. Urbański (ed.), *Wychowanie w nauczaniu Jana Pawła II*. (1978-1999), p. 354.

“is a process in which mutual communion of people comes to the light in a special way”⁵⁵³.

Education defined by John Paul II can therefore be understood as a process of self-education, which begins after a human being reaches a certain degree of psychophysical maturity⁵⁵⁴ and requires the presence of an educator. This observation confirms the statement made in the *Apostolic Letter to young people around the world on the occasion of the International Year of Youth*: “If there is no doubt that the family is bringing up, that the school is educating and bringing up, then at the same time the action of the family as well as the school will remain incomplete (and may even be destroyed) – if each and every one of you young people does not take up the work of their education themselves. Family and school education can only provide you with elements for self-education⁵⁵⁵”, which should be understood as patient, persistent, difficult building “from the inside”.

In the field of human self-education, the words of Christ “will know the truth and the truth will set you free” become an important programme. These words form the inner core of what we call self-education. The Pope emphasizes that young people have an innate “sense of truth”. The truth is to serve freedom, which contains the criterion of truth. In turn, proper use of freedom requires a right conscience, a sense of responsibility, and openness to other people⁵⁵⁶.

2.4.2. Human being – the basic criterion for pro-ecological education

Pro-ecological education in personalistic education adopts a specific character. All activities aimed at protecting and developing the social and natural environment are conditioned by the good of the person created to support life. According to Dziekoński, there is a need to teach – especially young people – respect for life and the way it is born, runs, dies and is constantly reborn⁵⁵⁷.

In the personalistic concept of education, showing respect for nature will be a manifestation of the affirmation of a man who is included in the environment, and at the same time goes beyond it. Respect for nature is a consequence of respecting human dignity. Therefore, we are dealing with anthropocentrism. In this perspective, respect for the laws of nature will be respect for human rights. Human obligations towards the natural environment acquire a moral character,

⁵⁵³ Ibid. p. 353.

⁵⁵⁴ Ibid. p. 356.

⁵⁵⁵ Jan Paweł II, *List apostolski „Parati semper” Ojca Świętego Jana Pawła II do młodych całego świata z okazji Międzynarodowego Roku Młodzieży*, in: S. Urbański (ed.), *Wychowanie w nauczaniu Jana Pawła II*. (1978-1999), p. 47.

⁵⁵⁶ Jan Paweł II, *List apostolski „Parati semper” Ojca Świętego Jana Pawła II do młodych całego świata z okazji Międzynarodowego Roku Młodzieży*, in: S. Urbański (ed.), *Wychowanie w nauczaniu Jana Pawła II*. (1978-1999), p. 47.

⁵⁵⁷ S. Dziekoński, *Wychowanie ekologiczne w perspektywie personalistycznej*, in: „Studia Ecologiae et Bioethicae” Nr 1/2003, p. 450; S. Roller, *Cele wychowania – tworzenie i odradzanie*, in: Unesco International Bureau of Education, *Bliskie i dalekie cele wychowania*, przeł. I. Wojnar, Warszawa, PWN, 1987, pp. 413-414.

because their final recipient is man. According to Dziekoński, the human being is the basic criterion for the good that belongs to other beings⁵⁵⁸.

The affirmation of the human being for himself and his dignity does not contradict the autonomous good of living organisms. However, as Dziekoński notices, in the extreme form of anthropocentrism, the depreciation of entities without reason, consciousness incapable of creating science, culture, civilization may manifest itself to some extent, but this situation should not take place in personalism⁵⁵⁹. This opinion is reinforced by the explicit statements of John Paul II, who, by presenting a personalistic vision of education as the one most suited to man, also gives a teaching about the "own good" of the natural world. This means the need to limit any use of the gifts of the natural environment⁵⁶⁰.

The main aspect of such a human' behaviour is life. The next generations have the right to live in the same state of nature as our existence continues. A degraded environment affects the quality of human life. In addition, by not being able to provide people with proper conditions for their both physical and mental development, degradation of the environment contributes to health loss.

At the same time, John Paul II points to the positive aspects of human contact with nature. Referring to the Bible, he talks about the beneficial effects of the created world on man, about the recreational and aesthetic properties of nature. Care for the state of nature therefore has an anthropocentric character⁵⁶¹.

Education to respect the natural environment should begin as early as possible. According to Dziekoński, as a result of pro-ecological education, it is necessary that pupils:

- understand the idea of eco-development;
- are sensitive to human activities that threaten the environment;
- develop and apply the skills necessary for active participation in environmental protection in the local, national and global area;
- take care of the present and future quality of existence of people, animals, plants and inanimate nature;
- improve critical analysis of controversial ecological problems;
- better understand the truth that there are no simple solutions in environmental matters⁵⁶².

⁵⁵⁸ S. Dziekoński, *Wychowanie ekologiczne w perspektywie personalistycznej*, „*Studia Ecologiae et Bioethicae*” Nr 1/2003, p. 450.

⁵⁵⁹ Ibid. p. 450; P. Kędzierski, *Motywacja troski o zachowanie naturalnego środowiska w nauczaniu Jana Pawła II*, in: J. W. Czartoszewski (ed.), *Edukacja ekologiczna na progu XXI wieku: stan, możliwości, programy*, „Chrześcijaństwo i Edukacja Ekologiczna”, 1 (2001), Warszawa, VERBINUM Wydawnictwo Księży Werbistów, p. 132.

⁵⁶⁰ S. Dziekoński, *Wychowanie ekologiczne w perspektywie personalistycznej*, in: „*Studia Ecologiae et Bioethicae*” Nr 1/2003, p. 451; S. Dziekoński, *Przewodnie idee wychowania młodzieży w nauczaniu Jana Pawła II*, in: J. Stala (ed.), *Dzisiejsza młodzież*, Kraków, Wydawnictwo Naukowe PAT, 2001, p. 96.

⁵⁶¹ S. Dziekoński, *Wychowanie ekologiczne w perspektywie personalistycznej*, in: „*Studia Ecologiae et Bioethicae*” Nr 1/2003, p. 451; P. Kędzierski, *Motywacja troski o zachowanie naturalnego środowiska w nauczaniu Jana Pawła II*, in: J. W. Czartoszewski (ed.), *Edukacja ekologiczna na progu XXI wieku: stan, możliwości, programy*, pp. 134-135.

⁵⁶² S. Dziekoński, *Wychowanie ekologiczne w perspektywie personalistycznej*, in: „*Studia Ecologiae et*

In summary, concern for the state of the environment in which we live has an anthropocentric character. In this perspective, respect for the laws of nature will be respect for human rights. Respect for nature is a consequence of respecting human's dignity. Therefore, human obligations towards the natural environment acquire a moral character, because the final recipient is man himself. Therefore, it becomes important to limit any use from the gifts of the natural environment. The next generations also have the right to live in the same environmental conditions in which we live.

The personalistic concept of education suits man best, and the personalistic concept of pro-ecological education also involves science about the "own good" of the natural world. In the personalistic concept of education, showing respect for nature will be a manifestation of the affirmation of man integrated into the environment.

2.4.3. Goals of pro-ecological education versus goals of personalistic education

The ideal of upbringing, which is ascribed to both education and pro-ecological education by Stanisław Dziekoński, is sustainable development, or eco-development. It is about raising a man who has the ability to meet current needs in a way that does not prevent the next generations from the possibility of meeting their expectations. Such development, according to Dziekoński, occurs through the coexistence of man and nature in a certain state of balance. Therefore, it requires finding harmony between three aspects: natural, social and economic⁵⁶³.

According to Dziekoński, environmental protection, economic growth and human development both in the individual and social plane, are closely related⁵⁶⁴. There is a relationship of diversity between them and complementarity⁵⁶⁵.

The direction of pro-ecological education thus outlined is identified largely with the objectives mentioned in the personalistic concept of education. According to this concept, all educational activities should be subordinated to the integral development of man as a person in the individual and social plane⁵⁶⁶.

As it was noticed by Dziekoński, personalistic concept of education is interested in the whole person, his eternal destiny, and at the same time the common good of society. "In practice, this requires physical and moral care as well as intellectual well-being of the pupils, so that they can acquire an increasingly perfect sense

Bioethicae" Nr 1/2003, p. 451; K. Plewnicka, *Edukacja na rzecz zrównoważonego rozwoju*, in: J. W. Czartoszewski, J. Leśniewska (ed.), *Edukacja w naturze czyli jak pokochać, poznać, zrozumieć i chronić przyrodę*, „Chrześcijaństwo i Edukacja Ekologiczna” 2(2002), Warszawa, VERBINUM Wydawnictwo Księży Werbistów, p. 60.

⁵⁶³ S. Dziekoński, *Wychowanie ekologiczne w perspektywie personalistycznej*, in: „Studia Ecologiae et Bioethicae” Nr 1/2003, p. 448.

⁵⁶⁴ K. Plewnicka, *Edukacja na rzecz zrównoważonego rozwoju*, in: J. W. Czartoszewski, J. Leśniewska (ed.), *Edukacja w naturze czyli jak pokochać, poznać, zrozumieć i chronić przyrodę*, p. 56.

⁵⁶⁵ S. Dziekoński, *Wychowanie ekologiczne w perspektywie personalistycznej*, „Studia Ecologiae et Bioethicae” Nr 1/2003, p. 448.

⁵⁶⁶ Ibid. p. 449.

of responsibility by properly taking advantage of their freedom and preparing themselves for an active participation in social life”⁵⁶⁷.

2.4.4. Pro-ecological education as pro-social education

Pro-ecological education can also be referred to as *pro-social education*, because human development in the individual and social plane is closely related to the protection of the social and natural environment.

The subject of pro-social education is justice and social love, which means full moral order and which is the foundation of everyone's life and society⁵⁶⁸. It is included in the scope of social education in a special way, education for freedom and peace and pro-ecological education, which cannot be built either with words or with the help of external force. You must first desire it and then it is the result of the contribution of all people⁵⁶⁹.

In the social dimension, the “personalistic norm” transforms into specific deeds of human love towards others. Thanks to love, man is able to treat other people as brothers and understands perfectly that his role is to be a caring administrator of the world entrusted to him. Love is the main aspect in humanizing the natural environment, namely human involvement in transforming the world. Interference with nature should harmonize with the confirmation of human dignity and love⁵⁷⁰.

It is necessary to shape in a man some skills and abilities from early childhood in order to make love take such an expression in man. In this regard, the example of parents and educators is of great importance. Their tenderness, respect, service, selflessness, readiness to sacrifice, teach children to care for the needs of the fellow creature. A human being cares about both spiritual and material needs. Therefore, they educate in respect for the world of nature⁵⁷¹.

Education for love is emphasized in Christianity. The analysis of the documents of the Catholic Church, both pre-Vatican II and conciliar as well as contemporary, shows that creating an atmosphere of love in education is the basic condition for good education and its effectiveness. By imitating the love of Christ, a Christian finds the right relationship with the environment in which he lives⁵⁷².

The source of love for created things and responsibility for the state of the natural environment, for people who believe in Jesus Christ is love for God the Creator and Redeemer. That is why human activity in the world should be determined by such love. It is only love which allows truly and completely devote

⁵⁶⁷ Jan Paweł II, *Audienca dla biskupów ze Stanów Zjednoczonych Ameryki, przybyłych z wizytą „ad limina Apostolorum”*, Watykan, 28 października 1983, in: S. Urbański (ed.), *Wychowanie w nauczaniu Jana Pawła II*. (1978-1999), p. 235.

⁵⁶⁸ S. Chrobak, *Koncepcja wychowania personalistycznego w nauczaniu Karola Wojtyły – Jana Pawła II*, Warszawa, Wydawnictwo Salezjańskie, 1999, pp. 73-77.

⁵⁶⁹ Jan Paweł II, „*Pokój i młodzi idą razem*”, *Orędzie Ojca Świętego Jana Pawła II na XVIII Światowy Dzień Pokoju, 1 stycznia 1985*, in: S. Urbański (ed.), *Wychowanie w nauczaniu Jana Pawła II*. (1978-1999), p. 69.

⁵⁷⁰ S. Dziekoński, *Wychowanie ekologiczne w perspektywie personalistycznej*, „*Studia Ecologiae et Bioethicae*” Nr 1/2003, p. 449.

⁵⁷¹ Ibid. p. 449.

⁵⁷² Ibid. p. 449.

in order to, for example, satisfy the basic needs of the inhabitants of distant regions of the world, build solidarity between people and with the natural environment⁵⁷³.

2.4.5. The specificity of pro-ecological education according to Christian personalism

Christian pedagogical thought gives to all education, proecological as well, the nature of moral shaping, which is acquired through continuous action to achieve the ultimate goal of man⁵⁷⁴.

Christian ideal, moralism, personalism and Christian humanism is based on the ideal of Christian education, including a dual purpose: supernatural – regarding salvation, and temporal – embracing the good of the human person and the social and natural environment⁵⁷⁵.

Directing all education towards Christ that is taking place in Christian pedagogy, therefore, creates specific implications in the ecological area. Christ is the one who gives creation special dignity. In the person of Christ there is not only man but also nature experiences great exaltation. Therefore, it is the duty of man to show appropriate respect for the created nature⁵⁷⁶.

The above approaches have their source and final argument in the Bible, which is the basis for ecological solutions in the Christian religion. At the root of pro-ecological education there is the truth about the Creator God, creation of the universe and man⁵⁷⁷. The analysis of biblical texts enables the axiological approach to the environment as a creative work, shows the Christocentric dimension of the world as a determinant of values and draws attention to the eschatological orientation of the world as the final complement of its value⁵⁷⁸.

As a consequence, pro-ecological education is not primarily associated with providing relevant information, but with the formation of pro-ecological consciences and attitudes, triggering personal responsibility for creating on the way of personal commitment to the protection of the created world⁵⁷⁹.

⁵⁷³ Ibid. p. 450; S. Dziekoński, *Wychowanie ekologiczne w religii chrześcijańskiej*, in: J. M. Dołęga (ed.), *Podstawy kultury ekologicznej*, Polska Akademia Nauk, Komitet „Człowiek i środowisko”, „Zeszyty Naukowe” 32 (2002), pp. 72-73.

⁵⁷⁴ S. Dziekoński, *Wychowanie ekologiczne w perspektywie personalistycznej*, „Studia Ecologiae et Bioethicae” Nr 1/2003, p. 447; G. Groppo, *Teologia dell'educazione, Origine, identità, compiti*, Roma, LAS, 1991, p. 66.

⁵⁷⁵ S. Dziekoński, *Wychowanie w nauczaniu Kościoła. Od początku wieku XIX do Soboru Watykańskiego II*, Warszawa, Wydawnictwo UKSW, 2000, p. 75.

⁵⁷⁶ S. Dziekoński, *Wychowanie ekologiczne w perspektywie personalistycznej*, „Studia Ecologiae et Bioethicae” Nr 1/2003, pp. 452-454; P. Kędzierski, *Motywacja troski o zachowanie naturalnego środowiska w nauczaniu Jana Pawła II*, in: J. W. Czartoszewski (ed.), *Edukacja ekologiczna na progu XXI wieku: stan, możliwości, programy*, pp. 145-146.

⁵⁷⁷ S. Dziekoński, *Wychowanie ekologiczne w perspektywie personalistycznej*, „Studia Ecologiae et Bioethicae” Nr 1/2003, p. 452.

⁵⁷⁸ Ibid. p. 454.

⁵⁷⁹ Ibid. p. 455; J. Leśniewska, *Zasady chrześcijańskiej edukacji ekologicznej w rodzinie*, „Ateneum Kapańskie” 3 (2002), p. 190.

Chapter 3

Education to achieve ecological values and its implementation in State Higher Vocational Schools in Poland

Having presented the theoretical foundations of pro-ecological education, now we will present the practical aspect of implementing this education in higher vocational schools in Poland. Therefore, we will start explaining what higher vocational schools are and what educational programmes they implement, including pro-ecological education. We will also present the conditions of the pro-ecological process of education at the State Higher Vocational Schools.

State Higher Vocational School these are universities conducting first or second degree studies, primarily focusing on the professional preparation of future graduates in terms of the labor market requirements⁵⁸⁰. The education of students is to lead to the achievement of learning outcomes according to the NQF – National Qualifications Framework in three dimensions: knowledge, skills as well as such important social competences⁵⁸¹.

The greatest disadvantage of our technical civilization is making efficiency a kind of absolute value (greater production, effective competence, etc.), which appears as a criterion for evaluation also in education, and at the same time in upbringing, even in universities⁵⁸². For this reason, the concept of the *sacrum*

⁵⁸⁰ T. Pilch (ed.), *Encyklopedia pedagogiczna XXI wieku*, t. IV, Warszawa, Wydawnictwo Akademickie „Żak”, 2008, pp. 575-583.

⁵⁸¹ Ustawa z dnia 27 lipca 2005 r. – Prawo o szkolnictwie wyższym (Dz. U. 2005 Nr 164, poz. 1365, z późn. zm.); <http://www.nauka.gov.pl/krajowe-ramy-kwalifikacji-dla-szkolnictwa-wyzszego/>, downloaded on 10th December 2011.

⁵⁸² M. Nowak, *Pedagogiczny profil nauk o wychowaniu*, p. 400; K. Denek, *Uniwersytet w perspektywie społeczeństwa wiedzy. Dydaktyka akademicka i jej efekty*, Poznań, Wydawnictwo Naukowe WSPiA, 2011; K. Denek, *Uniwersytet w perspektywie społeczeństwa wiedzy. Nauka i edukacja w uniwersytecie XXI wieku*, Poznań, Wydawnictwo Naukowe WSPiA, 2011; K. Denek, *Uniwersytet w perspektywie*

becomes foreign to modern man, and therefore the concept of value is also foreign to him⁵⁸³.

Therefore, education towards values is very deeply connected with education towards a sense of the sacrum. In view of the sacrum, as it is noticed by M. Nowak, basically two opposing attitudes can be adopted:

- the first is the attitude of sacrifice, devotion to the sacrum, called *sacrificium* (which means sacrifice);
- in turn, the other, is called *sacrilegium*, namely desecrating the sacred (holiness) when it comes to values this is the attitude involving undermining or radical rejecting of values⁵⁸⁴.

The right attitude of a person towards values requires sensitivity and respect for the sacrum. For every human being, something becomes valuable in a given thing, person or event when he discovers something noble and sacred in them.

3.1. Pro-ecological education programmes at the PWSZ

In Polish pedagogical literature, the process of pro-ecological education is noticed primarily through the aspects of ecological education. In relation to ecological education a lot of work has been undertaken to create various programmes accepted internationally, nationally and locally, such as the International Strategy for Environmental Education, the National Strategy for Environmental Education as well as regional educational strategies. These programmes require even more detailed development, taking into account the results of current research devoted to awareness, the system of values and pro-ecological attitudes of the Polish society, including selected professional and social groups, such as academic youth.

The analysis of documents related to pro-ecological education in higher vocational schools.

In the present publication, we rely on the unified text of the Act of July 27, 2005 – Law on higher education (Journal of Laws of 2005 No. 164, item 1365, as amended). This text takes into account the changes introduced by the Act of 18 March 2011 amending the Act – Law on Higher Education, the Act on academic degrees and academic title and on degrees and title in the field of art and on the amendment of some other acts (Journal of Laws 2011 No. 84, item 455), in the version in force from October 1, 2011⁵⁸⁵.

In turn, the educational standards introduced under the Regulation of the Minister of Science and Higher Education of July 12, 2007 on education standards

społeczeństwa wiedzy. Przyszłość kształcenia nauczycieli, Poznań, Wydawnictwo Naukowe WSPiA, 2011; K. Denek, *Uniwersytet. Między tradycją a wyzwaniem współczesności i przyszłości*, „Edukacja Humanistyczna” nr 1 (28), Szczecin, 2013; A. J. Sowiński, *Szkice do teorii wychowania kreatywnego*, Kraków, Oficyna Wydawnicza „Impuls”, 2013, pp. 241-260.

⁵⁸³ M. Nowak, *Pedagogiczny profil nauk o wychowaniu*, p. 400.

⁵⁸⁴ Ibid. p. 401.

⁵⁸⁵ Ministerstwo Nauki i Szkolnictwa Wyższego, <http://www.nauka.gov.pl/szkolnictwo-wyzsze/reforma-szkolnictwa-wyzszego/tekst-ujednolicony-prawo-o-szkolnictwie-wyzszym>; <http://www.nauka.gov.pl/krajowe-ramy-kwalifikacji-dla-szkolnictwa-wyzszego/> – downloaded on 10th December 2011.

in regard to specific fields and levels of education, as well as the mode of creation and conditions that a university must meet in order to conduct interdisciplinary and macro-directional studies (Journal of Laws of 2007 No. 164, item 1166) and the Regulation of the Minister of Science and Higher Education of October 16, 2009 amending the regulation on education standards for specific fields and levels of education, as well as the mode of creation and conditions that a university must meet to conduct interdirectional studies and macro-directions (Journal of Laws 2009 No. 180, item 1407) constituted the core curriculum until October 1, 2011 year. The standards specified, among others the following issues: graduate qualifications, content and learning outcomes broken down into "learning content" and "learning outcomes – skills and competence"⁵⁸⁶.

Then, the Regulation of the Minister of Science and Higher Education was created of October 5, 2011 on the conditions for conducting studies at a specific field and level of education (Journal of Laws 2011 No. 243, item 1445). Aforementioned regulation defines the conditions that must be met by the curriculum, descriptions of first and second degree qualifications and the conditions that universities must fulfill in order to conduct studies within a given field of study and level of education⁵⁸⁷.

In turn, the Regulation of the Minister of Science and Higher Education of November 2, 2011 regarding the National Qualifications Framework for Higher Education (Journal of Laws 2011 No. 253, item 1520) defines the learning outcomes for the general academic profile and for the practical profile in the areas of education in the field of humanities (Annex 1 to the Regulation), social sciences (Annex 2 to the Regulation) or natural sciences (Annex 4 to the Regulation)⁵⁸⁸.

Among the attachments to the Regulation of the Minister of Science and Higher Education of November 4, 2011 (Journal of Laws 2011 No. 253, item 1521), Attachment 1 presents the model learning outcomes for the field of study in Pedagogy, first-cycle studies with a general academic profile, which indicate that the field of study pedagogy belongs to the areas of education in both the humanities and social sciences⁵⁸⁹.

Despite the existence of specialist education in the field of environmental protection and development within higher education, the status of pro-ecological education and upbringing in pedagogical fields is still not clearly defined. Most frequently, basic education and pro-ecological education are not included in the form of an object integrating ecological content, extracted from various subjects. Usually, ecological content is incorporated in the programmes of various subjects.

The National Strategy for Environmental Education "Through education to sustainable development", which was adopted in 1997, sets the directions for pro-ecological education and ecological education in Poland. It indicates the need to incorporate content related to environmental protection into formal education

⁵⁸⁶ Ministerstwo Nauki i Szkolnictwa Wyższego, <http://www.nauka.gov.pl/krajowe-ramy-kwalifikacji-dla-szkolnictwa-wyzszego/> – downloaded on 10th December 2011.

⁵⁸⁷ Ibid.

⁵⁸⁸ Ibid.

⁵⁸⁹ Ibid.

programs, as well as to support forms of non-formal education. According to the *National Strategy for Environmental Education "Through education for sustainable development"*, ecological education in universities should consist of education aimed at introducing ecological issues in the field of natural, economic and technical sciences as well as the humanities, and pro-ecological education should shape the system of values and pro-ecological attitudes in future graduates of all universities⁵⁹⁰.

However, there are still a few studies providing comprehensive knowledge, from environmental conditions to a set of social contexts, and knowledge of technologies and techniques used in environmental protection, ending with:

- as a consequence, some graduates are even well familiar with the issues of environmental conditions of environmental protection, but they do not understand social, technical and economic conditions;
- on the other hand, graduates prepared in the field of "applying technology" in environmental protection underestimate the natural and social conditions, not to mention the ethical conditions of human attitude to the environment.

Studies providing comprehensive ecological knowledge become indispensable as a source of further education when it comes to teachers and desirable due to social needs related to the quality of life in the natural and social environment.

The National Strategy for Environmental Education is a document that should become the basis for creating systemic solutions that achieve socially desirable goals in the field of effective education and pro-ecological education. It should eliminate apparent and ineffective actions for initiatives that will enable the preservation of a healthy living environment and its values for future generations in accordance with the principle of sustainable development. Thus, environmental upbringing and education at universities should become one of the priority tasks nowadays⁵⁹¹.

However, in reality, little attention is paid to education at a university, and even less to pro-ecological education. In this regard, even higher vocational schools become focused on providing students with relevant knowledge enumerated in the curricula, leaving aside the issues of educational impact, in particular pro-ecological education. However, the task ascribed to higher vocational schools should be to model the system of values, views, beliefs, behaviours and attitudes of students together with social expectations. Shaping students' system of values and attitudes is important in their later social and professional functioning.

Based on the analysis of educational programmes implemented in higher vocational schools, we find that the first degree studies in the field of Pedagogy, English Philology or Tourism and Recreation did not directly cover the content of pro-ecological education.

In connection with the aforementioned arguments, the question arises: how to properly achieve the goals of the National Strategy for Environmental Education

⁵⁹⁰ Ministerstwo Środowiska, *Narodowa Strategia Edukacji Ekologicznej. „Przez edukację do zrównoważonego rozwoju”*, Warszawa, 2001, pp. 5-30.

⁵⁹¹ Ibid. pp. 5-30.

in higher education schools? That's why in the present publication we attempt to develop the basis for building an integral concept of pro-ecological education in a higher vocational school, as well as the theoretical model of the functioning of such education. In addition, we attempt, on the basis of recognizing the basic conditions, relationships and mutual relations between individual elements inscribed in the functioning of pro-ecological education in a higher vocational school, to apply specific implications of this model of education to implement pro-ecological education in a higher vocational school.

Thus, we want to emphasize that pro-ecological education is an important field of human education, based on shaping human by obtaining knowledge about ecosystems, biosystems and social systems considered axiologically and methodically, and above all existentially.

Following Marian Nowak, we come to conclusion that the goals of education are derived from consciously set and selected values and norms for education. Generally speaking, they answer the questions: Where to? Why? For what purpose?⁵⁹²

The taxonomy of teaching and educational goals is the starting tool to increase the orientation and effectiveness of pro-ecological education. The functions of taxonomy are conditioned by a broader social and organizational context. The social context is primarily related to the content aspect of the objectives and their changeability. The organizational context, on the other hand, is the praxeological principles of complex, long-term activities aimed at achieving many goals.

B.S. Bloom's proposal regarding the development of the theoretical base of pro-ecological education seems substantially and methodologically when it comes to both cognitive and emotional sphere.

Bloom's taxonomy in the cognitive field includes six categories of goals: knowledge, understanding, application, analysis, synthesis and assessment.

In turn, the second taxonomy regarding the emotional domain, developed by a team consisting of: B. S. Bloom, D. R. Krathwohl, B. B. Masia, is an attempt to "processively" comprehend emotional goals in five categories⁵⁹³:

1. Reception:
 - 1.1. Awareness
 - 1.2. Willingness to receive odbierania
 - 1.3. Directed or selective attention
2. Activity:
 - 2.1. Acceptance
 - 2.2. Willingness to act
 - 2.3. Satisfaction derived from activity
3. Evaluation:
 - 3.1. Acceptance of values
 - 3.2. Selection of values
 - 3.3. Involvement in selected values

⁵⁹² M. Nowak, *Pedagogiczny profil nauk o wychowaniu*, p. 412; M. Nowak, *Teorie i koncepcje wychowania*, p. 371.

⁵⁹³ W. Okoń, *Wprowadzenie do dydaktyki ogólnej*, Warszawa, PWN, 1987, pp. 81-82.

4. Organisation:

4.1. Conceptual approach (conceptualisation) of values

4.2. Creating a system of values

5. Choosing your own system of values:

5.1. Subordinating the actions to values

5.2. Transforming the system of values into the view of the world

The first category includes skills such as the ability to stand out, choose, adopt or express attitude. As a result, the learner should learn and understand basic pro-ecological content.

The second category refers to the ability of adapting to the emotional situation and acting in accordance with the assumptions or expectations, approving actions, voluntary reporting, counteracting, enriching one's experiences, and others.

The third category – revaluation is revealed in understanding, defending and propagating accepted and recognized values. The results of these forms of activity are group membership, strong beliefs, decisive undertakings, opposition to falsehood and fraud, and others.

The fourth category of emotional changes constitutes the systematization of values, including the conceptual approach to values and the creation of a system of values.

The highest level of emotional sphere is a permanent internal system of values. In its creation, there is a subordination of behaviour to values that become personal characteristics and then values are transformed into a view of the world. Values change and requirements stabilize here. In addition, the pursuit to achieve improvement occurs. There is even an expectation of recognition and high assessment by other people (superiors, subordinates, peers, friends). The result of these changes is behaviour, efforts made, methods applied, plans developed to avoid, cope and solve problems in this field⁵⁹⁴.

Taxonomy of the motivational field proposed by B. Niemierko⁵⁹⁵ shows a great resemblance to B. S. Bloom's proposal, which creates a wide range of possibilities of its use, also in developing the goals of pro-ecological education.

Table 2. Taxonomy of educational goals proposed by Boleslaw Niemierko

Taxonomy of educational goals proposed by B. Niemierko	
Level	Category
I. Action	A. Participation in action B. Taking action
II. Attitude	C. Attitude towards action D. System of actions

Source: B. Niemierko, *Między oceną szkolną a dydaktyką*, Warszawa, WSiP, 1988, p. 15.

⁵⁹⁴ J. Półturzycki, *Dydaktyka dla nauczycieli*, Toruń, Wydawnictwo Adam Marszałek, 1997, pp. 53-54.

⁵⁹⁵ B. Niemierko, *Między oceną szkolną a dydaktyką*, Warszawa, WSiP, 1988, p. 15.

- A. Participation in the action involves conscious and attentive receiving of a certain type of stimuli and performing activities corresponding to the adopted role, but without showing initiative. The learner willingly adapts to the situation.
- B. Taking action involves spontaneous initiation of a given type of an activity and internal involvement in the performance of a given type of an activity. The learner organizes situations in a certain way.
- C. Attitude towards action involves the consistent performance of a given type of an activity as a result of a permanent internal need and positive evaluation of its results. The pupil is a supporter of this activity and encourages others to participate.
- D. The system of activities involves regulating a particular type of an activity by means of a harmoniously ordered set of conduct tasks which the learners ward is identified with to such an extent that these tasks can be considered as personality traits. The pupil does not disappoint others even in very difficult situations and his activities are characterized by efficiency and style specificity⁵⁹⁶.

To sum up, the goals of pro-ecological education fit perfectly into the educational goals presented by B. Niemierko – starting from pro-ecological values, through activities, we strive to shape pro-ecological attitudes among State Higher Vocational Schools (PWSZ) students in Poland.

3.2. Contents of pro-ecological education at PWSZ

The topics concerning pro-ecological education are implemented in the curriculum in state vocational higher schools in Poland at various degrees. The division of the material between different faculties is presented in the following tabular summary of the researched faculties:

Table 3. Division of the contents of ecological education depending on the researched field of study

Implemented pro-ecological topics (curricular and cross-curricular) at PWSZ	
Pope John Paul II State School of Higher Education in Biała Podlaska	
Pedagogy Year I Pedagogy Year III	Ecological education with methodology (30 classes) Methodology of environmental and ecological education in kindergarten (15 lectures and 15 classes)
English Philology I-III	only pro-ecological and health-oriented content as part of other subjects
Tourism and Recreation Year I Tourism and recreation Year III	Ecology and environment protection (30 lectures, 15 classes) Eco-tourism (15 lectures, 15 classes)

⁵⁹⁶ Ibid. p. 15.

State Higher Vocational School in Gorzów Wielkopolski	
Pedagogy Year I Pedagogy Year III	Environmental education with methodology (30 lectures, 30 classes)
English Philology I-III	only pro-ecological and health-oriented content as part of other subjects
State Higher Vocational School in Leszno	
Pedagogy Year I Pedagogy Year III	Social ecology with ecological education (30 lectures, 30 classes) Science in integrated teaching (30 lectures, 30 classes)
Tourism and Recreation Year I Tourism and recreation Year III	Nature resources in tourism (30 lectures, 30 classes) Eco-tourism (30 lectures, 30 classes) Sustainable tourism (30 lectures, 30 classes)
State Higher Vocational School in Racibórz	
Pedagogy Year I Pedagogy Year III	Environmental education with methodology (15 lectures, 30 classes.)
English Philology I-III	only pro-ecological and health-oriented content as part of other subjects

The axiology of pro-ecological education cannot be degraded to the level of ordinary facts of civilization progress and environmental protection issues, because human life would lose its human dimension. The achievements of humanity and technology would take the form of environmental adaptation and training of attitudes. The concept of hierarchy of values allows to show values without the need to absolutise them, but also to show their own value embedded ontologically. There is man himself on this line between reality and ideal. In addition, it is the man who becomes the principle and basis for the implementation of a specific concept of value⁵⁹⁷ such as the concept of the hierarchy of pro-ecological values

It is man himself who decides in the process of adopting the external ideal and making it the internal form of a person. First, a human being becomes enriched with the values absorbed in the continuous process of upbringing, formation or education⁵⁹⁸.

Axiology of pro-ecological education in present publication concerns the evaluation of life, human's health and at the same time the life environment itself. The basics of evaluation are developed in axiology and the philosophy of existence. As part of pro-ecological education, life and health as perceived as the highest values, but not absolute ones. Nevertheless, the socio-natural environment is treated as a common good⁵⁹⁹.

Axiology of pro-ecological education at the PWSZ in Poland refers to everything that exists in nature, human's behaviour, his not only social but also material activity as well as all human creations serves to maintain the balance between

⁵⁹⁷ M. Nowak, *Pedagogiczny profil nauk o wychowaniu*, p. 419.

⁵⁹⁸ Ibid. pp. 419-420.

⁵⁹⁹ J. M. Dołęga, *Troska Jana Pawła II o środowisko*, in: S. Urbański (ed.), *Duchowość współczesnego człowieka w świetle globalizacji i edukacji*, p. 147.

the social system and the biosystem and ecosystem⁶⁰⁰. Values materialize in the broadly understood contacts of man with nature.

On the basis of the collected literature of the subject⁶⁰¹, we distinguish groups of pro-ecological values that are sought in pro-ecological education according to shallow and deep ecology: ecosystem axiology, biosystem axiology, social system axiology, and a group of values in methods and attitudes – pro-ecological lifestyle.

3.2.1. Axiology of ecosystem in pro-ecological education

The existence of humanity is conditioned by the continuous making use of air, water, food, raw materials and energy resources from the lithosphere, hydrosphere, atmosphere and biosphere⁶⁰².

Therefore, in order to preserve human's life and health and, for the sake of him, the environment as well treated as a common good, the problem of axiology of ecosystems in pro-ecological education, undertaken by shallow ecology, becomes so indispensable.

The field of axiology includes concern for the protection of ecosystems in terms of the state of the atmosphere, the lithosphere and the hydrosphere and the preservation of species biodiversity in them. At the same time, axiology emphasizes being economical while managing the nature resources bearing in mind future generations.

Not only the theory but also practice of protection and developing natural environment is derived from the axiology of ecosystems taking measures to stop the degradation of ecosystems. Environmental protection is an activity focused on human needs to keep our living environment on the least degraded level as possible. Legal foundations for environmental protection⁶⁰³ were created in accordance with the following generalized principles:

⁶⁰⁰ R. Nazar, S. Popławski, *Wartości i ekologia*, in: Z. Hull, W. Tulibacki (ed.), *Człowiek wobec świata*, Olsztyn, Wydawnictwo PTF Oddział w Olsztynie, 1996, pp. 272-280; Z. Hull, *Człowiek i biosfera – wymiar aksjologiczny*, in: Z. Hull, W. Tulibacki (ed.), *Człowiek wobec świata*, pp. 81-90.

⁶⁰¹ J. M. Dołęga, *Ekologia w teologii i filozofii chrześcijańskiej*, in: A. Papuziński (ed.), *Wprowadzenie do filozoficznych problemów ekologii*, Bydgoszcz, Wydawnictwo Uczelniane Wyższej Szkoły Pedagogicznej w Bydgoszczy, 1999, pp. 161-162. E. J. Pałyga (ed.), *Ekologia społeczna i współpraca międzynarodowa w zakresie ochrony środowiska*, Warszawa, AKEE, 1992, pp. 18-53; L. Ostasz, *Ku etyce uniwersalistycznej i zarys teorii wartości*, Kraków, WM, 1994; K. Kłosowski, *O naczelnej zasadzie etycznej relacji: człowiek – środowisko*, in: J. Dębowski (ed.), *Człowiek i środowisko. Humanistyka i ekologia. Prace I Olsztyńskiego Sympozjum Ekologicznego, Olsztyn 5-6 maja 1994 roku*, Olsztyn, Wydawnictwo WSP w Olsztynie, 1995, pp. 107-112; B. Hałaczek, *Aksjologiczna koncepcja nauki podłożem postulatów etyki uniwersalnej*, in: J. Sekuła (ed.), *Czy jest możliwa etyka uniwersalna – materiały Ogólnopolskiej Konferencji Naukowej*, Warszawa, WSRP, 1994, pp. 129-140; S. Dziamski (ed.), *Aksjologia, etyka, samookreślenie*, Poznań, WF Humaniora, 1996; J. M. Dołęga, *Miejsce problematyki etycznej i ekonomicznej w ekofilozofii*, in: W. Tyburski (ed.), *Ekologia – Ekonomia – Etyka*, Toruń, UMK, 1997.

⁶⁰² J. Machowski, *Problemy prawne ochrony środowiska*, Warszawa, Wydawnictwo Akademickie „Żak”, 2000, p. 22.

⁶⁰³ Ustawa z dn. 31 stycznia 1980 r. o ochronie i kształtowaniu środowiska (Dz. U. z 1994 r. Nr 49, poz. 196; z 1998 r. Nr 106, poz. 668).

The principle of comprehensiveness of environmental protection treats the environment as an indivisible whole, including the interdependence of both biotic and abiotic elements, which man integrally has a duty to care for.

The principle of maintaining environmental balance emphasizes that the processes of shaping the environment must be carried out with knowledge and respect for the laws governing nature and with full awareness of the effects these changes will have on the ecosystem. This rule requires rational management of all natural resources of the environment on the basis of the current state of knowledge in order to prevent its deterioration.

The principle of being economical obliges to economize activities in the field of managing environmental resources in order to maximize its protection by saving, eliminating waste and limiting exploitation to the absolutely necessary minimum. Efficiency requires the efficient and rational use of exploited nature resources and devices for environmental protection. The principle of planning that supports the organization and functioning of public administration in the field of rational environmental protection measures is supportive.

The principle of the superiority of environmental protection over economic activity and the principle of functional integration – which imposes on all subjects of law a universal obligation to protect and rationally shape the environment under the international idea of eco-development – sustainable development was implemented

In turn, the principle of legality emphasises that all exploitation activities of environmental resources and human production are allowed within the limits set by the provisions of environmental law⁶⁰⁴.

3.2.2. Axiology of biosystem in pro-ecological education

The axiology of the biosystem in pro-ecological education includes respect for any life. It also emphasizes respect for human life and health and takes into account harmony in the coexistence of all living organisms on Earth.

Pro-ecological education proclaims the demand for respect for life, because all people have the right to live and its protection. In relation to the biosystem, we must not thoughtlessly, without explicit necessity, destroy anything from the world of animals and plants.

The purpose of protective measures is not only to maintain various forms of life, but also to counteract the deterioration of its quality, and therefore actions for maintenance and ensuring good health condition of man and other living organisms -overall the entire biosystem – the sphere of life on Earth.

In the course of developing civilization diseases, we are becoming increasingly aware of the fact that both human's health as well as health of all living organisms depends, to a large extent, on the extent to which we can respect the laws of the natural world, read and understand its proper rhythms and mechanisms of survival. Any imbalance in the natural world becomes a great threat to human

⁶⁰⁴ J. Machowski, *Problemy prawne ochrony środowiska*, pp. 15-18.

health. Therefore, in order to preserve the value of health and quality of life, it is essential to care about maintaining ecological balance in the biosystem as well taking care of the purity of the atmosphere, hydrosphere, lithosphere⁶⁰⁵.

3.2.3. Axiology of social system in pro-ecological education

The subject of our responsibility in pro-ecological education is not only the biosystem or ecosystem but above all the sociosystem that we create ourselves.

Axiology of the social system in pro-ecological education, fulfilling a regulatory function in human-nature relations and orienting us towards consistent with the good of nature, thinking and behaviour primarily refers to such values as peace, solidarity, justice, responsibility, restraint and moderation.

Responsibility accompanies the realization of other values, observance of other values or their negation, i.e. situations when certain values are not respected and valuable things are not created. The notion of responsibility includes a sense of commitment to take on the effects of one's own deeds, attitudes, and behaviours. A sense of responsibility comes along with an attempt to cross the barrier between the "I" and the outside world. It can be another person, family, group, homeland and also the natural world. Responsibility means to open myself to what is outside me, to the world, to go out to it, to make contact with it, to hear it, to understand it as well as to answer it.

Responsibility is usually perceived in an individual and group dimension. In case of an individual, it relates to this area of its activity in which it may have a positive or negative impact on the environment⁶⁰⁶.

In turn, group and generational responsibility involves respecting the obligation to leave the natural environment in a condition that will not reduce the chances of survival for future generations⁶⁰⁷. J. Feinberg rightly argues that the responsibility of the modern generation is associated with the obligation to our descendants who have the right to inherit the world in a certain shape⁶⁰⁸.

The revival of social and economic life should be based on the foundation of the ethical value of restraint and moderation. Changes in thinking in regard to the world around us require changes in existing behavioural patterns and the current lifestyle⁶⁰⁹. That is why the need to reorganise the concept of social and economic development from material growth towards the quality of life and to radically transform the structure of consumption is increasingly being recognized in consistence with the value of restraint.

In the name of preserving life, its richness and diversity, one should strive for consumer restraint, moderation and reduction of needs. Respecting the restraint in the use of natural resources and civilization achievements will allow technological

⁶⁰⁵ Z. Hull, *Problemy filozofii ekologii*, in: A. Papużński (ed.), *Wprowadzenie do filozoficznych problemów ekologii*, pp. 118 – 120.

⁶⁰⁶ Ibid. p. 121.

⁶⁰⁷ Ibid. p. 122.

⁶⁰⁸ J. Feinberg, *Obowiązki człowieka i prawa zwierząt*, „Etyka” nr 18, 1980, p. 35.

⁶⁰⁹ Z. Hull, *Problemy filozofii ekologii*, in: A. Papużński (ed.), *Wprowadzenie do filozoficznych problemów ekologii*, p. 123.

and economic development to give a balanced direction “which will lead us back to the real needs of man”⁶¹⁰.

The value of community is an important component of modern ecological thinking. With the help of this value, ecological ethics and pro-ecological education want to shape and promote awareness of the community of the human world with the natural world⁶¹¹.

The idea of community and solidarity with the world of nature, proclaimed by ecological ethics and pro-ecological education, has two dimensions: normative-persuasive and cultural-civilizational. The first of these dimensions is aimed at changing the individual's attitude towards beliefs and behaviour of man's attitude towards the natural environment. The second one provides a specific vision of civilization, based on the assumption that human views and modes of action are the function of the possibilities provided by culture as a specifically human world of life. It is a program for the development of human civilization capable of approving and respecting the needs of the non-human world, treated as community needs of the whole world of life and a harmonious fulfillment of human needs⁶¹².

Axiology of the social system in pro-ecological education concerns, first of all, such values as: peace, community and solidarity, justice, responsibility, restraint and moderation. It can become the basis for eco-development – sustainable development of the social and natural environment.

3.2.4. Values in pro-ecological methods and lifestyle

Due to the deepening effects of the ecological crisis, the need to change human mentality and attitudes arises also in the sphere of values. This need to change the attitude of man towards the social and natural environment and attitudes (lifestyle) refers to transcendental values. Education comes to help as its most important goal is to enable the subject – the learner to accept leadership over his own development process. Pro-ecological education should bring education closer to the maieutics process of a person, i.e. to arouse a person in a learner. When recognizing the value of a human person as a value holder, there is progress in the process of personal development of the learner, also in the sphere of acceptance of the axiology of pro-ecological lifestyle

Deep ecology helps to shape the pro-ecological attitude of modern man in all the spaces of the Platonic triad⁶¹³. Thus, the cognitive attitude directs the human mind towards truth, moral attitude is expressed in the pursuit of good, and the aesthetic one allows you to go to beauty. Respect for these metavalues allows us to move from a partitioning attitude towards a pro-ecological one. We learn to accept the relationship between understanding and faith, action and hope, contemplation

⁶¹⁰ E. F. Schumacher, *Małe jest piękne*, Warszawa, PIW, 1981, p. 181.

⁶¹¹ Z. Hull, *Problemy filozofii ekologii*, in: A. Papużński (ed.), *Wprowadzenie do filozoficznych problemów ekologii*, p. 125.

⁶¹² Ibid. p. 125.

⁶¹³ K. Najder-Stefaniak, *Edukacyjne implikacje platońskiej triady*, in: J. M. Dołęga (ed.), *Ochrona środowiska społeczno-przyrodniczego w filozofii i teologii*, Warszawa, Wydawnictwo UKSW, 2001, pp. 210-215.

and love. At the same time, we learn to see the interdependence of the sense of truth, good and beautiful⁶¹⁴.

The outstanding German ethicist Hans Jonas emphasizes that the threat of an upcoming ecological disaster "requires a change in our consumption habits, and therefore the lifestyle of us all"⁶¹⁵. A chance to solve ecological problems exists in bringing about "fundamental changes in philosophy of life and behavioural patterns"⁶¹⁶.

Comprehensive development of young people in terms of shaping their personality in completeness, as well as preparation for life in society, should be guided by the ideal of a "new man" in the socially defined system of modern and pro-ecological education. Both in the development of personality (the process of personalization, awareness of "I", who you really are) as well as in preparation for social life (the process of socialization, social adaptation) there is a defeat of the "old man" and rejecting his natural attitudes towards life and other people. So educational upbringing takes place from a natural state to a higher cultural state, and this is due to the internal transformation of human psychological disposition, which causes a change in the egoistic attitude to the dominating altruistic attitude in the process of personalization, and at the same time in the process of socialization, the initial attitude gives way to nostic (Latin nos- we) opposing we and them groups in favour of an illistic attitude (Latin illi- them), and thus a service-related commitment in the community⁶¹⁷.

One of the most important values in pro-ecological methods and attitudes – in the pro-ecological lifestyle that we focus on in this dissertation are: work, contemplation, compassion and community.

3.3. Entities of pro-ecological education at the PWSZ

The role of entities of pro-ecological education in state vocational colleges is significant in the whole of the determinants of the axiology of pro-ecological education, because it is mostly academic teachers and pupils who determine how they spend their time devoted to studies and what commitment they show in social and future professional life in the axiological aspect.

Environmental values also belong to the human person, and their ecological aspect is revealed in human contacts with both the social environment and nature. Violation of these values invariably leads to the degradation of man and the natural world. In other words we can observe: the ecological crisis is also a crisis of values⁶¹⁸. That is why it is so important to properly introduce students of universities to the world of values, including pro-ecological ones.

⁶¹⁴ Ibid. p. 218.

⁶¹⁵ E. Nowicka-Włodarczyk, W. Sztombka (ed.), *Prawda moralna, dobro moralne. Księga jubileuszowa dedykowana prof. Iji Lazari-Pawłowskiej*, Łódź, Wydawnictwo Uniwersytetu Łódzkiego, 1993, p. 163.

⁶¹⁶ Z. Sadowski, Przedmowa do książki D. H. Meadows, D. L. Meadows, J. Randers, *Przekraczanie granic. Globalne załamanie czy bezpieczna przyszłość*, Warszawa, CUUW i PTWKR, 1995, p. 19.

⁶¹⁷ S. Kunowski, *Podstawy współczesnej pedagogiki*, pp. 170-171.

⁶¹⁸ W. Tyburski, *Komponenty kultury ekologicznej*, in: J. M. Dołęga (ed.), *Podstawy kultury ekologicznej*, „Zeszyty Naukowe” 32, Warszawa, Wydawnictwo UKSW, 2002, p. 20.

A graduate of first-cycle studies, in addition to having interdisciplinary general knowledge in the field of social sciences and humanities, should have the skills to use it in work and life in accordance with ethical and legal principles. He should skilfully follow the principles of sustainable development in his activities, bearing in mind the common good, which is the social and natural environment. The graduate should also acquire the ability to solve social and ecological problems. He should demonstrate social competences acquired during studies – be well prepared to communicate with the environment using the principles of professional responsibility, which is inherent in proceedings with ethics.

Therefore, academic teachers help their students understand, accept and implement pro-ecological values in relation to others and the world they live in. However, above all, they support learners to change their lifestyle.

Higher vocational schools are an integral part of society and their task is to contribute to its development and to solve contemporary social and ecological problems. Cooperation with governments, in particular, is also becoming important in the local environment – with authorities, with various types of institutions as well with industry and business in joint activities aimed at the sustainable development of the socio-natural environment. It is faith in the “wisdom of educators” that goes hand in hand with openness to current problems and helping the society. In this way the social and pro-ecological function of a higher vocational school is outlined⁶¹⁹.

3.4. Methods of pro-ecological education at the PWSZ

On the basis of values, the educational process takes place, organized by various methods or strategies. Careful, proper and fully axiologically justified selection of values that we want to shape in the pupil is extremely important⁶²⁰. The educator who faces a pupil in his present situation – in his “being-now” wants to lead him to the state of “future developmental good” – that is, to “can-be” or “should-be”⁶²¹.

In connection with this, we introduce methods of pro-ecological education from in-depth knowledge of the process of this education as well from the transition from the idea of acquiring certain things in education to the development of man by possessing these things. In the method of pro-ecological education we combine two approaches: traditional education, which places more emphasis on the requirements, namely what is necessary and what the pupil is supposed to do, and progressive education, which emphasizes the principle of one’s own activity, acting in a spontaneous way as well as activating the pupil himself in the educational process.

⁶¹⁹ The role of a university in a local environment is incisively analysed by M. Nowak, *Rola szkoły wyższej w środowisku lokalnym*, in: J. Marchel, M. Nowak (ed.) *Zapotrzebowania a oferta edukacyjna w lokalnej polityce oświatowej*, Biała Podlaska, Wydawnictwo PWSZ, 2004, pp. 15-32; Z. Melosik, *Uniwersytet i społeczeństwo. Dyskursy wolności, wiedzy i władzy*, Poznań, Wydawnictwo Wolumin, 2002.

⁶²⁰ M. Nowak, *Podstawy pedagogiki otwartej*, p. 422.

⁶²¹ Ibid. p. 422.

Pro-ecological education emphasizes spontaneous action and at the same time emphasizes that this action is to be a response to the requirements of a given educational situation. The educational method always depends on some general as well as specific factors. The structure of the method is primarily influenced by the relations of internal factors (personal self) with external factors – the environment (surrounding life and education) of the educator and pupils.

Nowadays, we become aware of the need to include both an idealistic position, incorporating elements of artistry in education, a positivist position, emphasizing the importance of experience and programs, as well as functionalism, appreciating the person of the foster himself with his psyche in the theory of method (or methodology). The existence of the aforementioned method requires the presence of both content and forms, as well as leaving from unilateral positions towards considering the development of the ward from the biological, psychological, socio-cultural side and spiritual⁶²².

The methodology, including the methodology of pro-ecological education, as a theory of practice, in its specific action cannot stop in regard to techniques and means, but should reach the feelings (or heart) as well as will and respond to the needs of the pupil⁶²³.

It seems right to have many typologies of methods in order to be able to apply them in regard to the needs, taking into account the educator, the pupil and the educational situation.

In the publication entitled *"Theories and concepts of education"*⁶²⁴ M. Nowak classifies methods of education as:

- direct methods – relate to direct educational interactions that involve raising awareness and explaining, persuading, explicit assessment of behaviour, shaping habits, rewards and punishments.

The advantage of methods related to the direct action of the educator is their relationship with the emotional sphere of the learner, which gives them particular effectiveness (e.g. emotions and feelings arising during rewarding).

These methods should be used with others, because they rather inform the learner about what the educator expects from him.

- Indirect methods are indirect educational effects, most often used by an educational team or a social group. The pupil, seeing an example of the dynamics of a given team's activity, begins to accept team actions.
- Information and persuasion methods are also included in indirect methods and they expose the verbal message of influence on the learner. It is important to accurately assess the needs, expectations, beliefs and attitudes of pupils. However, this method is not very effective if we do not create good verbal relations between the subjects of education themselves, which is difficult.

⁶²² M. Nowak, *Pedagogiczny profil nauk o wychowaniu*, pp. 456-461.

⁶²³ Ibid. p. 467.

⁶²⁴ M. Nowak, *Teorie i koncepcje wychowania*, pp. 439-454.

- Modeling methods – modeling should lead to the liberation of natural pursuit of imitation in a pupil. Thank to this, it is possible to shape beliefs, behaviours and attitudes with great efficiency, especially in children.
- The induction-deductive method directs the pupil himself to inductive and deductive reasoning, thereby developing his reflectiveness, ability to think and solve problems on his own.
- Evaluation method used to shape self-esteem and self-control skills. The importance of self-esteem, empathy and the so-called evaluating the outlook on the personal development of the pupil from the position of the other person interestingly developed T. Gordon in the publication *Education without failures*⁶²⁵.

In pro-ecological education at the level of the university, one should not use only direct methods in the form of lectures – one should be essential to get out of them through the methods of indirect educational interactions and come to inductive-deductive and evaluation methods, thanks to which the pupils can largely self-educate themselves.

We place both educational methods as well as pro-ecological ones on three levels in terms of behavioural conditionings and attitudes of pupils⁶²⁶.

Level I covers the process of direct influence of the educator on the learner. At level I, the pupil's behaviours and attitudes are formed in accordance with the direct expectations of the educator.

Level II constitutes an indirect way to activate the learner by using a group of indirect methods. It is at level II when the pupil's attitudes arise together with the educator's expectations and accepted norms of social life.

Level III corresponds to the last group of methods of educational impact. It is a complicated, but most willingly accepted by pupils way of reaching their own activity. At level III, attitudes of the learner are already formed in accordance with the expectations of the learner himself and his own system of values⁶²⁷.

Contemporary typologies of educational methods lack a view from the position of general pedagogy, binding each of the typologies and each group of methods with man himself, with the aims of education and their conditions. An example of in-depth analysis of educational methods with references to their anthropological and axiological conditions is proposed, among others, by Ludwika Jeleńska (1885-1961)⁶²⁸. She understands education as "the art of internal harmonization of man"⁶²⁹. The author considers conscious influences, including the ideal method, the objectification (evil) method, and the method of effort specialization; and subconscious influences on the learner through unconscious imitation, an atmosphere of joy, aesthetic taste and developing a sense of moral sensitivity.

In the ideal method, the educator proposes an ideal to be realized in himself, thus increasing the pupil's self-respect. The educational value of the proposed

⁶²⁵ T. Gordon, *Wychowanie bez porażek*, Warszawa, IW PAX, 1991.

⁶²⁶ M. Nowak, *Pedagogiczny profil nauk o wychowaniu*, pp. 471-473.

⁶²⁷ M. Nowak, *Teorie i koncepcje wychowania*, pp. 444-447.

⁶²⁸ M. Nowak, *Pedagogiczny profil nauk o wychowaniu*, pp. 473-475.

⁶²⁹ L. Jeleńska, *Sztuka wychowania*, Warszawa, Nasza Księgarnia, 1930.

ideal of man lies in the fact that he awakens the desire to become himself and the pupil undertakes work on himself – self-education.

In turn, by the method of objectification (evil), the educator supports the pupil in overcoming evil, using such means as instruction and conscious discipline. Through a good relationship and persistent cooperation of the educator with the pupil in order to overcome evil, we awaken faith in him, raise his personal dignity, point to the ideal. This method requires noticing the goodwill of the pupil, which is often too weak. We strengthen the will of the pupil through educational work⁶³⁰.

The method of specializing effort also strengthens the pupil's will so that he wants to spend the effort well, directing his energy to one goal – in order to obtain a given value or virtue with greater strength⁶³¹.

The presented above educational methods all emphasize an integral support for the pupil in his self-education process also in relation to himself, others and the environment in which we live.

Among the methods of pro-ecological education, it is also worth mentioning task-based methods, which involve entrusting pupils with specific tasks to perform in the field of ecology and environmental protection in order to enrich their knowledge and experience in ecological activities. Thus, there is stimulation for pro-ecological action and formation of responsibility for its implementation. While performing socially and morally desirable tasks, pupils acquire not only the ability to perform various activities useful for normal functioning among people, but also learn to empathize with the needs of others and satisfying them. At the same time, they also learn how to live and be useful to others⁶³².

The advantage of task methods is their voluntariness and conviction about the urgent need to implement a given ecological issue or environmental protection. At the same time, cooperation in the implementation of a given pro-ecological task is favourable for the development of pro-ecological attitudes and thus pro-social ones. Conducting education by using such task methods, in itself already brings up responsibility, teaches loyalty to words, principles, people or undertaken tasks.

A specific complement to the discussed problem is the approach to methods presented by S. Kunowski, who, in connection with the issue of universalism and the desire to integrate a comprehensively developed and perfected personality – seen as a goal – indicates the need to adopt specific attitudes and undertake specific tasks, material and formal. In the scope of material tasks, he recommends forming an attitude of openness to truth, which requires in the personality to separate truth from error and falsehood, ideals from what has no value, beauty from ugliness, holiness from sin, and therefore demands an attitude of criticism. However, in terms of formal tasks it requires, among others, shaping the attitude of discipline, sensitive conscience, imagination, religious sense, etc. The following

⁶³⁰ L. Jeleńska, *Sztuka wychowania*, Warszawa, Nasza Księgarnia, 1930, pp. 157-241; T. Kukołowicz (ed.), *Teoria wychowania. Wybrane zagadnienia*, Stalowa Wola, Oficyna Wydawnicza Fundacji Uniwersyteckiej, 1996, pp. 101-114.

⁶³¹ M. Nowak, *Pedagogiczny profil nauk o wychowaniu*, p. 474; L. Jeleńska, *Sztuka wychowania*, Warszawa, Nasza Księgarnia, 1930, pp. 214-229.

⁶³² M. Łobocki, *Wychowanie*, in: W. Ciechaniewicz (ed.), *Pedagogika*, Warszawa, Wydawnictwo Lekarskie PZWL, 2008, p. 109.

methods can be used to accomplish these tasks: method of teaching and instructing as a response to information appearing in the relation between the educator and the learner, a method of creating attitudes through action and getting used as a response to the efforts made forming and a method of suggesting emotional motives to lead a life in accordance with the information and formation received, which is a response to inspiration in the tutor-pupil relationship⁶³³.

The task-oriented method of education is becoming particularly important and needed in the modern educational context, where, on the one hand, we witness huge civilization progress, which increasingly thickens all interpersonal relationships, but unfortunately also causes the emergence of multi-faceted social and ecological problems⁶³⁴.

These threats spread to all people and are observed in every place of the world, which requires upbringing and education appropriate for everyone, not so much oriented on knowledge or technology as on solving own and community problems. Competences for living in the contemporary world full of civilization threats are becoming necessary. The living environment as a whole of reality, assigned to human existence, puts every human being in the face of responsibility for it. Natural environment will be in such a condition which will ultimately result from our presence in the surrounding world⁶³⁵.

In this sense, we can also talk about the very environment of life as a great task to protect it for each of us. Therefore, what is really needed nowadays is to shape attitudes based even more on humanity. Finally, obligatory ethical tasks emerge from this. Modern man, as philosophers sometimes define it, has escaped responsibility for the whole. He makes himself responsible only for individual aspects, often forgetting about their relationships with other problems. Only the awareness of being responsible for the whole is able to protect against a mistake related to only one-aspect action⁶³⁶.

It also requires the evolution of the concept of pro-ecological education to open education – and on a possible wide spectrum of problems not only ecological, but above all axiological. In this type of education, we criticize achieving immediate satisfaction and consumption goals, and we work out moral virtues to prevent evil⁶³⁷. Task-based methods of education also fulfill the community-creative personality-creative function, because they build both the human community and the personality of the pupils, by teaching and bringing up in order to achieve a caring relationship with others, and at the same time opening to positive emotions. Education involves guiding the pupil while fully respecting his subjectivity and is perceived as a help in development, leading to the pupil's activity in the field of not only self-education⁶³⁸ – also pro-ecological education.

⁶³³ M. Nowak, *Pedagogiczny profil nauk o wychowaniu*, pp. 478-479; S. Kunowski, *Wychowanie do chrześcijańskiego uniwersalizmu*, „Zeszyty Naukowe KUL”, 12 (1969), nr 1 (45), pp. 3-15.

⁶³⁴ M. Nowak, *Pedagogiczny profil nauk o wychowaniu*, pp. 480-481.

⁶³⁵ Ibid. pp. 480-481.

⁶³⁶ Ibid.

⁶³⁷ Ibid. p. 482.

⁶³⁸ Ibid. p. 483.

Complementing the upbringing and pro-ecological education methods is to show good educational as well as upbringing strategies facing the value in order to arouse the active attitude of the pupils towards the future.

The education strategies concern the assumptions of the upbringing procedure and always stem from the adopted, specific concept of education. Traditional education concepts lead to the formation of a creating (shaping) strategy, emphasizing the importance of direct and indirect methods, where the educator is an active subject of education, and the pupil is only a passive participant in the educational process. This strategy received support from, among others behaviorism, which brought to it a whole set of positive and negative reinforcements and the possibility of external control of the behaviour of the pupil⁶³⁹.

On the other hand, on the basis of liberation concepts that promote freedom in educational relations, a searching strategy has emerged, raising the rank of an equal dialogue between the two subjects participating in the process of education, namely a pupil and an educator. Such interaction and dialogue is to lead to a better knowledge, a better understanding of yourself and the world, as well as a better action⁶⁴⁰.

However, from the concept of personalistic education and Christian inspirational regarding subjective reference to the pupil, close to our considerations, an open strategy has developed. In this strategy, we do not leave the pupil alone, but accompany him in discovering the world. It is a full and committed cooperation with the learner to shape his relationship with himself, to others and to the world⁶⁴¹.

Following M. Nowak, we distinguish the following strategies for education to achieve value⁶⁴²:

Strategies of education in order to achieve value are not implemented either by indoctrination or imposition of values, but the pupil himself is subject to a progressive "process of acquiring and gaining value"⁶⁴³.

1. Dissonance strategy involving the use of contradictions in the way of thinking and valuing the pupil himself and another person or group. Thus, the pupil himself is stimulated to reduce the gap between his own individual behaviour and that presented to him by a significant person or group and he begins to change his attitude⁶⁴⁴.
2. The strategy of the certificate introduces us to the mechanism of unconscious self-identification of the pupil observed on the basis of the life of the educator in accordance with his declared values⁶⁴⁵.
3. Stimulation strategy concentrates on helping the pupil in favour of specific values⁶⁴⁶.

⁶³⁹ Ibid. p. 492.

⁶⁴⁰ M. Nowak, *Teorie i koncepcje wychowania*, pp. 449-452.

⁶⁴¹ M. Nowak, *Pedagogiczny profil nauk o wychowaniu*, p. 493.

⁶⁴² M. Nowak, *Podstawy pedagogiki otwartej*, pp. 421-425.

⁶⁴³ Ibid. p. 423.

⁶⁴⁴ Ibid. p. 422.

⁶⁴⁵ Ibid. p. 424.

⁶⁴⁶ Ibid. p. 425.

As a result of applying many educational strategies, the learner will gradually acquire an increasingly internally coherent system of values. Along with personal experience, reflection, confrontation of many thoughts, opinions, attitudes, he will build a real coherence between words, deeds, his attitude and the whole system of his behaviour caused by both values and pro-ecological values⁶⁴⁷.

⁶⁴⁷ Ibid. p. 425.

Chapter 4

Methodology of own empirical research

In the present chapter we present the methodology of own research on the values and methods of pro-ecological education in higher vocational schools. Initially, we will pre-define the research area, present the subject and objectives of the research and research problems. Then, we will put research hypotheses into research problems and determine variables and their indicators. In the next stage we will present the methods, techniques and research tools used.

The tools used in the research were inspired by the literature of the subject as well as especially prepared to conduct the research on the problems of pro-ecological education. In the final stage, we will present the surveyed populations, the research area, sample selection and characteristics of the respondents as well as the method of elaborating own research results, their organization and procedure.

4.1. Determining the subject of research, research objectives, research problems and hypotheses as well as variables and their indicators

The main goal of scientific cognition is to acquire the most accurate, maximally certain, maximally general and maximally simple knowledge containing the greatest deal of information⁶⁴⁸. Therefore, pedagogical research is determined primarily by the purposes they serve for⁶⁴⁹. Thus, in the present publication we distinguished the following goals:

1) theoretical 2) cognitive and 3) practical.

Ad. 1) Theoretical aim

⁶⁴⁸ T. Pilch, T. Bauman, *Zasady badań pedagogicznych*, Warszawa, Wydawnictwo Akademickie „Żak”, 2001, p. 23.

⁶⁴⁹ Ibid. p. 34.

Developing a diagnosis devoted to the situation of pro-ecological education and its perception as well as the presence of pro-ecological values among students in state vocational colleges in Poland.

Ad. 2) Cognitive aim

Understanding the changes in students' consciousness (deep or shallow) attending PWSZ in Poland. These changes refer to the following values:

a) ecosystem

- recognising the understanding of these values by students
- recognising students' preferred values
- recognising the impact of promoted values in school, local, family as well as mass media environments on the range of values chosen by students
- recognising the influence of natural environment on the range of values chosen by students
- recognising the influence of values on students' attitudes (lifestyle)

b) biosystem

- recognising the understanding of these values by students
- recognising students' preferred values
- recognising the impact of promoted values in school, local, family as well as mass media environments on the range of values chosen by students
- recognising the influence of values on students' attitudes (lifestyle)

c) social system

- recognising the understanding of these values by students
- recognising students' preferred values
- recognising the impact of promoted values in school, local, family as well as mass media environments on the range of values chosen by students
- recognising the influence of values on students' attitudes (lifestyle)

d) in the methods of pro-ecological education and pro-ecological lifestyle

- recognising the understanding of these values by students
- recognising students' preferred values
- recognising the impact of promoted values in school, local, family as well as mass media environments on the range of values chosen by students
- recognising the influence of values on students' attitudes (lifestyle)

Ad. 3) Practical aim

Formulation of general indications, addressed to students, regarding the pro-ecological lifestyle.

Formulation of general recommendations regarding the transmission of pro-ecological values and methods of developing pro-ecological attitudes addressed to educators.

The aim of empirical research is to examine the conditions necessary for the implementation of postulated states of affairs. More generally – we can conclude that the goal of the research is learning enabling effective action⁶⁵⁰. On the other hand, according to Tadeusz Pilch, the research problem is a question about the nature of the phenomenon undergoing the study, about the essence of the

⁶⁵⁰ T. Pilch, T. Bauman, *Zasady badań pedagogicznych*, p. 35.

relationship between events or beings and process features, as well as the features of the phenomenon. In other words, the research problem involves realizing the difficulties connected with explaining and understanding a specific fragment of reality. Also, it can be stated that research problem is a declaration of our ignorance involved in the grammatical form of questions⁶⁵¹.

According to Mieczysław Łobocki, research problems are questions that we are looking answers to in the process of scientific research⁶⁵². The formulated problems must exhaust the extent of our ignorance contained in the topic of the research. Therefore, problems more precisely define the scope of our doubts, thus defining the research area. The correctness of the research problem is also proved by its empirical decidability and practical value⁶⁵³.

The main problem:

What values of pro-ecological education are present in the awareness of students at State Higher Vocational Schools in Poland and what are the challenges for the currently implemented pro-ecological education methods?

Detailed problems:

1. What values of ecosystem, biosystem, social system and in the methodology of pro-ecological education and pro-ecological lifestyle are preferred by students of PWSZ in Poland?
2. What level of (shallow or deep) ecology is the axiological awareness of PWSZ students in Poland on?
3. What is the impact of promoted pro-ecological values in the school, local, family and mass media environment on the range of values chosen by PWSZ students in Poland?
4. What is the influence of the natural environment on the range of values within ecosystem, biosystem and social system chosen by PWSZ students in Poland?
5. What is the students' response towards the pro-ecological education methodology as well as pro-ecological lifestyle?
6. What influence do the values of pro-ecological education have on the attitudes (lifestyle) of PWSZ students in Poland?

The research problem, or rather a set of research problems determines the further process of thought in the concept phase. They form the basis for creating hypotheses. In turn, all the statements only partly justified are called the hypothesis. Therefore, also any speculation thanks to which we translate the actual data, and thus also speculation in the form of a generalization achieved (...) on the basis of the output. Hypothesis in pedagogical research most often takes the shape of a probable dependence of two phenomena⁶⁵⁴.

Therefore, working hypotheses based on preliminary data obtained from observing the academic community during professional work, analyzing official

⁶⁵¹ Ibid. p. 43.

⁶⁵² M. Łobocki, *Metody badań pedagogicznych*, Warszawa, PWN, 1984, p. 56.

⁶⁵³ T. Pilch, T. Bauman, *Zasady badań pedagogicznych*, p. 44.

⁶⁵⁴ Ibid. pp. 44-47.

documents and querying the literature on the subject were put to the above research problems:

1. It is assumed that the values of the ecosystem, biosystem and social system are present in the awareness of PWSZ students in Poland and introduce them to other values important in education.
2. It is assumed that some students come to the awareness of deep pro-ecological education and the value of the ecosystem, the biosystem and the social system.
3. It is assumed that there are differences between promoted pro-ecological values in the school local and family environment and the range of values chosen by students as well as common values for mass media and students.
4. It is assumed that the influence of the natural environment on the choice of ecosystem, biosystem and social system values by PWSZ students in Poland is large.
5. It is assumed that the students' response to the methodology of pro-ecological education at the PWSZ in Poland is positive – they are actively involved in ecological activities.
6. It is assumed that the values of pro-ecological education have a great impact on the change of attitude (lifestyle) of PWSZ students in Poland.

The hypothesis must specify relationships between variables. At the same time all general relationships between variables should be included in research problems. Thanks to this, we will have a fairly strict scope of the phenomena studied. A set of variables creates a fact, event or process. Otherwise, variables are the features that create, make up the phenomenon. These variables must be of such a character that they can be empirically known, measured, counted, or described. Their typology depends on whether we want to know the sources or manifestations of the phenomenon, educational and social effects or the cultural context. Variables, thus adopted by the researcher, give direction to research and determine their purpose. Variables can be expressed quantitatively or qualitatively. However, the relationship between individual variables is much more significant. Namely, it refers to what is the direction of the relationship between them, which affects others, and which undergoes different influences. Depending on this, one variable is called an independent variable and the other one is called a dependent variable⁶⁵⁵.

In order to verify hypotheses the following variables have been formulated:

⁶⁵⁵ Ibid. pp. 44-52.

Table 4. The correlation of formulated variables for the purposes of the present publication entitled *Axiology in pro-ecological education in the opinion of students at State Higher Vocational Schools in Poland*

Independent variables	Dependent variables
parents' education type of high completed school students' faith students' sex field of education at first-cycle studies at the PWSZ in Poland influence of family and local environment, mass media, natural environment	awareness of the value of the ecosystem, biosystem, social system in the methodology and attitudes (lifestyle) of PWSZ students in Poland

The variables, in turn, indicate empirically given factors called indicators. An indicator, on the other hand, is a certain feature, event, phenomenon on the basis of which we conclude with certainty, either with a certain probability, or finally with a probability higher than average that a phenomenon that interests us occurs⁶⁵⁶.

Therefore, the dependent variable will be examined using indicators of the following groups of pro-ecological education values. These values are distinguished on the basis of the literature on the subject⁶⁵⁷:

1. axiology of ecosystem:

- concern for preservation of species biodiversity,
- concern for the protection of the atmosphere, lithosphere and hydrosphere,
- being economical in managing natural resources,

2. axiology of biosystem:

- respect for life,
- respect for human life and health,
- harmony,

3. axiology of social system:

- peace,
- solidarity,
- justice,

⁶⁵⁶ Ibid. pp. 53-55.

⁶⁵⁷ J. M. Dołęga, *Ekologia w teologii i filozofii chrześcijańskiej*, in: A. Papuziński (ed.), *Wprowadzenie do filozoficznych problemów ekologii*, pp. 161-162. E. J. Pałyga (ed.), *Ekologia społeczna i współpraca międzynarodowa w zakresie ochrony środowiska*, Warszawa, AKEE, 1992, pp. 18-53; L. Ostasz, *Ku etyce uniwersalistycznej i zarys teorii wartości*, Kraków, WM, 1994; K. Kłoskowski, *O naczelnej zasadzie etycznej relacji: człowiek – środowisko*, in: J. Dębowski (ed.), *Człowiek i środowisko. Humanistyka i ekologia. Prace I Olsztyńskiego Sympozjum Ekologicznego, Olsztyn 5-6 maja 1994 roku*, Olsztyn, Wydawnictwo WSP w Olsztynie, 1995, pp. 107-112; B. Hałaczek, *Aksjologiczna koncepcja nauki podłożem postulatów etyki uniwersalnej*, in: J. Sekuła (ed.), *Czy jest możliwa etyka uniwersalna – materiały Ogólnopolskiej Konferencji Naukowej*, Warszawa, WSRP, 1994, pp. 129-140; S. Dziamski (ed.), *Aksjologia, etyka, samookreślenie*, Poznań, WF Humaniora, 1996; J. M. Dołęga, *Miejsce problematyki etycznej i ekonomicznej w ekofilozofii*, in: W. Tyburski (ed.), *Ekologia – Ekonomia – Etyka*, Toruń, UMK, 1997.

- responsibility,
- restraint, moderation,
- 4. values in methods and attitudes (lifestyle),
 - work,
 - contemplation,
 - compassion,
 - community.

4.2. Selection of methods, techniques and tools for collecting research material

Practice provides experience, namely necessary material for scientific studies, and is an important criterion for verifying the truth of the theory, not allowing it to break away from life. The theory has an explanatory meaning for practice, gives better orientation, facilitates overcoming the difficulties arising as a result of a tendency to delve into the specificity and fragmentation of the look and study characteristic of practice⁶⁵⁸.

Postulating a realistic attitude following M. Nowak who points to open pedagogy as a proposal of attitude (orientation) in education, we propose it as well in ecological education. It would be able to keep the human person and his dignity in the center of reflection, through a systemic approach, support him in the complex process of education, taking into account all the dynamics of his development and subjectivity. This would require support and consideration of all factors and circumstances forming the so-called educational situation⁶⁵⁹. Qualitative methods are particularly suitable for these tests. One of their features is, among others creativity, combining different perspectives and approaches, often referred to as triangulation. It involves combining diverse, complementary research methods, techniques, empirical materials, theoretical perspectives and observers in the study⁶⁶⁰.

In pedagogical research, researchers strive to examine the person as "as he is", and not just instruct "as he should be" (which is the task of ethics and moral theology), which means taking into account specific facts that relate to these matters. These data should be extracted and confronted with others in the study of behaviour and attitudes that are subject to direct observation, historical registration, biography and history, present, among others, in statistical research of psychology and sociology.

⁶⁵⁸ M. Nowak, *Pedagogiczny profil nauk o wychowaniu*, p. 212; M. Nowak, *Treści i zadania badań pedagogicznych*, in: J. Piekarski, D. Urbaniak-Zajac, K. Szmidt (ed.), *Metodologiczne problemy tworzenia wiedzy w pedagogice. Oblicza akademickiej praktyki*, Kraków, Oficyna Wydawnicza „Impuls”, 2010, pp. 27-39.

⁶⁵⁹ M. Nowak, *Pedagogiczny profil nauk o wychowaniu*, p. 239; M. Nowak, *Podstawy pedagogiki otwartej*.

⁶⁶⁰ M. Nowak, *Pedagogiczny profil nauk o wychowaniu*, p. 239; B. Smolińska-Theiss, W. Theiss, *Badania jakościowe – przewodnik po labiryncie*, pp. 79-102 oraz W. Dróżka, *Triangulacja badań. Badania empiryczne ilościowo-jakościowe*, in: S. Palka (ed.), *Podstawy metodologii badań pedagogicznych*, Gdańsk, Gdańskie Wydawnictwo Pedagogiczne, 2010, pp. 124-135; też D. Kubinowski, *Jakościowe badania pedagogiczne*, Lublin, Wydawnictwo UMCS, 2011.

Particularly noteworthy here is the experimental and observational method, which allows the implementation of this type of scientific approach also in the humanities. In the view of philosophical generalizations in classical normative and theoretical pedagogy, it is now becoming significant – along with the transition to experimental and descriptive and hermeneutic (more generally humanist) pedagogy – recognition of empirical components of the humanities⁶⁶¹.

A necessary condition for pedagogical research is the selection of the appropriate method by which we intend to seek answers to the given questions.

Firstly, analysis and synthesis of the collected literature and analysis of official documents were carried out.

Then the main research method was chosen – the diagnostic survey method, which allows to know a large, spatially dispersed population in a relatively short time. Therefore, this method enables acquiring knowledge about the surveyed population – students of vocational universities in Poland, and making a diagnosis on the basis of this community's opinion from the point of view of the examined indicators. Collecting information about the examined population is based only on its representative sample – students of four State Higher Vocational Schools in Poland: in Biała Podlaska, Leszno, Gorzów Wielkopolski and Racibórz from the general population – from 36 universities of this type.

The subject of the survey is a specific social phenomenon of significant importance in terms of education. Therefore, the survey research in this publication will concern the axiology of pro-ecological education in the opinion of students of the State Higher Vocational Schools in Poland.

Basic techniques for collecting empirical data were adopted:

1. examination of documents because it is a research technique used to collect initial, descriptive, and quantitative information about the examined institution as well as about the educational phenomenon. At the same time, it is also a technique for becoming familiar with the opinions expressed in documents⁶⁶²; The analysis of education standards for specific faculties and levels of education as well as study programmes at PWSZ will provide information on the value of pro-ecological education promoted by the current system of higher education, which will be the basis for the diagnosis of the situation of axiology of pro-ecological education and its perception as well as its presence among students attending higher vocational schools in Poland;
2. conducting a research with the use of a questionnaire since it is a research technique used to collect quantitative data. This technique involves asking the respondents questions included in the questionnaire in an organised way⁶⁶³. The choice of this technique was dictated by the fact that it is an easy method to be used. In addition, this technique gives the possibility to fairly accurately determine the preferences of the subjects;

⁶⁶¹ M. Nowak, *Pedagogiczny profil nauk o wychowaniu*, p. 241.

⁶⁶² T. Pilch, *Zasady badań pedagogicznych*, Warszawa, PWN, 1998, p. 143.

⁶⁶³ K. Rubacha, *Metodologia badań nad edukacją*, Warszawa, Wydawnictwo Akademickie i Profesjonalne, 2008, p. 173.

3. research by interview, because it is a research technique used to collect qualitative data, involving a conversation with the subjects directed by the researcher. The choice of this technique was dictated by the possibility of more accurately determining the preferences of the subjects and thus confirming the reliability of the collected data⁶⁶⁴.
4. the research with the use of pro-ecological values Scale formulated on own authorship;
5. comparative research on levels of awareness and understanding of the value of pro-ecological education of respondents starting their studies in the first year and completing the first-cycle studies in the third year.

Selected techniques have clearly defined research tools⁶⁶⁵:

- questionnaire prepared on one's own and referring to axiology of pro-ecological education in the opinion of the students at State Higher Vocational Schools in Poland .
- Value scale of own authorship – formulated by the author.
- Questionnaire interview prepared on own authorship referring to axiology of pro-ecological education in the opinion of the students at State Higher Vocational Schools in Poland.

Then, in the present publication, triangulation of quantitative and qualitative pedagogical empirical research was used. To be more specific, the triangulation of sources and methods was used to collect first and third year studies students' opinions attending higher schools from different geographical locations in Poland, with a different state of the natural environment, by conducting qualitative interviews and using surveys and value scale.

The term triangulation (Latin *triangulum* – “triangle”) means a method of measuring larger areas, which involves dividing the measured area into adjacent triangles, used in geodesy⁶⁶⁶. In turn, in the theory of psychological tests, this term was used as a metaphor for the combination of various methods and instruments as well as tools used in many subsequent quantitative measurements⁶⁶⁷.

However, in the methodology of qualitative research, and initially in relation to the method of participating observation as well as biographical research, this concept was introduced by Norman Denzin, who perceived it as a “strategy”, consisting of combining in one study various, mutually complementary research methods, techniques, empirical materials, theoretical perspectives and observers⁶⁶⁸. The scholar proposed the initiative to undertake qualitative

⁶⁶⁴ Ibid. p. 133.

⁶⁶⁵ T. Pilch, T. Bauman, *Zasady badań pedagogicznych*, p. 71.

⁶⁶⁶ W. Kopaliński, *Słownik wyrazów obcych i zwrotów obcojęzycznych*, Warszawa, Państwowe Wydawnictwo Wiedza Powszechna, 1985, p. 434.

⁶⁶⁷ W. Dróżka, *Triangulacja badań. Badania empiryczne ilościowo-jakościowe*, in: S. Palka (ed.), *Podstawy metodologii badań w pedagogice*, Gdańsk, GWP, 2010, p. 124; H.-H. Kruger, N. Pfaff, *Metody badań pedagogicznych*, przeł. D. Sztobryn, in: B. Śliwerski (ed.), *Pedagogika*, t.2: *Pedagogika wobec edukacji, polityki oświatowej i badań naukowych*, Gdańsk, GWP, 2006, p. 44.

⁶⁶⁸ W. Dróżka, *Triangulacja badań. Badania empiryczne ilościowo-jakościowe*, in: S. Palka (ed.), *Podstawy metodologii badań w pedagogice*, pp. 124-125; N. K. Denzin, *The Research Act in Sociology*, London, Butterworth, 1970.

field research as a peculiar methodological strategy of triangulation, which combines document analysis, interviews with respondents and informers, direct participation and observation as well as introspection. At the same time, he postulated its widespread use by researchers. This author clearly distinguishes four types of triangulation: triangulation of sources, researchers, methods and theories that can coexist simultaneously⁶⁶⁹.

Triangulation of sources refers to the comparative analysis of data received from different people, from different places and collected in different time⁶⁷⁰.

In turn, triangulation of researchers focuses on comparing the conclusions of several researchers working in the same area⁶⁷¹.

Then triangulation of methods involves comparing data collected using different methods, such as surveys and open interviews. This allows researchers to overcome the subjective limitations of using only one method⁶⁷².

The triangulation of the theory is aimed at expanding the comparison of interpretations of the collected data in different theoretical approaches⁶⁷³.

The strategy of triangulation becomes means of searching for solutions ensuring a holistic picture of the phenomena studied as well as the most detailed and critical understanding of them, focusing on the emancipation of individual and social entities. Taking into consideration the issues connected with the triangulation of social and pedagogical research, it should be emphasized that it is currently developing on the basis of the broadly understood multi-method and interdisciplinary qualitative approach of modern science⁶⁷⁴. Therefore, among methodologists and researchers, there is a growing awareness of the fact that no single method is able to capture, explain or understand the intricacies of human experience in its various conditions⁶⁷⁵.

As a consequence, in order to penetrate the complexity and depth of the phenomena studied and to show their social and cultural contexts, researchers are increasingly using a specific form of triangulation, and therefore using a wide range of interrelated methods, techniques, research tools and methods of interpretation of collected empirical material. Formerly functional, positivist, behaviorist and totalizing approaches to the human sciences are now giving way to pluralistic and open perspectives⁶⁷⁶.

The creation of knowledge is perceived as a continuous, essentially qualitative process of explaining, interpreting and specifying mutual dependencies

⁶⁶⁹ K. Konarzewski, *Jak uprawiać badania oświatowe. Metodologia praktyczna*, Warszawa, WSiP, 2000, p. 33.

⁶⁷⁰ Ibid. p. 33.

⁶⁷¹ Ibid. p. 33.

⁶⁷² Ibid. p. 33.

⁶⁷³ Ibid. p. 33.

⁶⁷⁴ N. K. Denzin, Y. S. Lincoln, *Wkraczanie na pole badań jakościowych. Wprowadzenie do podręcznika „Acta Universitatis Nicolai Copernicus”*, Socjologia wychowania, t. XIII, 1991, pp. 4-7.

⁶⁷⁵ W. Dróżka, *Triangulacja badań. Badania empiryczne ilościowo-jakościowe*, in: S. Palka (ed.), *Podstawy metodologii badań w pedagogice*, pp. 127-128; N. K. Denzin, Y. S. Lincoln, *Wkraczanie na pole badań jakościowych. Wprowadzenie do podręcznika „Acta Universitatis Nicolai Copernicus”*, Socjologia wychowania, t. XIII, 1991, p. 10.

⁶⁷⁶ Ibid. p. 10.

rather than building existing, certain or indisputable theories. It is close to understanding qualitative research as “interdisciplinary and sometimes an interdisciplinary field that crosses the human sciences, social sciences and natural sciences”⁶⁷⁷.

Qualitative research includes many of the aforementioned things at once. They are even multi-paradigmatic. Researchers using them are sensitized to the value of a multi-methodical approach. They are devoted to the naturalistic perspective and the interpretative understanding of human experience. At the same time, their field of activity is inherently shaped by various ethical and political positions”⁶⁷⁸.

The triangulation approach seems to be a significant both methodological and research suggestion when it comes to pedagogy as a holistic discipline, examining educational processes in their broadest and holistic sense and in all biological, psychological, socio-cultural and spiritual conditions. This approach also requires holistic categories, such as: quality of life, life strategy, life orientation, identity, generation, personal formation or lifestyle⁶⁷⁹.

These categories include both the sphere of non-judgemental, so-called physical, objective, external phenomena (biological, material, economic, socio-cultural conditions) as well as the area of subjective, personal, internal and consciousness phenomena (spiritual conditions) regarding evaluation, faith, behaviour or choice of goals. They set out, in a way, a triangulation perspective of research covering both the triangulation of sources (sources of so-called objective and indirect data as well as direct, subjective and personal materials, taking into account the point of view of entities), as well as research techniques and analysis procedures (quantitative – statistical, qualitative – interpretative)⁶⁸⁰.

Triangulation problems expressed in combining quantitative and qualitative methods (as complementary to each other) in order to obtain many perspectives of the reality of education are vividly discussed in scientific pedagogical literature. Stanisław Palka provides important justifications for the thesis that in pedagogy both methods of research should be used together, because the very nature of the educational processes studied is decisive. In order to capture the world of values, experiences, feelings, hopes and fears of pupils, qualitative methods should be used above all⁶⁸¹.

According to Palka, pedagogy is both a social science, adopting the empirical and analytical (so-called quantitative) pattern of research in natural sciences, and human sciences, adopting and developing the pattern of hermeneutic-interpretive (so-called qualitative) humanistic research. Therefore, in order to learn, explain

⁶⁷⁷ Ibid. p. 10.

⁶⁷⁸ Ibid. p. 10.

⁶⁷⁹ W. Dróźka, *Triangulacja badań. Badania empiryczne ilościowo-jakościowe*, in: S. Palka (ed.), *Podstawy metodologii badań w pedagogice*, p. 132; Z. Kwieciński, *Socjopatologia edukacji*, Olecko, Mazurska Wszechnica Nauczycielska, Białystok, Trans Humana, 1995, pp. 19-21.

⁶⁸⁰ W. Dróźka, *Triangulacja badań. Badania empiryczne ilościowo-jakościowe*, in: S. Palka (ed.), *Podstawy metodologii badań w pedagogice*, p. 133.

⁶⁸¹ Ibid. p. 134; S. Palka, *Metodologia. Praktyka pedagogiczna*, Gdańsk, GWP, 2006, pp. 61-63.

and understand the education process, it is necessary to combine both research models and use the possibilities of quantitative and qualitative research⁶⁸².

The possibility of using triangulation of quantitative and qualitative research is discussed in detail by Heinz-Hermann Krüger⁶⁸³ as a postulate of triangulation in combining methods derived from hermeneutic traditions (qualitative-understanding) and empirical (quantitative-analytical). In order to provide a more accurate and comprehensive description of the studied process of education, parallel or progressive qualitative and quantitative research can be used. The author gives many examples of possible combinations of research approaches and methods, including examples of research conducted on youth, the construction of questionnaires or on taking of complementary samples. It also introduces another possibility of linking secondary statistical data on society and the environment, survey data and ethnographic methods of participant observation, thanks to which it is possible to make a differentiated analysis of the living space and subjective definitions of youth.

Triangulation is currently perceived as an opportunity to conduct broad, multi-dimensional research projects that provide understanding, human and moral, and not only technical insight into the social and pedagogical processes taking place as well as enabling wise, with ethical responsibility, and not only technical brilliance, solving emerging problems. Such research requires learning about the various macro- and micro-social conditions of contemporary changes in pedagogical processes – in family education, in institutions and school and non-school environments against the background of ambivalence of modernization, cultural and civilization processes⁶⁸⁴.

To sum up the considerations, in the present publication we have primarily used the triangulation of sources and methods of collecting first and third year students' opinions attending studies located in various geographical locations in Poland, with a varied state of the natural environment, by conducting qualitative interviews and using surveys and scale of values.

Then the obtained data was subjected to both quantitative and qualitative analysis. The obtained data was statistically processed using the SPSS PC + computer programme. The following statistical methods were used in the elaboration of the results of empirical research in the present publication:

Data collected in the survey is unmeasurable data. It means the collected data is qualitative. One of the aims of the work is to assess the relationship between

⁶⁸² W. Dróźka, *Triangulacja badań. Badania empiryczne ilościowo-jakościowe*, in: S. Palka (ed.), *Podstawy metodologii badań w pedagogice*, p. 134.

⁶⁸³ H.-H. Krüger, *Wprowadzenie w teorie i metody badawcze nauk o wychowaniu*, przeł. D. Sztobryn, Gdańsk, GWP, 2005; H.-H. Krüger, N. Pfaff, *Metody badań pedagogicznych*, przeł. D. Sztobryn, in: B. Śliwerski (ed.), *Pedagogika*, t.2: *Pedagogika wobec edukacji, polityki oświatowej i badań naukowych*, Gdańsk, GWP, 2006; H.-H. Krüger, *Metody badań w pedagogice*, przeł. D. Sztobryn, Gdańsk, GWP, 2007.

⁶⁸⁴ H.-H. Krüger, *Wprowadzenie w teorie i metody badawcze nauk o wychowaniu*, przeł. D. Sztobryn, Gdańsk, GWP, 2005, pp. 186-194.

variables of this type and to examine the intensity of the relationship between two selected qualitative features⁶⁸⁵.

The χ^2 test was used to assess the independence between two qualitative features. This test compares the frequencies observed with the frequencies expected assuming the characteristics are independent⁶⁸⁶.

In addition to testing independence with the χ^2 test, the strength and direction of the relationship was indicated for dependent variables. Spearman's rank coefficient was used to investigate this property. This factor takes values from -1 to 1. A correlation coefficient sign informs us about the direction of the correlation, while its absolute value informs us about the strength of the relationship⁶⁸⁷. If the coefficient is less than 0, then we talk about negative correlation, and if greater – about positive correlation. The closer the factor is to 1 or -1, the stronger the correlation is observed.

Another test used in the work is the Kruskal-Wallis test. It is a sum-rank test to verify the hypothesis about the identical nature of distributions for many populations. This test assumes that the variable under consideration has been measured at least on a range scale. Thanks to using this test, it can be tested whether n independent samples are from the same population⁶⁸⁸. This test is based on rankings, i.e. on the assignment of numerical values to immeasurable data.

4.3. Characteristics of the study area, sample selection and studied population

The State Higher Vocational Schools in Poland began to appear in 2000 as a new organizational form of higher education aimed at promoting precisely the field of vocational education, preparing practitioners at the undergraduate level studies to be able to perform various professions.

The establishment of 36 PWSZ in Poland in smaller cities created an opportunity for young people from areas located far away from larger urban agglomerations, inhabited by people with low income, to graduate from a higher vocational school⁶⁸⁹.

In order to present a more complete picture of the axiology and methodology of pro-ecological education, in the opinion of PWSZ students in Poland, a number of conditions affecting the preferences of respondents were taken into account, in particular the origin of students from diverse natural areas of Poland.

⁶⁸⁵ A. Stanisławski, *Przystępny kurs statystyki z zastosowaniem STATISTICA PL*, t.1-3, Kraków, StatSoft, 2007, p. 321; też A. Krajewska, *Statystyka dla pedagogów*, Białystok, Trans Humana, 2001.

⁶⁸⁶ Ibid. p. 323.

⁶⁸⁷ Ibid. p. 292.

⁶⁸⁸ Ibid. p. 386.

⁶⁸⁹ The list of 36 state higher vocational schools is announced on the website of the Ministry of Science and Higher Education, <http://www.nauka.gov.pl/szkolnictwo-wyzsze/system-szkolnictwa-wyzszego/uczelnie/uczelnie-publiczne/wykaz-uczelni-publicznych-nadzorowanych-przez-ministra-wlasniwego-ds-szkolnictwa-wyzszego/panstwowe-wyzsze-szkoly-zawodowe/>, downloaded on 26th March 2012.

A representative sample of PWSZ in Poland was selected – four State Higher Vocational Schools from various regions of the country were selected due to the state of the natural environment and the industrial and economic situation of a given region. The following universities were chosen: State Higher Vocational School in Biała Podlaska, in Gorzów Wielkopolski, in Leszno and in Racibórz.

State College Pope John Paul II in Biała Podlaska is located in the lubelskie province at the end of eastern Poland. Biała Podlaska is located by the Krzna River in typically agricultural areas. The condition of the environment in Biała Podlaska is satisfactory and constantly monitored, and the ecological awareness of the inhabitants is constantly raised⁶⁹⁰.

The establishment of the State Higher Vocational School in Biała Podlaska on July 18, 2000, pursuant to a regulation of the Council of Ministers, created a unique opportunity for young people from areas far away from large cities to obtain a university diploma. Educating a significant number of young people, who would not otherwise have a chance to study, means forming human capital for the region of Biała Podlaska⁶⁹¹.

On April 28, 2005, by the regulation of the Ministry of National Education and Sport, the State Higher Vocational School in Biała Podlaska was named the Pope John Paul II State Higher School in Biała Podlaska. It promotes the following fields of study: Philology – with specialties: German, English, Russian; Management; Pedagogy; Information Technology; Tourism and Recreation; Nursing; Sociology; Public Health; Life saving; Agriculture; Building; National Security; Finance and Accounting; Economy.

It is worth mentioning that on May 14 and 20, 2008 PWSZ im. Pope John Paul II in Biała Podlaska, with the support of the Provincial Fund for Environmental Protection and Water Management in Lublin, implemented an environmental education project “Z ekologią na TY”. Its goal was to raise secondary school students as well as the university students’ awareness of the wealth of nature and ways how to protect it.

The State Higher Vocational School in Gorzów Wielkopolski is located in the Lubuskie Province in western Poland. Gorzów Wielkopolski is located by the Warta river.

Gorzów Wielkopolski currently has about 126,000 inhabitants and plays an important role of an administrative, socio-economic and cultural center of the region. It is a large industrial centre with many branches of industry developed there. There is, among others, chemical industry, electronic industry, energy, pharmaceutical as well as light industry. Also, it is the centre of machine, metal, automotive, food and textile industries.

On March 24, 2004, the City Council adopted the Environmental Protection Program together with a waste management plan for the City of Gorzów Wielkopolski (resolution No. XXVI279/2004) The overall goal set out in the

⁶⁹⁰ *Raport o stanie środowiska województwa lubelskiego w 2009 roku*, Lublin, Biblioteka Monitoringu Środowiska, 2010.

⁶⁹¹ Państwowa Szkoła Wyższa im. Papieża Jana Pawła II w Białej Podlaskiej, *Dziesięciolecie Uczelni 2000-2010*, Bydgoszcz, Wydawnictwo Unitex, 2010 p. 4.

programme is sustainable city development, in which environmental protection has a significant impact on the future character of the city and at the same time supports its economic and social development.

When defining the strategy for environmental protection in the city, the following issues were presented: improvement of environmental quality and ecological security, protection of the natural heritage and rational use of nature resources, sustainable use of raw materials, materials, water and energy, systemic issues, including the integration of environmental protection aspects into sectoral policies, future development of the city in the aspect of environmental protection and ecological education⁶⁹².

PWSZ in Gorzów Wielkopolski was established on August 1, 1998 and conducts the following faculties: Administration; Philology – with a specialization: German; Pedagogy; Management; Polish Philology – first and second cycle studies; National Security; Information Technology; Mechanical Engineering; Finances and Accounting; Cultural Studies; Tourism and Recreation; Economy.

Vocational State College of Jan Amos Comenius in Leszno was established on July 1, 1999. It offers the following fields of study: Electrical Engineering; Mechanical Engineering; Agriculture; Physical Education; Artistic Education in the field of music art; Pedagogy; Economy; Tourism and Recreation; Nursing as well as Information Technology. PWSZ in Leszno is located in Wielkopolskie Province in the western part of Poland.

Vocational State College of Jan Amos Comenius in Leszno in 2000, the President of the City of Leszno decided to develop a “Sustainable Development and Environmental Protection Program for the City of Leszno”, meeting the formal and legal requirements arising from the Act on Environmental Protection and Shaping (Journal of Laws No. 49/94 item 196, as amended) and the Waste Act (Journal of Laws No. 96/97 item 592 as amended).

In the course of developing this “Sustainable Development Programme and environmental protection of the City of Leszno” a new environmental protection law came into force in Poland from October 1, 2001 (Environmental Protection Act from April 27, 2001, Journal Of Laws No. 62/01 item 627), which imposes an obligation on the President of the City to develop an environmental protection programme. Therefore, a decision was made to change the title of the study to the “Environmental Protection Program of the City of Leszno” and to introduce the necessary changes in the document to make it compatible with current legislation.

The city of Leszno is the main trade and service centre as well as industrial and agricultural domain of the region, and also offers interesting educational facilities as well as the possibility of education at universities and colleges. Leszno is a city with a high dynamics of population growth, a large share of young people in the general population and a low (compared to the rest of the country) unemployment rate.

An indispensable condition for the successful development of the city in the long run is to achieve a stable, good condition of the environment, which is associated,

⁶⁹² *Stan Środowiska w Gorzowie Wielkopolskim w latach 2004-2008*, Gorzów Wielkopolski, Biblioteka Monitoringu Środowiska, 2009.

among others with controlling waste management, controlling water and sewage management, reducing low emissions (including the introduction of an efficient communication system in the city), developing the urban greenery system and increasing the ecological awareness of residents⁶⁹³.

The State Higher Vocational School in Racibórz was established on February 1, 2002 and promotes the following fields of study: Artistic Education in the field of visual arts; Sociology; Physical Education; Maths; Pedagogy; Philology – with specialties: English Philology, German Philology, Czech Philology, Russian Philology; Automation and Robotics; European Studies; Architecture and Urban planning.

PWSZ in Racibórz is located in the Śląskie Province in the southern part of Poland. Racibórz is located on the Odra River. It is an important socio-economic centre of the region. The state of the environment in Racibórz is constantly monitored and improved by influencing the quality of introduced principles of sustainable development of individual enterprises and industries as well as through ecological education of residents⁶⁹⁴.

In regard to the awareness of the value of the ecosystem, biosystem, sociosystem, in methodology and attitudes (lifestyle) of PWSZ students in Poland, apart from the influence of the natural environment, the following characteristics proved to be influential: education of parents; sex; type of secondary school completed; faith; year of study; place and field of undergraduate studies (Pedagogy, English, Tourism and Recreation) at the PWSZ in Poland: in Biała Podlaska, Gorzów Wielkopolski, Leszno and Racibórz. In addition, the impact of promoted values in school, local, family and mass media environments was observed

Below we present the initial characteristics of respondents from four representative PWSZ in Poland: in Biała Podlaska, in Gorzów Wielkopolski, in Leszno and in Racibórz (Table 5):

Table 5. Distribution of respondents – students of selected PWSZ in Poland depending on the state of the natural environment

PWSZ in Poland	Number of respondents N I year and III year studies		%
Biała Podlaska	100	100	25,0%
Gorzów Wielkopolski	100	100	25,0%
Leszno	100	100	25,0%
Racibórz	100	100	25,0%
Total	800		100,0%

The research included 800 students from four selected state higher vocational schools, 100 respondents from the first and third year of first-cycle studies from all over Poland due to, first of all, natural conditions and the degree of industrialization of the areas where the students come from and study (Table 5).

⁶⁹³ *Program ochrony środowiska w Mieście Leszno*, Leszno 2004.

⁶⁹⁴ Stan środowiska w województwie śląskim w 2010 roku; Program ochrony środowiska dla powiatu raciborskiego na lata 2008 – 2011 z perspektywą do roku 2015.

Table 6. Distribution of the number of respondents – students of selected PWSZ in Poland due to the field of study

Faculty in PWSZ	Number of respondents N	%
English Philology	92	11,5
Pedagogy	617	77,1
Tourism and Recreation	91	11,4
Total	800	100,0

800 students from three fields of study participated in the study: Pedagogy – 617 students, which is 77.1% of all respondents, English Philology – 92 students – 11.5% and Tourism and Recreation – 91 students (11.4%) (Table 6).

Table 7. Distribution of the number of respondents – students of selected PWSZ in Poland due to sex

Sex of respondents	Number of respondents N	%
Female	637	79,6
Male	163	20,4
Total	800	100,0

79.6% of all respondents were 637 female students and 20.4% of respondents were male – 163 students (Table 7).

Table 8. Distribution of the number of respondents – students of selected PWSZ in Poland due to place of living

Place of living	Number of respondents N	%
City	481	60,1%
Small town	54	6,8%
Village	265	33,1%
Total	800	100,0%

60.1% of respondents came from urban areas – 481 people and 39.9% of respondents came from less inhabited areas, mainly rural (33.1%) (Table 8).

Table 9. Distribution of the number of respondents – students of selected PWSZ in Poland due to the condition of natural environment in the place of living

The condition of environment in the place of living	Number of respondents N	%
Good	508	63,5%
Bad	141	17,6%
I don't know	151	18,9%
Total	800	100,0%

63.5% of respondents evaluates the state of the natural environment at home as good. In turn, 17.6% of respondents observe negative effects in the surrounding environment. As many as 18.9% of students could not determine the quality of the environment in which they live (Table 9).

Table 10. Distribution of the number of respondents – students of selected PWSZ in Poland in regard to secondary school completed

Type of secondary school completed	Number of respondents N	%
Secondary school	642	80,3%
Technical high school	74	9,3%
Others	84	10,5%
Total	800	100,0%

The majority of 80.3% respondents graduated from high school, as many as 642 people. The remaining respondents – 158 studied at other technical secondary schools, which constitutes 19.8% of all respondents (Table 10).

Table 11. The influence of parents' education on the on the opinion of students of selected PWSZ in Poland

Education	Mothers N	Fathers N	Mothers %	Fathers %
Higher	158	123	19,8%	15,4%
Secondary	537	524	67,1%	65,5%
Elementary	105	153	13,1%	19,1%
Total	800	800	100,0%	100,0%

The majority of parents (537 mothers and 524 fathers) of respondents (66.3%) have a secondary education. We are analysing in the next chapter of the publication the impact of parents' education on the students' opinion about the values of the ecosystem, biosystem, sociosystem, in the methodology and attitudes (lifestyle) (Table 11).

Table 12. Distribution of the number of respondents – students of selected PWSZ in Poland in regard to the level of faith

Faith of respondents	Number of respondents N	%
Deep	207	25,9%
Average	435	54,4%
Weak	118	14,8%
Lack of faith	40	5,0%
Total	800	100,0%

207 respondents profess deep Christian faith, namely 25.9% of all respondents. In turn, 435 surveyed students evaluate their faith as quite strong, which

represents 54.4% of all respondents. Only 5% of respondents – 40 people admit their lack of faith. In total, 95% of the surveyed students believe and base their worldview on the Christian value system (Table 12).

We will also analyze the impact of respondents' faith on their preferred values in the next chapter of this work.

4.4. Organization and the course of own research

Initially, pilot studies were carried out to verify research tools strictly used for the purposes of this work. The diagnostic survey method was chosen, which allows to get to know a large population, spatially dispersed in a relatively short time. This method enabled gaining knowledge about the surveyed population – students of vocational higher schools in Poland, as well as making a diagnosis of this community's opinion from the point of view of the examined indicators.

The collection of information on the surveyed population was based only on its representative sample – 800 students of four State Higher Vocational Schools in Poland: in Biała Podlaska (200 students), Leszno (200 students), Gorzów Wielkopolski (200 students) and Racibórz (200 students) from general population – from 36 universities of this type. The respondents were students of the following fields of study: Pedagogy, English Philology as well as Tourism and Recreation.

A few months before the the actual research was started, a request was sent to the Rectors of PWSZ in Poland for consent for the participation of students in diagnostic survey – interview and survey. Rectors and Directors of individual Institutes approved the request, confirming the legitimacy of researching students' opinions on pro-ecological values, as such studies have not been conducted so far. The importance of the issues of the axiology of pro-ecological education in the times of growing civilization threats was emphasized.

Students participating in the research with the use of the diagnostic survey method – interview, questionnaire and scale of pro-ecological values were personally informed by the author about the purpose of the research and the manner of conducting it. Respondents were assured of the anonymity and voluntary nature of the research and that the research results would be used only for scientific purposes. At the same time, each survey questionnaire contained an introduction to the research together with instructions on how to complete it on the first page.

The interviews, the survey and the scale of pro-ecological values were conducted during 1.5-hour didactic classes in groups of about 25 people in the presence of the author of this publication and an academic teacher.

During the research, the author of this work tried to create an atmosphere of integration and friendship, and stressed the importance of reliable opinions about pro-ecological values in the era of rapid civilization progress of humanity both globally and locally, and the impact of pro-ecological education methods on the lifestyles of the surveyed students.

Chapter 5

Correlations of preferred ecological values with ecological education of students of the PWSZ in Poland (in the light of own research)

This chapter will present and subject to quantitative and qualitative analysis the results of own research on the values and methods of pro-ecological education in the opinion of students of state vocational schools in Poland.

We will show correlations between students' preferences of ecosystem, biosystem, and social system values as well as methods and lifestyle with pro-ecological values promoted not only in school environment but also in local, family and mass media environment. In addition, the impact of the natural environment itself will be analysed. Next, we will compare levels of awareness and understanding of the value of pro-ecological education of 1st and 3rd year students – whether they are at the level of shallow or deep ecology. Finally, we will attempt to determine the impact of the value of pro-ecological education on the lifestyle of PWSZ students.

The obtained data was statistically processed using the SPSS PC + computer programme. Then, the obtained research results, statistically processed in percentage terms, will be presented and described in the form of tables, graphs and verbal descriptions.

On the basis of the literature of the subject, we have distinguished the following groups of pro-ecological values, promoted in two currently dominating approaches:

1) *shallow ecology* and 2) *deep ecology*, which form the basis of the axiology of the pro-ecological education process, the conditions of which we examine in the present publication:

Ad. 1) *shallow ecology* discusses

1.1) axiology of the ecosystem in order to preserve human life and health as well as the environment as a common good:

- concern for preservation of species biodiversity,
 - concern for the protection of the atmosphere, lithosphere and hydrosphere
 - being economical in managing natural resources;
- Ad. 2) *deep ecology* expands the group of pro-ecological values important in changing lifestyle to:
- 2.1) axiology of biosystem:
 - respect for life,
 - respect for human's both life and health,
 - harmony;
 - 2.2) axiology of social system:
 - peace,
 - solidarity,
 - justice,
 - responsibility,
 - restraint, moderation;
 - 2.3) values in methods and attitudes (lifestyle)
 - work,
 - contemplation,
 - compassion,
 - community.

Table 13. Summary of the impact of the studied variables in the present work on Values and methods of pro-ecological education in the opinion of PWSZ students in Poland

Independent variables and their influence on the choice of pro-ecological values as well as lifestyle in the opinion of PWSZ students	Dependent variables
1. The influence of school/university environment Students' sex: females, males. Type of school completed: Secondary School, technical higher school, others. Profile of education (Pedagogy, English Philology, Tourism and Recreation) at first cycle studies at PWSZ in Poland: in Biała Podlaska, Gorzów Wielkopolski, Leszno and Racibórz Year of studies: I and III Answers to questions: 19, 21, 23, 24, 25, 26, 30, 36.	Awareness of values (which are demonstrated by hierarchical answers 10, 13) and more broadly the values of the ecosystem (answers 1-4), biosystem (answers 5-9), social system (answers 10-17), in methodology and attitudes (lifestyle 28, 33) (answers 18-36) of students of the PWSZ in Poland.
2. The influence of local environment Answers to questions: 5, 9, 10, 11, 12, 13, 15, 16, 18, 21, 22, 27, 28, 29, 31, 32, 33, 34, 35.	The axiological awareness of students at the level of shallow or deep ecology is particularly reflected by the following answers:
3. The influence of the family: Father's and mother's education: higher, secondary, elementary [students' faith: deep, average, weak, lack of faith]	3, 5, 9, 15, 16, 17, 18, 27, 28, 32, 33, 34, 35.

and Answers to questions: 13 i 14.] as well as Answers to questions: 13, 20, 21. 4. The influence of mass media Answers to questions: 21, 22, 32. 5. The influence of natural environment: The condition of natural environment: good, bad, I don't know in the place of residence: city, settlement, village. Answers to questions: 3 i 4.	
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Table 13 shows the correlations of dependent variables on independent variables based on the developed answer key for own research tools. The influence of independent variables on the selection of pro-ecological values and lifestyle in the opinion of PWSZ students in Poland is presented in detail.

In regard to the deepening effects of the ecological crisis, the need to change human mentality and attitudes arises also in the sphere of values. This need to change the man's attitude towards the social and natural environment and attitudes (lifestyle), refers to transcendental values. Education proves to be helpful. Its most important goal is to enable the subject – the learner to assume leadership over his own development process. Pro-ecological education should bring education closer to the process of maieutics of a person, i.e. raising an individual in the learner. When recognizing the value of a human person as a value holder, there is progress in the process of personal development of the learner⁶⁹⁵, also in the sphere of acceptance of the axiology of pro-ecological lifestyle.

The need to change attitudes (lifestyle), refers to transcendental values. Deep ecology shapes the pro-ecological attitude of man in all the spaces of the Platonic triad⁶⁹⁶: Thus, the cognitive attitude directs the human mind towards truth, the moral attitude is expressed in the pursuit of good, and the aesthetic allows it to approach towards beauty. Respect for these metavalues allows us to move from a partitioning attitude towards a pro-ecological one. We learn to accept the relationship between understanding and faith, action and hope, contemplation and love. At the same time, we learn to see the interdependence of the sense of truth, goodness and beauty⁶⁹⁷.

The aforementioned values belong to the human person, and their ecological aspect is revealed in human-nature contact. Violation of these values invariably

⁶⁹⁵ M. Nowak, *Pedagogika personalistyczna*, in: Z. Kwieciński, B. Śliwerski (ed.), *Pedagogika*, Warszawa, PWN, 2004, p. 243.

⁶⁹⁶ K. Najder-Stefaniak, *Edukacyjne implikacje platońskiej triady*, in: J.M. Dołęga (ed.), *Ochrona środowiska społeczno-przyrodniczego w filozofii i teologii*, p. 215. Ibid. p. 210.

⁶⁹⁷ Ibid. p. 218.

leads to the degradation of man and the natural world. In other words: the ecological crisis is also a crisis of values⁶⁹⁸.

Eco-friendly education helps the pupil to understand, accept and implement pro-ecological values in relation to others and the world, in which he lives, but above all in changing his lifestyle.

In the research part of the publication the author focused on the situational definition of *education*⁶⁹⁹. It refers to the impact of the educational environment in order to examine the influence of the educational environment on the process of changing attitudes (lifestyle) of man towards the world, another man and himself. We treat pro-ecological education as a process of pro-ecological interactions (the process of transferring pro-ecological values and causing positive changes in a person's lifestyle) in regard to pupils, not only the educators themselves but also various circumstances and conditions as educational situations.

Pro-ecological activities are advantageous to the pupils' becoming familiar with the content and pro-ecological values. These activities also lead to the creation of awareness of the interrelationship between man, his social and natural environment. In pro-ecological education, it is emphasized that man influences the environment, transforms it with his presence, while at the same time nature influences him. Therefore, such education tends to create conditions in which the pupils make an effort, favourable to integral human development and improving their living environment.

5.1. Ecosystem, biosystem, and social system values as well as values observed in methods and lifestyle preferred by students of PWSZ in Poland

Ecosystem, biosystem and social system values as well as in methods and lifestyle preferred by PWSZ students.

In the present subchapter, we present a quantitative and qualitative analysis of the obtained data, statistically developed in percentage: 1) the value of the ecosystem, 2) the biosystem, 3) the social system, and 4) the values in the methods and lifestyle preferred by students of the PWSZ in Poland.

Ad. 1) The values of the ecosystem relate to the protection of the natural environment due to the need to stop its further degradation and to preserve the state of cleanliness of the environment for future generations by protecting the atmosphere, the lithosphere and hydrosphere that are closely related and affect the quality of life of living organisms. Promoting a moderate attitude as well as economical management of animate and inanimate nature resources are believed to serve protective function.

⁶⁹⁸ W. Tyburski, *Komponenty kultury ekologicznej*, in: J.M. Dołęga (ed.), *Podstawy kultury ekologicznej*, „Zeszyty Naukowe” 32, Warszawa, Wydawnictwo UKSW, 2002, p. 20.

⁶⁹⁹ S. Kunowski, *Podstawy współczesnej pedagogiki*, pp. 166-169.

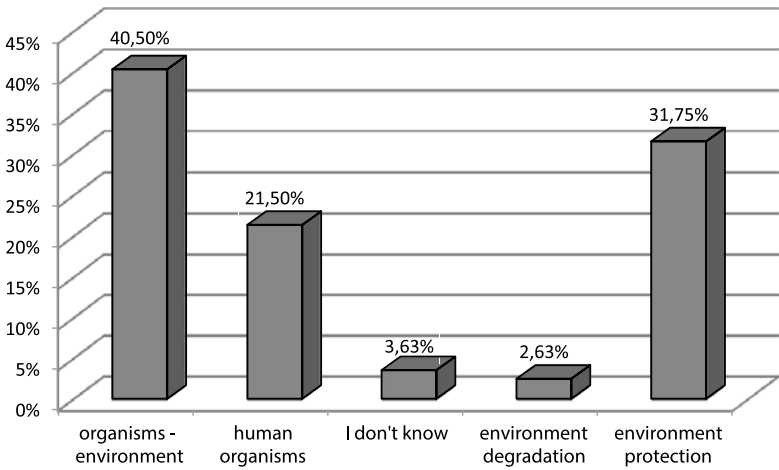


Chart 1. Ecology according to the respondents as well as according to scientific understanding of the term it is the field of studie examining the dependencies between living organisms and their natural habitat

PWSZ students in Poland have a varied approach to understanding ecology. 40.50% of respondents agree with the scientific understanding of ecology as a science examining the relationship between living organisms and their living environment. However, 21.50% of the respondents only consider the impact of the human population on the state of the environment, and as many as 31.75% identify the concept of ecology only with environmental protection.

To sum up, 55.88% of respondents perceive nature in the approach of shallow ecology. In other words they pay attention to the protection human living environment in order to preserve human life and health.

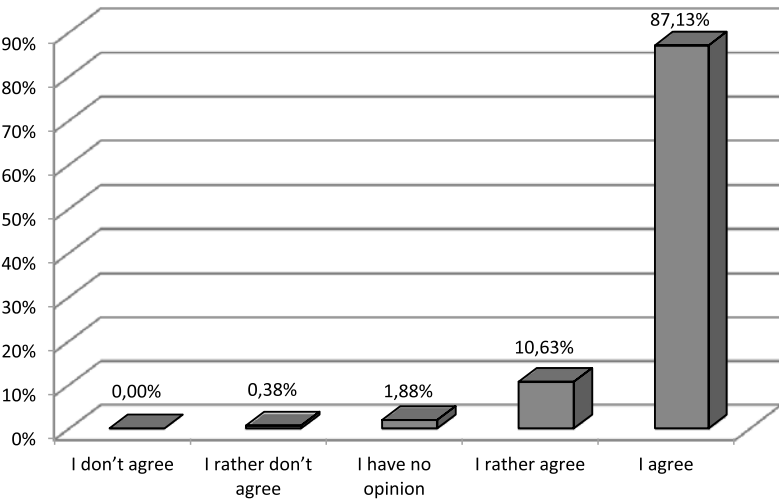


Chart 2. Nature as a common good for future generation

Ecosystem values are present in the awareness of students attending PWSZ in Poland, which is confirmed by 87.13% of respondents who respect the value of the natural environment as a common good for future generations. And we have already observed another confirmation of the respondents about the need to protect the environment in order to support the human species as it is shown by shallow ecology.

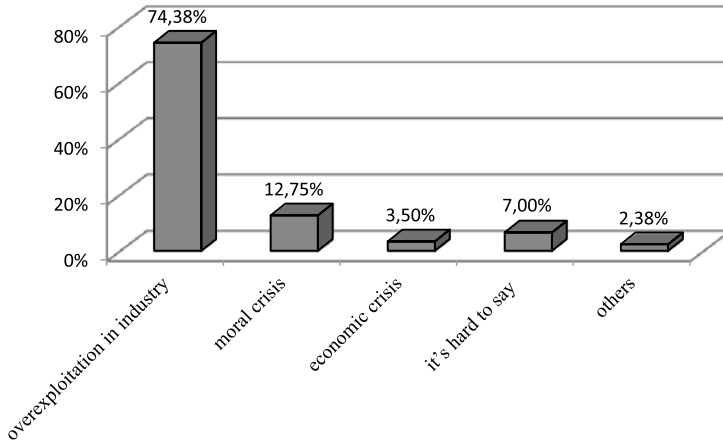


Chart 3. Causes of threats to ecosystems

74.38% of students notices the causes of threats to ecosystems primarily in the wrong industrial and economic activities, which also indicates shallow ecology. Only 12.75% of respondents indicate a moral crisis in connection with unethical human behavior.

Table 14a. The most endangered areas of biological life on a scale of 1-7 in respondents' opinion (1- most endangered)

Scale (results in [%])	atmosphere	hydrosphere	litosphere	zoosphere	phytosphere	anthroposphere	biosphere	I don't know
1	42,38	13,13	4,88	7,00	2,75	7,25	19,88	4,00
2	19,13	25,00	13,38	10,38	9,38	10,13	8,63	0,00
3	10,13	20,50	18,13	15,13	16,63	7,63	8,00	0,00
4	6,88	12,63	15,63	17,75	23,25	11,25	8,75	0,00
5	9,50	9,25	17,25	23,38	16,75	11,00	8,88	0,00
6	3,75	12,00	12,75	15,75	16,25	23,25	11,5	0,00
7	4,13	3,38	13,50	6,50	11,00	25,50	30,13	0,00

The analysis of biological life zones by students indicates that 42.38% of respondents consider the atmosphere to be the most threatened, then the hydrosphere – 25%, and only later the sphere of life of all living organisms (phytosphere – sphere of plant life – 23.25%; zoosphere – sphere of animal life – 23.38%; anthroposphere – sphere of human life – 23.25% and in the holistic approach the biosphere – sphere of life on Earth – 30.13%).

The research results indicate that the axiological awareness of the majority of respondents is at the level of shallow ecology, practicing only conservation activities in terms of primarily air and water protection in a purely technical and industrial sphere.

Table 14b. statistical evaluation of endangered spheres of biological life in the opinion of respondents

Life sphere		atmosphere (air)	hydro-sphere (standing and flowing waters)	lito-sphere (soil)	zoo-sphere (animal life sphere)	phyto-sphere (plant life sphere)	anthropo-sphere (human life sphere)	bio-sphere -sphere of all living creatures
N	Important	800	800	800	800	800	800	800
	No data	0	0	0	0	0	0	0
Average		2,38	3,18	4,09	4,02	4,23	4,68	4,22
Median		2,00	3,00	4,00	4,00	4,00	5,00	5,00
Dominant		1	2	3	5	4	7	7
Percentage	25	1,00	2,00	3,00	3,00	3,00	3,00	2,00
	50	2,00	3,00	4,00	4,00	4,00	5,00	5,00
	75	3,00	4,00	6,00	5,00	6,00	7,00	7,00

Ad. 2) Axiology of the biosystem takes into consideration a specific system of living organisms which guarantees, by its functioning, harmonious coexistence of man and nature. The values of the biosystem focus on respect for life, respect for both life and human's health and emphasize the harmony of coexistence in the biosystem.

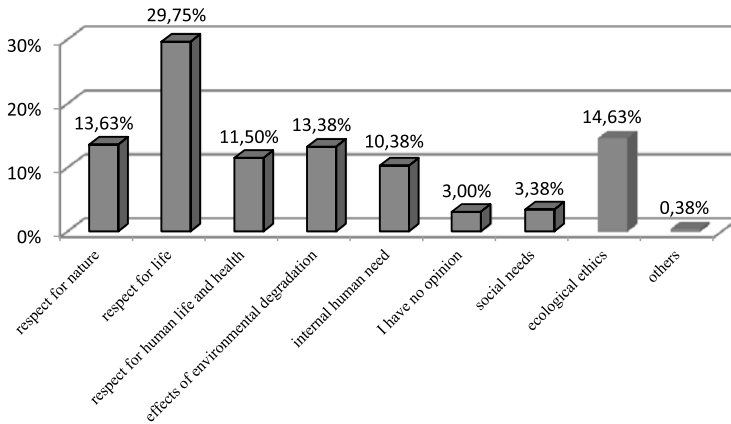


Chart 4. Reasons for environment protection

Among the reasons for environmental protection, students point to the most significant value of the biosystem – life (29.75%). Respondents expressed first and foremost to the lives of all living things as the most significant environmental protection reason. This reason is included in the deep ecology approach. At the same time, students confirm the recognition of deep ecology by perceiving the need to protect the living environment in the aspect of ecological ethics (14.63%) so important in shaping the pro-ecological attitude. Some respondents (10.38%) consider it even as an internal human need and 3.38% see the social needs of undertaking environmental protection.

In turn, respect for human life and health as a reason for environmental protection is expressed by 11.50% of respondents, as it is also presented by shallow ecology.

Respect for nature (13.63%) as in deep ecology and the effects of degradation of the natural environment (13.38%) as indicated by shallow ecology are also the reason why environment, in the opinion of student, should be protected.

Only 3% of respondents have no opinion in regard to the reasons for environmental protection. It follows that 97% of respondents take pro-ecological thinking, of which as many as 71.77% in the meaning of deep ecology.

Table 15. Correlation of causes of ecosystem threats on respondents' understanding of ecology

Ecology is a research science	Number of respondents [N] Percentage [%]	Causes of ecosystem threats					Total
		Inappropriate human's activities in the industry and technology spheres	Moral crisis	Economic crisis	I don't know	Others	
Correlation between organisms and their natural habitat	N	244	46	7	19	8	324
	% ecology is a research science	75,3%	14,2%	2,2%	5,9	2,5	100,0%
	% in causes of threats	41,0%	45,1%	25,0%	33,9	42,1	40,5%
Correlation between human population and their natural habitat	N	126	25	7	12	2	172
	% ecology is a research science	73,3%	14,5%	4,1%	7,0	1,2	100,0%
	% in causes of threats	21,2%	24,5%	25,0%	21,4	10,5	21,5%
Difficult answer	N	18	2	2	7	0	29
	% ecology is a research science	62,1%	6,9%	6,9%	24,1	,0	100,0%
	% in causes of threats	3,0%	2,0%	7,1%	12,5	,0	3,6%
Consequences of environment degradation	N	9	7	2	3	0	21
	% ecology is a research science	42,9%	33,3%	9,5%	14,3	,0	100,0%
	% in causes of threats	1,5%	6,9%	7,1%	5,4	,0	2,6%

Possibilities of environment protection	N	198	22	10	15	9	254
	% ecology is a research science	78,0%	8,7%	3,9%	5,9	3,5	100,0%
Total	% in causes of threats	33,3%	21,6%	35,7%	26,8	47,4	31,8%
	N	595	102	28	56	19	800
	% Ekologia to nauka badająca	74,4%	12,8%	3,5%	7,0	2,4	100,0%
	% in causes of threats	100,0%	100,0%	100,0%	100,0	100,0	100,0%
	% in Total	74,4%	12,8%	3,5%	7,0%	2,4%	100,0%
Chi-square tests	value	df	Asymptotic significance (two-sided)				
Pearsona Chi-square	39,557(a)	16	,001				
Likelihood ratio	33,963	16	,005				
Linear test relationship	,396	1	,529				
N important observations	800						
and 36.0% of cells (9) have an expected number less than 5. The minimum expected number is 50.							

From the correlation of the causes of ecosystem threats with the proper understanding of ecology as a science examining the relationship between organisms and their living environment, 75.3% of respondents emphasize the unfavourable treatment of the environment in which we live by the human being, paying attention to the crisis of morality and spiritual value as an important cause inherent in man (45.1%).

Some of the respondents, seeing the wrong understanding of the surrounding natural and social reality by man, perfectly fit into the mainstream of *deep ecology*, which speaks of the need to change the metanoia of man in relation to the environment

Ad. 3) The values of the social system also determine interpersonal relationships in terms of preserving the environment in which we live. In this regard, the axiology of the social system points to important values such as peace, solidarity, justice, responsibility, restraint and moderation.

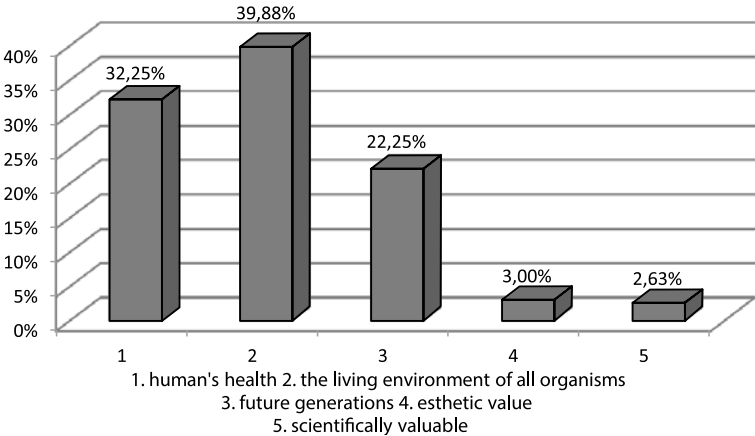


Chart 5. Basics of environmental protection in the opinion of respondents

According to the demands of *shallow ecology*, 32.25% of respondents were in favour of protecting human's health and 22.25% of respondents were in favour environmental protection for future generations. In turn, 40% of respondents emphasized the importance of environmental protection due to the protection of the living environment of all organisms as well.

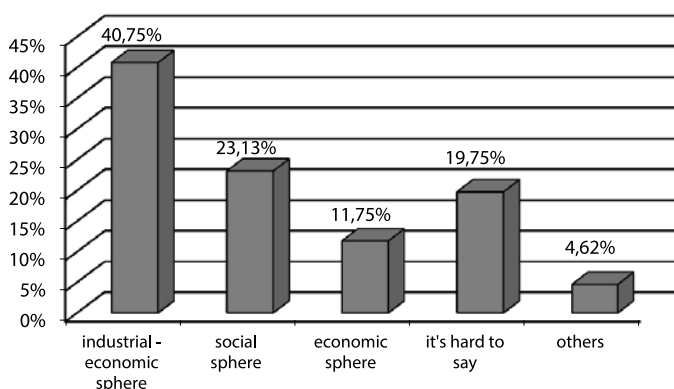


Chart 6. The consequences of ecological problems refer to different spheres of human life

The consequences of ecological problems when it comes to the quality of the human life environment are seen not only by the students in the industrial and economic sphere – 40.75% and economic – 11.75% but also in the social sphere – 23.13%. Thus, the effects of inappropriate human interactions on the ecosystem are also felt in regard to the social system.

Table 16a. The hierarchy of values appreciated by the respondents on a scale from 1 to 10 [%]

Ratio scale[%]	Human dignity	Harmony with nature	Peace	Solidarity, community	Justice	Responsibility	Restraint, moderation	Work	Contemplation	Compassion
1.	55,00	6,25	12,38	2,38	12,50	5,13	1,00	3,38	0,63	1,88
2.	13,25	8,75	18,00	9,38	25,63	12,38	1,75	6,00	1,00	3,63
3.	9,75	6,38	15,75	12,25	21,25	20,00	2,38	5,63	0,75	5,25
4.	5,75	7,63	12,25	15,63	14,13	18,88	6,50	8,75	1,50	8,38
5.	6,13	12,38	11,25	12,00	13,38	13,13	8,38	10,75	3,63	8,50
6.	3,00	12,50	10,25	16,00	4,25	13,75	11,25	11,75	4,88	11,25
7.	2,50	12,13	9,63	11,63	3,25	6,50	15,25	14,88	9,88	14,00
8.	1,63	13,50	6,13	10,63	2,75	4,50	18,00	13,63	11,88	17,00
9.	1,00	10,38	2,13	6,38	1,50	3,13	22,13	12,38	27,88	13,50
10	2,00	10,13	2,25	3,75	1,38	2,63	13,38	12,88	37,88	16,38

Among the values preferred by students, human dignity is the most important one (55%). On a 10-point scale, respondents distinguished respectively justice (25.63%), responsibility (18.88%) as well as solidarity and community (16%) altogether. 18% of respondents also pointed to restraint and moderation. The value of work (14.88%) and contemplation (37.88%) were appreciated. However,

students do not equate their thoughts and actions with world peace and compassion, let alone with harmony with nature.

Table 16b. Statistical evaluation of hierachy of values appreciated by the respondents

The scale of pro-ecological values		Human dignity	Harmony with nature	Peace	Solidarity, community	Justice	Responsibility	Restraint, moderation	Work	Contemplation	Compassion
N	Important	800	800	800	800	800	800	800	800	800	800
	No data	0	0	0	0	0	0	0	0	0	0
Average		2,42	5,98	4,20	5,38	3,48	4,49	7,31	6,45	8,53	6,90
Median		1,00	6,00	4,00	5,00	3,00	4,00	8,00	7,00	9,00	7,00
Dominant		1	8	2	6	2	3	9	7	10	8
Percentiles	25	1,00	4,00	2,00	4,00	2,00	3,00	6,00	5,00	8,00	5,00
	50	1,00	6,00	4,00	5,00	3,00	4,00	8,00	7,00	9,00	7,00
	75	3,00	8,00	6,00	7,00	5,00	6,00	9,00	9,00	10,00	9,00

Ad. 4) Values in pro-ecological methods and lifestyles are, above all, work, contemplation, compassion, community of intentions and pro-ecological activities.

In the pedagogical context, lifestyle becomes a way of indirect education, which shapes the personal choice of the concept of life with the adopted system of values and social communication skills.

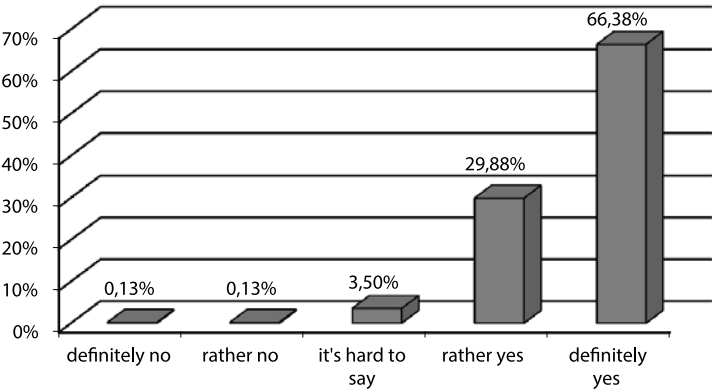


Chart 7. The improvement of the condition of environment requires changing people's lifestyles

When it comes to the improvement of the condition of environment by changing human's lifestyle, there is 84.01% of students in favour of taking such actions. On

the basis of the research results it is confirmed that the respondents are aware of the phenomenon involving the deepening of environmental problems and therefore the need for changes. As it can be seen from the results of these studies, deep ecology helps shape the pro-ecological attitude of modern man.

5.2. Pro-ecological values preferred in school, local, family, mass media environments and the choice of ecosystem, biosystem, and social system values, in students' methods and lifestyle

Many conditions, external factors and stimuli of educational environments influence the choice of values, including ecological ones, determining the learners' lifestyle. The first educational environment is family, followed by school, and extracurricular influences become significant, in particular, the significant influence of mass media. Pro-ecological education thus perfectly fits into the situational definition of education according to S. Kunowski. Father Decroly emphasizes that "education is preparation for life through life". P. Petersen perceives education as the primary function of the spirit, which is the saturation and perfection of the human form of life by the spiritual community of the family, nation and humanity. Education is thus perceived as a "community school" organizing a community experience through play, work, conversation, expression, creative expression, celebrations, etc. as "educational situations". Such definitions are situational, as they pose a problem as to how to organize an educational environment, pay attention to the unconscious influences of activities, rest, reading, theatre, cinema, and others. While raising the importance of the educational environment for upbringing, these terms are associated with the direction of environmentalism⁷⁰⁰.

Students derive ecological news primarily from mass media: television (33.38% in the first place), press (24.88%), radio and the Internet, as well as from announcements given by ecological organizations (24.55%).

Promoted pro-ecological values in mass media strongly influence students' awareness and lifestyle. Then the respondents took into account the impact of pro-ecological education from different levels of education.

⁷⁰⁰ S. Kunowski, *Podstawy współczesnej pedagogiki*, pp. 166-171.

Table 17a. The most important sources of acquiring ecological information on the scale from 1 to 12 in [%]

Scale [%]	University	Secondary school	Junior high school	Primary school	Kindergarten	Church	Family	Groups of peers	Television	Press	Radio	Ecological organisations
1.	6,50	4,00	2,38	7,00	6,13	1,75	5,50	1,50	33,38	2,13	2,88	24,25
2.	4,00	4,88	6,50	10,13	4,50	1,63	4,63	2,13	17,25	24,88	14,75	4,38
3.	2,88	7,38	10,88	6,88	4,25	1,25	4,00	2,38	8,13	25,50	23,38	2,75
4.	5,88	9,88	9,50	9,63	7,00	1,50	4,63	5,00	11,75	10,00	13,50	12,75
5.	13,63	11,75	9,00	12,75	9,25	2,63	8,75	8,50	6,75	5,88	5,38	5,13
6.	10,25	16,75	14,63	8,38	8,75	3,75	9,63	6,63	5,63	5,63	5,88	4,00
7.	7,63	14,50	17,25	13,50	8,00	5,88	6,38	5,88	4,38	5,75	5,75	4,38
8.	11,38	10,75	12,50	13,75	12,25	5,13	6,75	6,88	3,50	6,88	5,50	4,88
9.	10,25	9,13	8,00	9,75	15,50	8,00	9,75	6,50	5,13	4,00	8,13	5,75
10.	10,50	5,25	6,63	4,50	10,00	13,63	15,50	15,00	2,13	6,75	3,75	6,00

Table 17b. Statistical evaluation of sources of ecological information

Sources of ecological information		University	Secondary school	Junior high school	Primary school	Kindergarten	Church	Family	Groups of peers	Television	Press	Radio	Ecological organisations
N	important	800	800	800	800	800	800	800	800	800	800	800	800
	No data	0	0	0	0	0	0	0	0	0	0	0	0
Average		7,15	6,22	6,09	5,80	7,12	9,86	7,65	8,76	3,56	4,59	5,40	6,24
Median		7,00	6,00	6,00	6,00	8,00	11,00	8,00	10,00	2,00	3,00	4,00	6,00
Dominant		5	6	7	8	9	12	11	11	1	3	3	1
Percentiles	25	5,00	4,00	4,00	4,00	5,00	9,00	5,00	6,00	1,00	2,00	3,00	2,00
	50	7,00	6,00	6,00	6,00	8,00	11,00	8,00	10,00	2,00	3,00	4,00	6,00
	75	10,00	8,00	8,00	8,00	9,00	12,00	10,00	11,00	5,00	7,00	8,00	11,00

According to the respondents, ecological content was mainly provided at the academic level – 58.4%. However, the basics of ecology and environmental protection were also presented in primary and junior high schools as well as upper secondary schools (25%). Certainly the quality of the discussed content at different school ages determined the opinion of the respondents.

Students, as more mature pupils, have already received pro-ecological content in the first and foremost social dimension, and not only pure natural information that they only found in science and biology lessons or as part of cross-curricular pathways, as the students themselves claimed during the interview.

Table 18. Comparison of the degree of implementation of ecological content in PWSZ and at lower levels of respondents' education

PWSZ	N	Implementation of ecological content in schools you previously attended		Total
	%	No	Yes	
Biała Podlaska	N	65	135	200
	% Implementation of ecological content in PWSZ	32,5%	67,5%	100,0%
	% Implementation of ecological content in schools you previously attended	19,5%	28,9%	25,0%
Gorzów Wielkopolski	N	92	108	200
	% in PWSZ	46,0%	54,0%	100,0%
	% Implementation of ecological content in schools you previously attended	27,6%	23,1%	25,0%
Leszno	N	67	133	200
	% in PWSZ	33,5%	66,5%	100,0%
	% Implementation of ecological content in schools you previously attended	20,1%	28,5%	25,0%
Racibórz	N	109	91	200
	% in PWSZ	54,5%	45,5%	100,0%
	% Implementation of ecological content in schools you previously attended	32,7%	19,5%	25,0%
Total	N	333	467	800
	% in PWSZ	41,6%	58,4%	100,0%
	% Implementation of ecological content in schools you previously attended	100,0%	100,0%	100,0%
	% in total	41,6%	58,4%	100,0%

Chi-square tests	Value	df	Asymptotic significance (two-sided)
Pearson Chi-square	27,507(a)	3	,000
Likelihood ratio	27,572	3	,000
Linear test relationship	11,765	1	,001
N important observations	800		
and 0% of cells (0) have an expected number lower than 5. The minimum expected number is 83.25.			

Based on Chart 8, we can notice that only 20.88% of students were in favour of respecting the surrounding nature, resulting from the will of God the Creator. Unfortunately, 37.50% of respondents could not see the relationship between God – man – environment, and as many as 41.63% of respondents completely separated this relationship.

Therefore, ecological education should not be related, in the first place, with

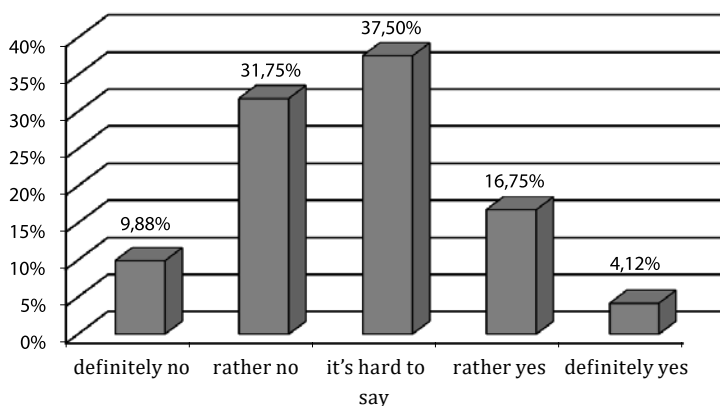


Chart 8. People respect nature due to the fact it was created by God

providing relevant information concerning nature, but above all it should be helpful in shaping pro-ecological consciences and attitudes, liberating personal responsibility for the creation on the path of personal commitment to protecting the created world⁷⁰¹.

⁷⁰¹ M. Nowak, *Podstawy pedagogiki otwartej*, p. 455; J. Leśniewska, *Zasady chrześcijańskiej edukacji ekologicznej w rodzinie*, „Ateneum Kapłańskie” 3(2002), p. 190.

Table 19a. Hierarchy of respondents' life goals in [%]

Scale	salvation	money	marriage	education	love	good job	social appreciation	personal happiness	peaceful life in accordance with nature	offsprings
1.	11,25	6,13	1,88	8,75	36,25	2,13	2,50	20,50	8,88	2,13
2.	2,50	4,00	14,25	13,00	22,50	8,50	3,63	19,13	7,38	5,75
3.	2,88	7,13	18,00	12,88	14,38	13,50	6,50	10,88	6,25	8,50
4.	1,88	9,00	17,25	10,75	10,13	15,88	7,25	11,38	7,00	9,75
5.	3,38	10,00	13,00	12,38	6,75	15,13	9,75	9,63	7,50	12,50
6.	5,75	9,75	10,50	12,63	3,88	13,63	13,25	10,63	8,75	11,38
7.	5,75	13,63	9,75	10,50	1,88	14,50	13,88	8,88	10,88	10,88
8.	9,63	12,00	7,38	10,75	2,00	9,25	17,63	4,88	13,63	13,88
9.	18,75	14,25	6,38	5,50	1,50	4,88	15,50	2,25	16,50	13,38
10.	37,75	14,00	1,63	2,75	0,75	2,63	10,13	1,88	13,00	11,88

The hierarchy of the respondents' life goals shows that love is the most important thing in life – 36.25%. Next, they enumerated marriage – 18%, good work – 13.63%, salvation – 18.75%. These results prove that respondents are characterised by the egocentric approach in the aspect of how to shape their lives and future. But one need to hope that thanks to the value of love and salvation, we can connect good and truth as well as sensitivity, empathy, compassion as well as help for others. It is argued that the altruistic attitude will develop in pupils as a result of integral education, also pro-ecological.

Therefore, education is a comprehensive development of young people, both in terms of shaping the completeness of their personality and preparation for life in society. At the same time, the guiding ideal of the “new man” in the socially defined system of modern education, shows that not only in the development of personality (the process of personalization, the awareness of one's self, who one really is) but also in preparation for social life (the process of socialization, social adaptation) there is a defeat of the “old man” and rejecting his natural attitudes towards life and other people. That is why educational taking from the natural to the higher cultural state takes place⁷⁰².

⁷⁰² S. Kunowski, *Podstawy współczesnej pedagogiki*, pp. 170-171.

This kind of change concerns the internal transformation of human psychological disposition, which causes that there is a change in the egoistic attitude into the dominating altruistic attitude in the process of personalization. At the same time, in the process of socialization, disappears the initial nostic attitude (Latin *nos-my*) opposing the we and them groups in favour of an illistic attitude (Latin *illi*), and therefore a serviceable commitment for the sake of the community⁷⁰³.

Table 19b. Statistical evaluation of the hierarchy of respondents life goals

Hierarchy of students' life goals		salvation	money	marriage	education	love	good job	social appreciation	personal happiness	peaceful life in accordance with laws of nature	offsprings
N	Important	800	800	800	800	800	800	800	800	800	800
	No data	0	0	0	0	0	0	0	0	0	0
Average		7,52	6,41	4,82	4,92	2,72	5,26	6,65	3,89	6,27	6,35
Median		9,00	7,00	4,00	5,00	2,00	5,00	7,00	3,00	7,00	6,50
Dominant		10	9	3	2	1	4	8	1	9	8
Percentiles	25	6,00	4,00	3,00	3,00	1,00	4,00	5,00	2,00	4,00	4,00
	50	9,00	7,00	4,00	5,00	2,00	5,00	7,00	3,00	7,00	6,50
	75	10,00	9,00	7,00	7,00	4,00	7,00	9,00	6,00	9,00	9,00

5.3. Natural environment and the choice of pro-ecological values by students

In the present subchapter, we present a quantitative and qualitative analysis of the obtained data, statistically developed in percentage terms, in the form of cross tables and charts describing the correlation of the conditions of the natural environment at the place of residence with pro-ecological values preferably chosen by PWSZ students in Poland.

The overall survey results including 800 respondents indicate that the state of the environment in which students live is good – as evidenced by 63.55% of respondents.

In turn, the majority of respondents from urban areas assess the state of the natural environment as poor – 72.3% compared to rural areas (21.3%).

⁷⁰³ Ibid. pp. 170-171.

Table 20. Evaluation of the condition of environment in the respondents' place of residence

I the condition of natural environment in the place of residence		Place of residence			Total
		City	Settlement	Village	
II the condition of natural environment in the place of residence	good	N	36	196	508
		% in II	7,1%	38,6%	100,0%
		% in I	66,7%	74,0%	63,5%
	bad	N	9	30	141
		% in II	6,4%	21,3%	100,0%
		% in I	16,7%	11,3%	17,6%
	I don't know	N	9	39	151
		% in II	6,0%	25,8%	100,0%
		% in I	16,7%	14,7%	18,9%
	Total	N	54	265	800
		% in II	6,8%	33,1%	100,0%
		% in I	100,0%	100,0%	100,0%
% in Total		60,1%	6,8%	33,1%	100,0%
Chi-square tests					
		value	df	asymptotic significance (two-sided)	
Pearsona Chi-kwadrat		21,202(a)	4	,000	
Likelihood ratio		21,863	4	,000	
Linear test relationship		15,027	1	,000	
N important observations		800			
and, 0% of cells (0) have an expected number of lower than 5. The minimum expected number is 9.52.					

Table 21. The influence of the respondents' faith on the perception of the condition of the natural environment

I the level of respondents' faith		Faith				Total	
deep average week		deep	average	week	lack of faith		
II the condition of natural environment in the place of residence	good	N	151	284	18	508	
		% in II	29,7%	55,9%	10,8%	3,5%	100,0%
		% in I	72,9%	65,3%	46,6%	45,0%	63,5%
	bad	N	20	75	37	9	141
		% in II	14,2%	53,2%	26,2%	6,4%	100,0%
		% in I	9,7%	17,2%	31,4%	22,5%	17,6%
	I don't know	N	36	76	26	13	151
		% in II	23,8%	50,3%	17,2%	8,6%	100,0%
		% in I	17,4%	17,5%	22,0%	32,5%	18,9%
	Total	N	207	435	118	40	800
% in II		25,9%	54,4%	14,8%	5,0%	100,0%	
% in I		100,0%	100,0%	100,0%	100,0%	100,0%	
% in Total		25,9%	54,4%	14,8%	5,0%	100,0%	
Chi-square tests							
	value	df	asymptotic significance (two-sided)				
Pearsona Chi-kwadrat	36,484(a)	6	,000				
Likelihood ratio	35,453	6	,000				
Linear test relationship	17,087	1	,000				
N important observations	800						
and, 0% of cells (0) have an expected number of lower than 5. The minimum expected number is 9.52.							

Analyzing the Table 21, we come to conclusion that the impact of faith is significant in perceiving the condition of the environment in which students live. Deep and average believing respondents are more concerned about the condition of the natural environment in their place of residence.

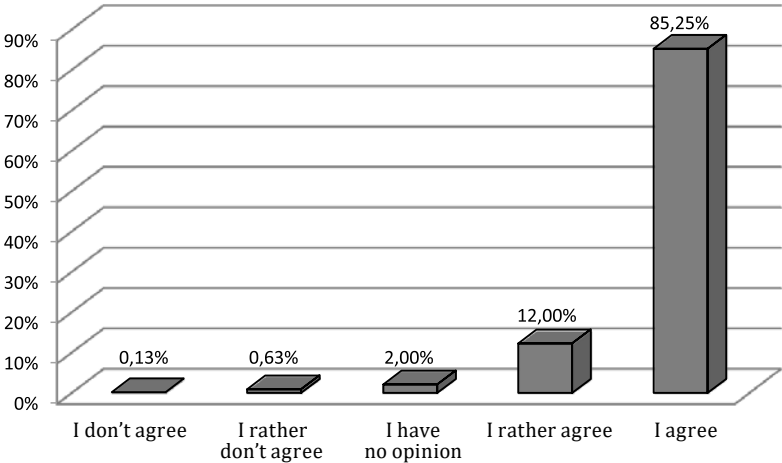


Chart 9. Protection of plant and animal species

On the basis of the obtained results, we can come to conclusion that respondents are not indifferent to the fate of living organisms in the natural environment. Most students agree on the need for plant and animals species protection – 85.25% of the respondents are definitely in favour and 12% are rather in favour.

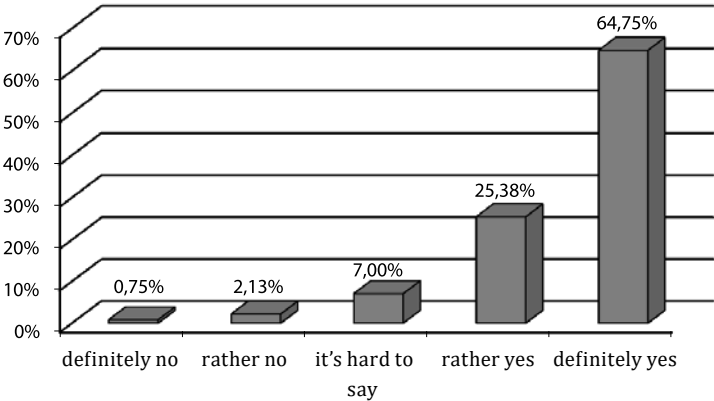


Chart 10. Recycling rubbish (separately glass, paper and others) is of great importance at present in order to improve the condition of environment

Most of the respondents are aware of the fact that improving the quality of human life environment requires us to minimize generated waste and segregate waste for recycling. 90.13% are in favour of introducing system solutions for the reuse of our rubbish.

To sum up, thanks to these test results we confirm what is perfectly explained by the three-factor theory of education, which familiarises us with the basic three variable factors: internal (innate) factors – in other words, own and characteristic for a given person (endogenous), containing hereditary features and somatic states of the body; external (exogenous) factors – considered as environmental stimuli and supernatural (the factor of grace), affecting the process of education and stimulating the development of own (innate) factors⁷⁰⁴.

There may be both intentional, deliberate and social influences: family, school, church, as well as unintended influences – including also the influences stemming from the biosphere (climate, natural landscape, fauna and flora, local environment, cultural, etc.). They form together the so-called acquired traits of the pupil and personality (spiritual) factor created by human spirituality and in fact associated with giving positive (or negative) responses of the learner to internal and external factors⁷⁰⁵.

The personality factor allows to rationalize the experience of the individual, develop opportunities and shape responsibility for oneself and for the community⁷⁰⁶.

5.4. Levels of understanding the values of pro-ecological education by students

In turn, in the present subchapter we present a quantitative and qualitative analysis of the obtained data which were statistically processed in percentage terms, in the form of cross tables and charts regarding the conditions of students reaching the understanding of pro-ecological values at the level of *shallow or deep ecology*.

We will then conduct a comparative analysis of the levels of consciousness as well as understanding the values of pro-ecological education of respondents starting their studies in the first year and completing the first-cycle studies in the third year.

⁷⁰⁴ M. Nowak, *Osoba i wartość w pedagogice ogólnej*. in: Nowak M., Magier P., Szewczak I. (ed.), *Antropologiczna pedagogika ogólna*, Lublin, KUL, 2010, pp. 41-56.

⁷⁰⁵ Ibid. pp. 41-56.

⁷⁰⁶ Ibid. pp. 41-56.

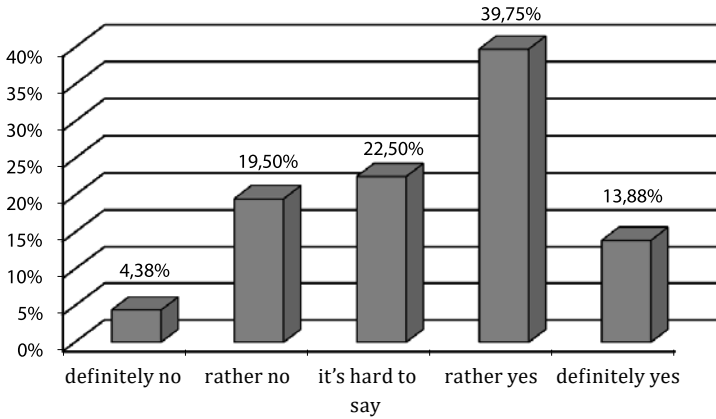


Chart 11. The level of respondents' interest in ecological issues

53.63% of respondents are interested in ecological issues, which indicates that the level of pro-ecological awareness of young people in Poland is increasing.

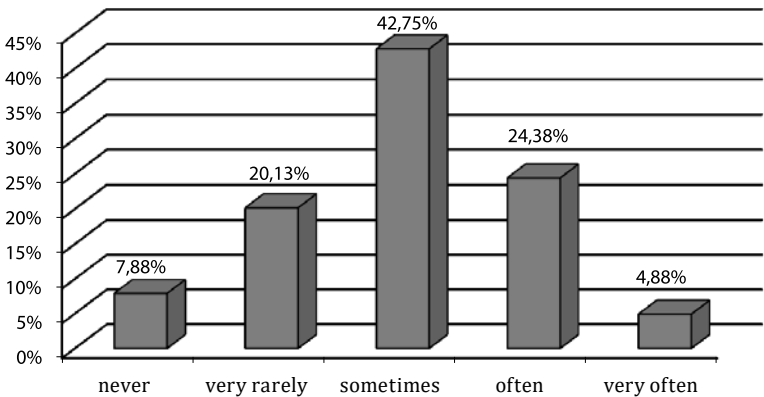


Chart 12. The frequency of ecological issues raised at schools attended by the respondents

92.12% of students proved that the fact of undertaking ecological issues at university was raised in different forms and intensities. Only 7.88% of respondents said that they never encountered ecological issues during their studies.

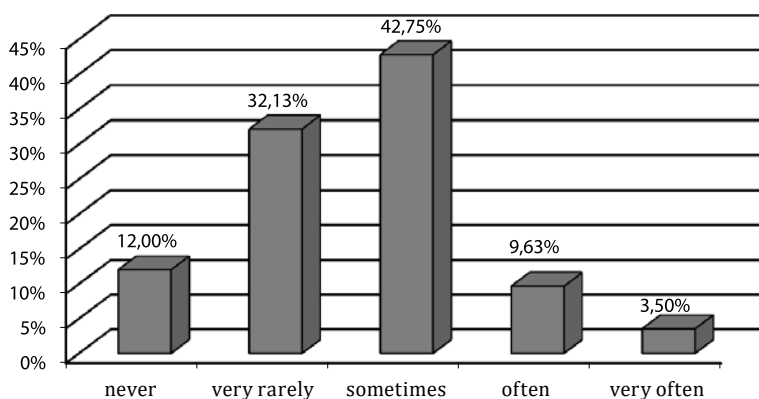


Chart 13. The frequency of ecological issues raised in the respondents' families

According to 88.00% of students, environmental issues were sometimes raised in a family environment and 12% said that this issue was completely ignored. Only 3.50% of respondents' homes can be treated as deeply ecological.

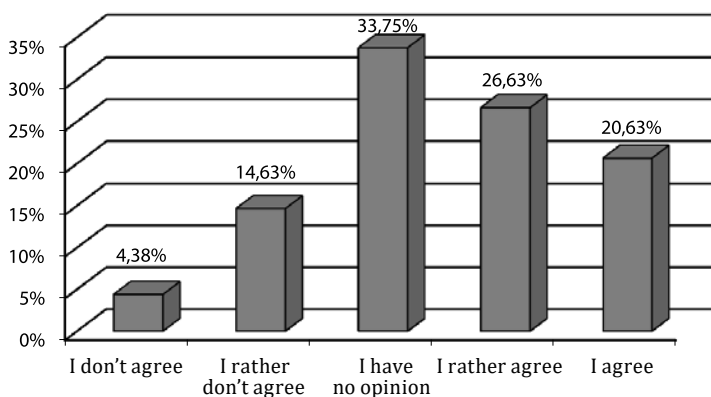


Chart 14. Lack of books, TV programmes and other publications devoted to the issue of shaping pro-ecological lifestyle in the opinion of respondents

The lack of studies and publications devoted to the development and shaping an ecological lifestyle is confirmed by 47.26% of respondents, and 33.75% admit that they are not familiar with ecological literature. Fortunately, it is comforting that 19.01% of respondents came across some publications and programmes on environmental issues.

Table 22. The comparison of reasons for natural environment protection and the responsibility for maintaining the balance in the relation man-nature in the opinion of respondents

I Reasons for environment protection		Respect for nature	Respect for life	Respect towards another man	Results of nature degradation	Internal human needs	Have no opinion	Social needs	Ecological ethics	Others	Total
II Responsibility of	Everyone of us	N	104	225	85	101	74	19	21	103	734
		% z II	14,2%	30,7%	11,6%	13,8%	10,1%	2,6%	2,9%	14,0%	100
		% z I	95,4%	94,5%	92,4%	94,4%	89,2%	79,2	77,8%	88,0%	91,8
		N	0	5	0	2	2	1	1	2	13
		% z II	,0%	38,5%	,0%	15,4%	15,4%	7,7%	7,7%	15,4%	100
		% z I	,0%	2,1%	,0%	1,9%	2,4%	4,2%	3,7%	1,7%	1,6%
	Directors of industrial plants.	N	0	1	0	1	2	2	0	1	7
		% z II	,0%	14,3%	,0%	14,3%	28,6%	28,6%	,0%	14,3%	100
		% z I	,0%	,4%	,0%	,9%	2,4%	8,3%	,0%	,9%	,9%
		%	,0%	,1%	,0%	,1%	,3%	,3%	,0%	,1%	,9%
	Scientist	N	2	1	2	0	0	0	2	4	11
		% z II	18,2%	9,1%	18,2%	,0%	,0%	,0%	18,2%	36,4%	100
		% z I	1,8%	,4%	2,2%	,0%	,0%	,0%	7,4%	3,4%	1,4%
	Public administration	N	3	6	5	3	5	2	3	7	35
		% z II	8,6%	17,1%	14,3%	8,6%	14,3%	5,7%	8,6%	20,0%	100
		% z I	2,8%	2,5%	5,4%	2,8%	6,0%	8,3%	11,1%	6,0%	4,4%
	Ecological organisations	N	3	6	5	3	5	2	3	7	35
		% z II	8,6%	17,1%	14,3%	8,6%	14,3%	5,7%	8,6%	20,0%	100
		% z I	2,8%	2,5%	5,4%	2,8%	6,0%	8,3%	11,1%	6,0%	4,4%

In total	N	109	238	92	107	83	24	27	117	3	800
	% z II	13,6%	29,8%	11,5%	13,4%	10,4%	3,0%	3,4%	14,6%	,4%	100
	% z I	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100
	% z Ogółem	13,6%	29,8%	11,5%	13,4%	10,4%	3,0%	3,4%	14,6%	,4%	100
Chi-square tests											
			VValue		df		Asymptotic significance (two-sided)				
	Pearsona Chi-square		57,476(a)		32		,004				
	Likelihood ratio		46,625		32		,046				
	Linear relationship test		12,125		1		,000				
	N important observations		800								
and 77,8% cells (35) have an expected number of lower than 5. The minimum expected number is,03.											

On the basis of summarising the results and presenting them in the form of a cross table including environmental protection reasons as well as the responsibility for maintaining balance in the human-nature relation, in the respondents' opinion we conclude that among many environmental reasons, respect for the life of all organisms (30.7%) emerges, which in turn confirms the understanding of the human-nature relationship by students at the deep ecology level. 91.8% of students said that the condition of the environment in which we live depends on all of us. Responsibility for maintaining human-environmental balance cannot only be put on industrial and economic structures.

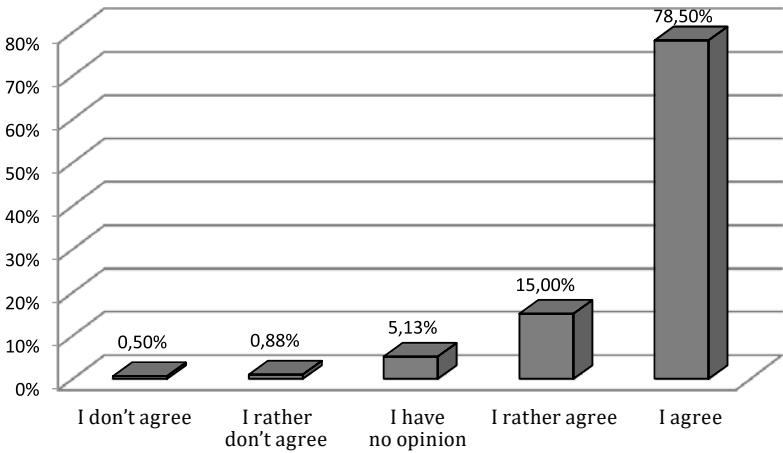


Chart 15. The attitude of respondents towards humane treatment of wild and farm animals

As many as 93.5% of students are in favour of humane treatment of wild and farm animals. Therefore, we can observe that not only ecosystem values promoted by shallow ecology are becoming of great significance, but also biosystem values underlined by deep ecology.

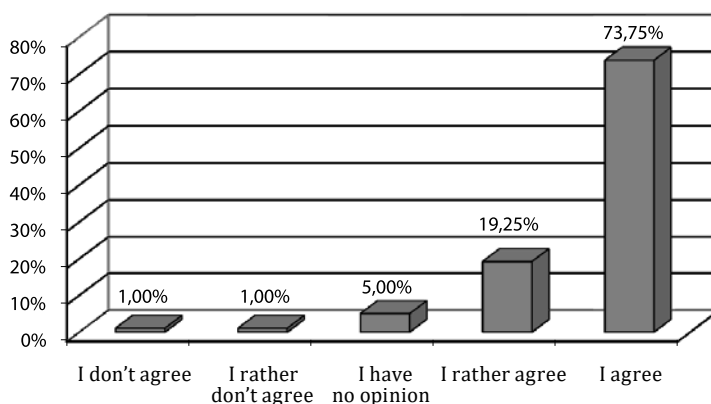


Chart 16. Man belongs to nature constituting an integral unity with it in the opinion of the respondents

When it comes to human being, 93% of respondents agree that man belongs to nature as an integral part of the entire biosystem,. As it can be observed from the results of the conducted research, the basics of systemic pro-ecological thinking are rooted in the consciousness of students of PWSZ in Poland.

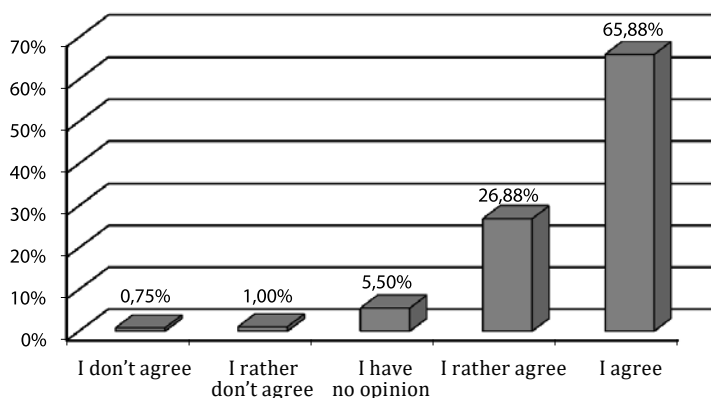


Chart 17. Man should get to know not only himself but the surrounding environment in the respondents' opinion

An optimistic accent in raising environmental issues can be observed in the responses of as many as 92.76% of students who consciously advocate getting to know the environment in which we live. As a result, we see students' compliance in learning about and understanding the value of an ecosystem, a biosystem and the sociosystem, which are quite closely related.

Table 23. The influence of the respondents' faith on the reasons for environment protection

Dependence faith (I) – reasons for environment protection (II)			I Faith				
			deep	average	weak	lack of faith	Total
II reasons for environment protection	Respect for nature	N	36	63	7	3	109
		% of II	33,0%	57,8%	6,4%	2,8%	100,0%
		% of I	17,4%	14,5%	5,9%	7,5%	13,6%
	Respect for all living creature	N	63	134	30	11	238
		% of II	26,5%	56,3%	12,6%	4,6%	100,0%
		% of I	30,4%	30,8%	25,4%	27,5%	29,8%
	Respect for human's life and health	N	25	48	14	5	92
		% of II	27,2%	52,2%	15,2%	5,4%	100,0%
		% of I	12,1%	11,0%	11,9%	12,5%	11,5%
	Results of natural environment degradation	N	25	60	15	7	107
		% of II	23,4%	56,1%	14,0%	6,5%	100,0%
		% of I	12,1%	13,8%	12,7%	17,5%	13,4%
	Internal human needs	N	20	44	12	7	83
		% of II	24,1%	53,0%	14,5%	8,4%	100,0%
		% of I	9,7%	10,1%	10,2%	17,5%	10,4%
	I have no opinion	N	6	12	4	2	24
		% of II	25,0%	50,0%	16,7%	8,3%	100,0%
		% of I	2,9%	2,8%	3,4%	5,0%	3,0%
	Social needs	N	7	12	7	1	27
		% of II	25,9%	44,4%	25,9%	3,7%	100,0%
		% of I	3,4%	2,8%	5,9%	2,5%	3,4%
	Ecological ethics	N	25	61	29	2	117
		% of II	21,4%	52,1%	24,8%	1,7%	100,0%
		% z I	12,1%	14,0%	24,6%	5,0%	14,6%
	Others	N	0	1	0	2	3
		% of II	,0%	33,3%	,0%	66,7%	100,0%
		% of I	,0%	,2%	,0%	5,0%	,4%
In total	N	207	435	118	40	800	
	% of Reasons for environmnet protection	25,9%	54,4%	14,8%	5,0%	100,0%	
	% of faith	100,0%	100,0%	100,0%	100,0%	100,0%	
	% ofTotal	25,9%	54,4%	14,8%	5,0%	100,0%	
Chi-square tests							
	value	df	Asymptotic significance (two-sided)				
Pearsona Chi-square	52,151(a)	24	,001				

Likelihood ratio	37,434	24	,040
Linear relationship test	9,439	1	,002
N important observations	800		
and 27,8% cells (10) have an expected number of lower than 5. The minimum expected number is,15.			

The analysis of the impact of faith of respondents on the perception of environmental protection reasons shows a strong relationship because as many as 82.8% of believing students emphasize the importance of respect for the lives of all living creatures, which is perfectly placed in the concept of deep ecology.

Comparative analysis of levels of awareness and understanding of the value of pro-ecological education of respondents starting their studies in the first year and completing first-cycle studies at the third year.

Based on a comparative analysis of the first and third year students' opinion in regard to the axiology of pro-ecological education, we will consider whether the values of the ecosystem, biosystem and social system are present in the hierarchies of student's values and whether their views are at the level of *shallow ecology* or *deep ecology*.

At the same time, referring to Stefan Kunowski, we will analyze whether *educational progression*, *educational degression* or *educational regression* occurred during the studies. *Educational progression* is the development upwards, in which each subsequent state becomes more perfect and better than the previous one – up to the ideal of a new man, leading man “on the degrees of virtue to heroism”. In turn, *educational degression* is the development that maintains a certain level of its capabilities. In contrast, *educational regression* is a downward development, i.e. a process of derailment, leading to developmental alienation, to the degeneration of a person, to his bestiality⁷⁰⁷.

⁷⁰⁷ S. Kunowski, *Podstawy współczesnej pedagogiki*, pp. 181-182.

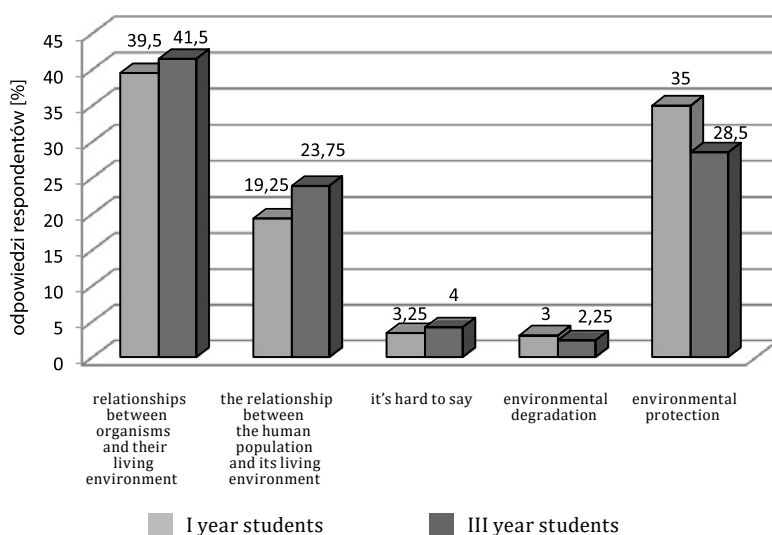


Chart 18. The level of scientific understanding of ecology by I and III year students

The perception of ecology, based on a comparative analysis of students' in the first and third year, there is a visible increase in the scientific understanding of ecology as a science examining the relationship between organisms and their living environment when it comes to third-year students (41.5%). Thus, only 28.5% of third-year students mistakenly identify ecology only with environmental protection in the colloquial sense.

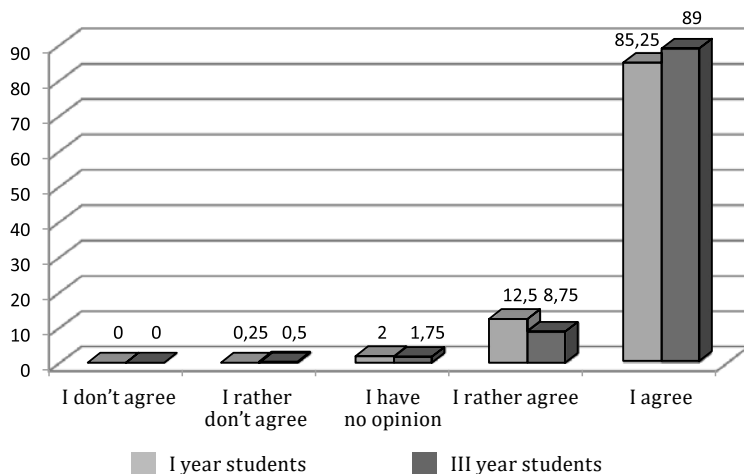


Chart 19. Level of perception of ecosystem value by first and third year students – nature as a common good for future generations in the understanding of shallow ecology

The vast majority of students – 97,75% understands and accepts the values of ecosystem. 89% of third-year students expresses pro-ecological attitude towards nature perceived as a common good which is supposed to serve for future generations according to *shallow ecology*.

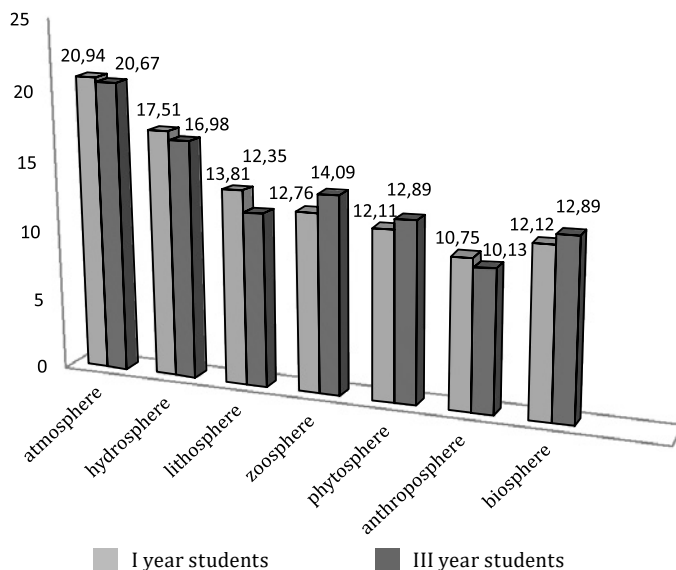


Chart 20. Comparison of first and third year students' opinions on the subject of endangered biological life zones

The comparative analysis of the first- and third- year students' showed that their understanding of threats towards main spheres of life when it comes to living organisms has increased. Increased environmental awareness of students graduating from universities in regard to the threats to the entire biosphere, including the zoosphere and phytosphere, indicates a gradual transition from only conservative concept of *shallow ecology*, especially in regard to the atmosphere, waters and soils, to global, comprehensive protection of the sphere of life on the Earth that *deep ecology* is approaching to.

The results of comparative studies indicate that the axiological awareness of the majority of first-year students is at the level of *shallow ecology*, practicing only conservation activities in terms of protection of air, water and soil. In turn, already third-year students come to a greater understanding of the concept of life protection in *deep ecology*.

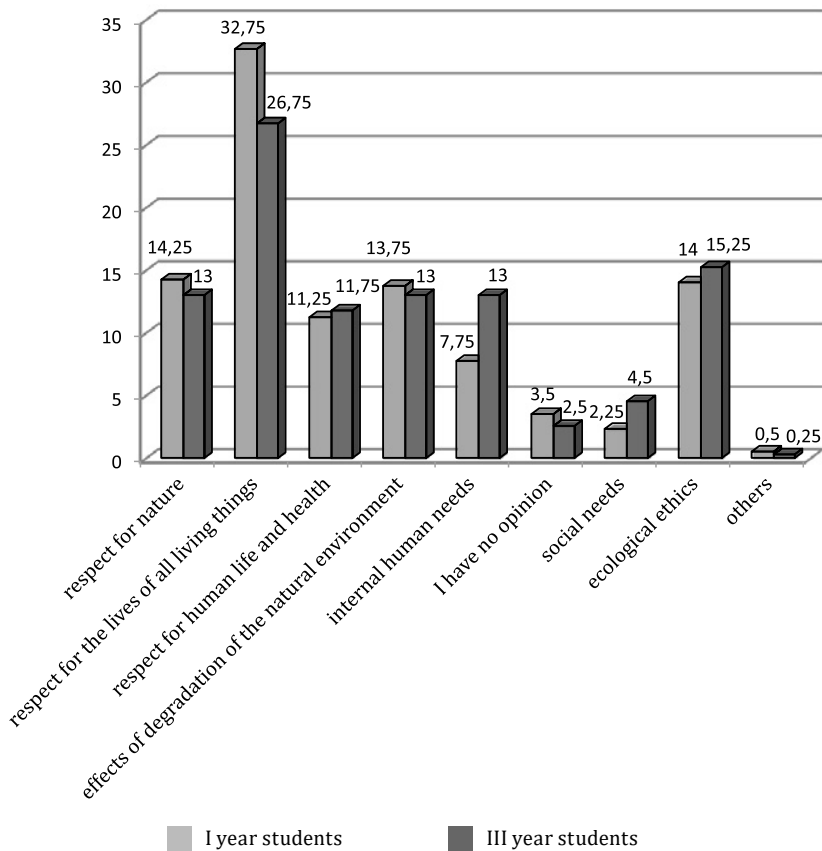


Chart 21. The level of the perception of biosystem values by first- and third-year students

In regard to a comparative analysis of the opinions of first and third year students, we find that the majority of respondents chose above all the value of life – the priority value of the biosystem. At the same time, we can observe an increase in the understanding of the need to protect the living environment as an internal human need as well as due to ecological ethics by third-year students in, which is so important in the basics of *deep ecology*. Taking all aspects into account, we can conclude that there is a deepening of pro-ecological thinking observed among students during studies.

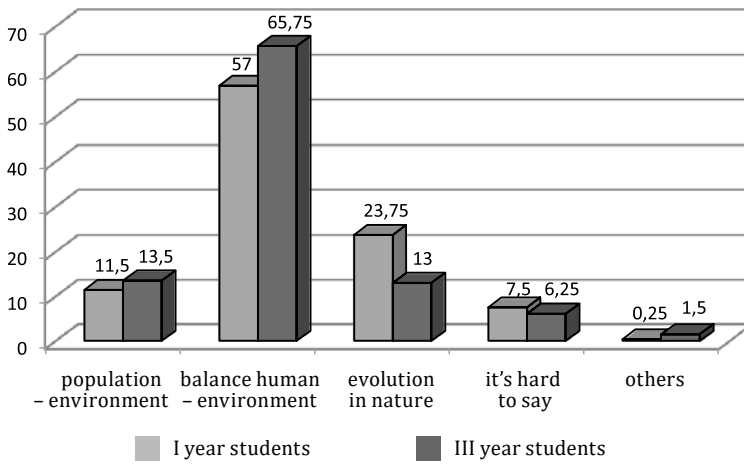


Chart 22. The level of understanding of eco-development by first and third year students

At the same time, we can observe progress in the perception of eco-development by third-year students – 65.75%, demonstrating an understanding of human responsibility for the condition of the environment in which we live and the need to strive for a balance between all human activities and environmental opportunities.

Therefore, *educational progression* took place in the studied scope of axiology of ecosystem and biosystem.

Then we proceed to comparative analysis of the perception of the value of the social system by first and third year students.

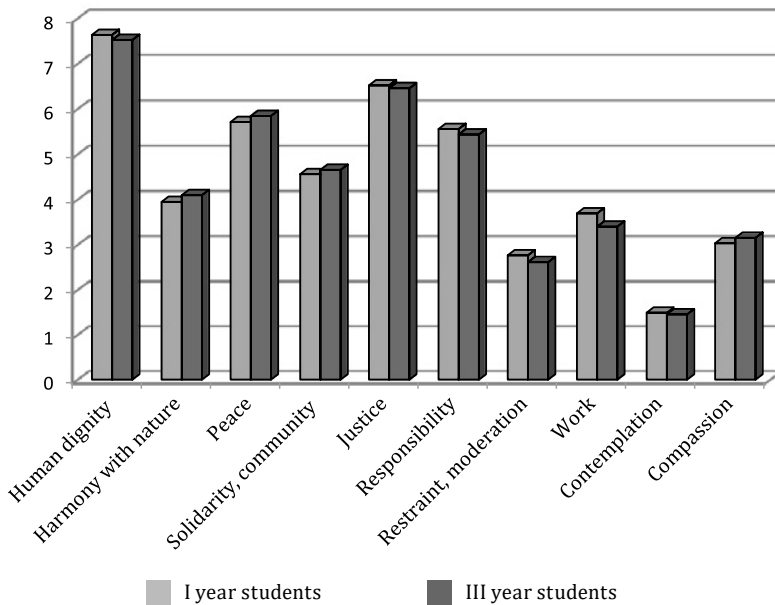


Chart 23. The level of perception of the value of the social system by first and third year students

First and third year student highly evaluate the values of a social system, and above all they distinguish human dignity. On a scale of 1 to 10, the respondents then distinguished justice, peace, responsibility, solidarity and community.

Students of the third year slightly higher place values than they did at the beginning of their studies: peace, solidarity-community, harmony with nature, and even compassion.

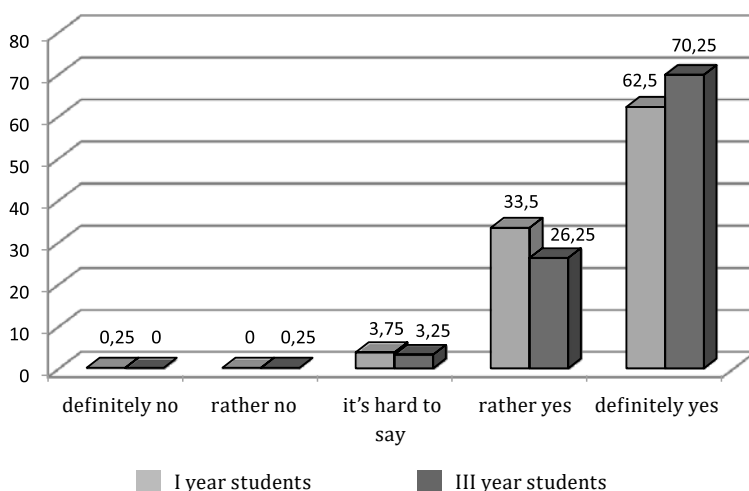


Chart 24. The level of understanding the values of pro-ecological education expressed by first- and third- year students' willingness to act for the sake of the environment

96.25% out of 800 respondents accept the values of pro-ecological education and at the same time declare their willingness to take actions for environmental protection. Increased awareness and pro-ecological readiness to act characteristic for third-year students (70.25%) is an optimistic phenomenon. Such visible educational progression is development upwards in order to achieve the ideal of a new man, leading man "on the degrees of virtue to heroism"⁷⁰⁸.

It is believed that educators through pro-ecological education should support, above all, the shaping of pro-ecological consciences and attitudes, and thus help to release responsibility in the learners through their commitment in protecting the environment in which we live.

⁷⁰⁸ S. Kunowski, *Podstawy współczesnej pedagogiki*, pp. 181-182.

5.5. Values of pro-ecological education and their impact on students' lifestyles

In this section we will present another quantitative analysis and qualitative data obtained, statistically processed in percentage terms, in the form of cross tables and charts regarding the impact of the value of pro-ecological education on the lifestyle of 800 surveyed students.

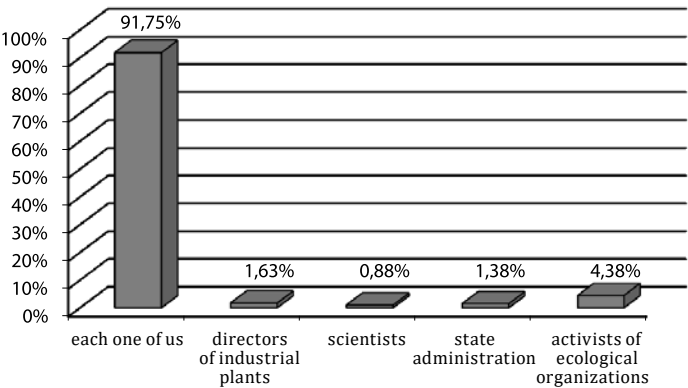


Chart 25. Maintaining the balance between man-nature is obligatory

Most students – 91.75% strongly believe that maintaining a human – environmental balance depends on each of us. They do not shoulder the responsibility for anthropogenic activities in the environment on public administration or non-governmental organizations or even on decision-makers in industry and economy. Therefore, they are aware of the need for a systemic approach to ecological issues.

Table 24 shows a more detailed correlation between human's responsibility for the environment and faith in the opinion of respondents.

The more faithful a respondent is, the more he emphasizes the responsibility of each person for striving to maintain balance in our relationship with the environment in which we live.

Table 24. The correlation between man's responsibility for the environment and faith in the opinion of the respondents

Correlation faith (I) - responsibility (II)		II Maintaining the balance between man - nature is obligatory:				
		Everybody of us	Directors of industrial plants	Scientists	Public administration	Ecological organisations
I Faith	Deep	N	2	1	2	5
		% of I	1,0%	,5%	1,0%	2,4%
	Average	% of II	15,4%	14,3%	18,2%	14,3%
		N	4	3	4	21
	Weak	% of I	,9%	,7%	,9%	4,8%
		% of II	30,8%	42,9%	36,4%	60,0%
	Lack of faith	N	3	2	5	8
		% of I	2,5%	1,7%	4,2%	6,8%
		% of II	23,1%	28,6%	45,5%	22,9%
		N	4	1	0	1
		% of I	10,0%	2,5%	,0%	2,5%
		% of II	30,8%	14,3%	,0%	2,9%
Total	Total	N	13	7	11	35
		% of Faith	1,6%	,9%	1,4%	4,4%
		% of Maintaining the balance between man - nature	100,0%	100,0%	100,0%	100,0%
		% Of Total	1,6%	,9%	1,4%	4,4%

Chi-square Tests			
	Value	df	Asymptotic significance (two-sided)
Pearson's Chi-square	35,931(a)	12	,000
Likelihood ratio	24,573	12	,017
Linear relationship test	5,423	1	,020
N important observations	800		
and 55,0% cells (11) have an expected number of lower than 5. The minimum expected number is ,35.			

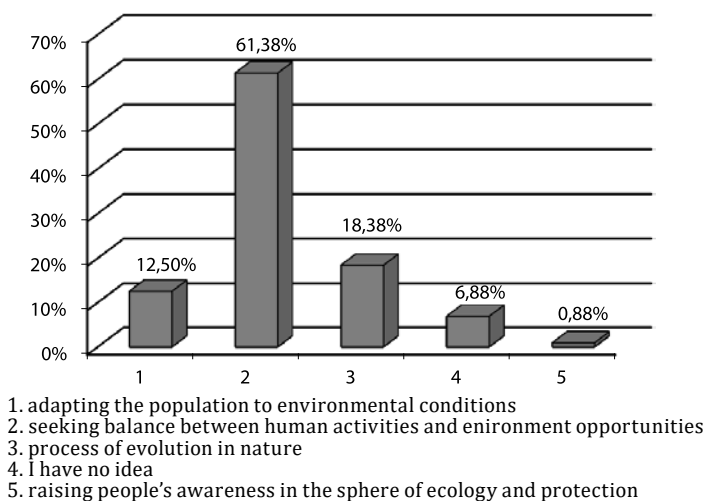


Chart 26. Eco-development in the opinion of respondents

Vast majority of respondents – 61.38% treat the concept of eco-development as striving for a balance between human activities and the possibilities of the environment.

Sustainable development is the optimal way for the human species to survive with so many changing environmental factors.

The understanding and acceptance of sustainability by most respondents fits perfectly into the concept of *deep ecology*

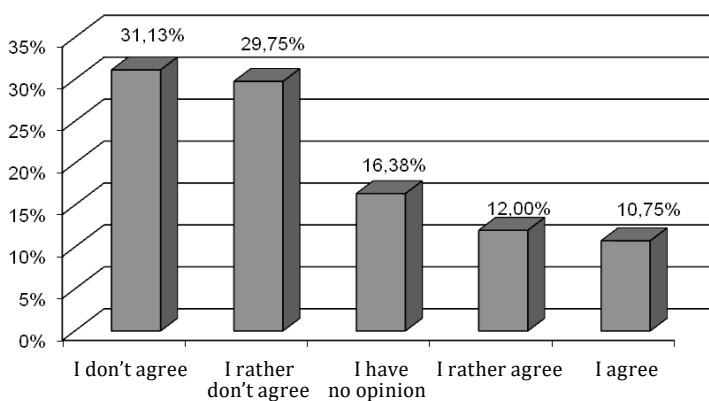


Chart 27. According to the respondents, man has the right to transform the environment without restrictions, so as to meet all own needs, in the respondents' opinion

Most students – 60.88% are aware of the need to save, restraint and moderation in the use of natural resources. The scale of human needs must be adapted to the environmental possibilities. The obtained research results give hope that consumerism and materialism attitudes, which are primarily promoted in the media, will slowly be eradicated for the sake of common good of people and the environment.

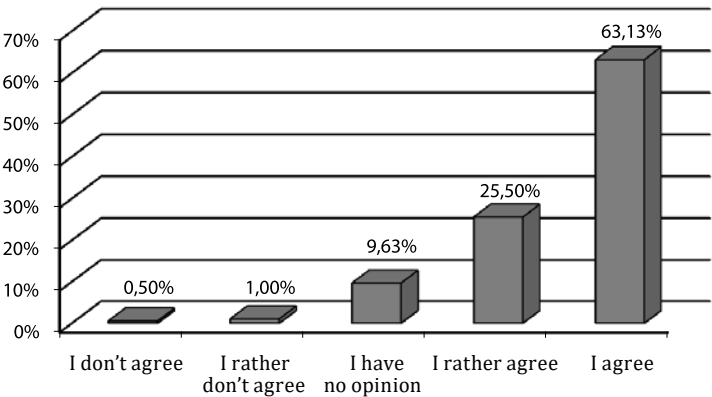


Chart 28. In order to eliminate the wrong attitude of man towards nature is to properly raise and educate society in the opinion of respondents

It is satisfactory that 88.63% of students believe in ecological education of societies in order to raise ecological awareness and shape pro-ecological attitudes.

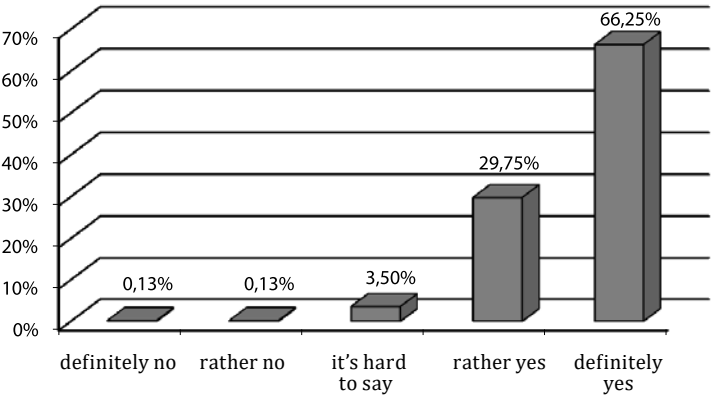


Chart 29. It is worth acting for the environment in the opinion of respondents

Almost all students, namely 96% of them, support environmental activities. Thus, they reveal an understanding of the need for environmental protection and deep ecological awareness.

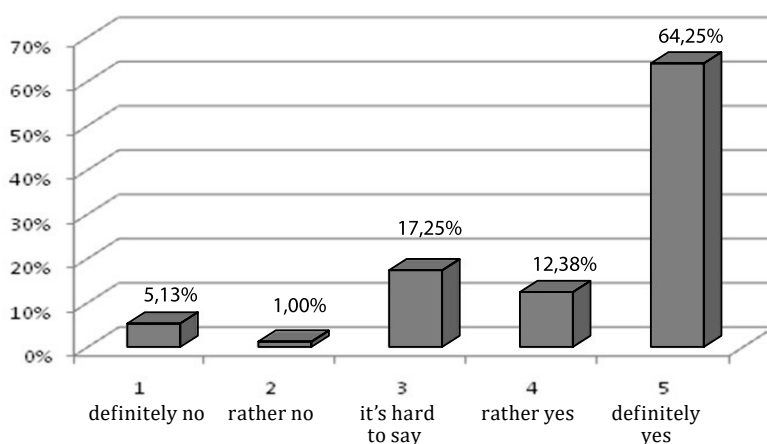


Chart 30. Pro-ecological education has influence on human's attitude towards the environment

According to 76.63% of respondents, pro-ecological education has a significant impact on shaping pro-ecological attitudes towards the environment. Thus, the students themselves are in favour of the need for educational and upbringing interactions in the area of ecology and environmental protection.

Table 25 shows a more detailed relationship between the need for pro-ecological education and the degree of implementation of ecological content in schools in the respondents' opinion. The majority of respondents – 70.4% emphasize the urgent need for pro-ecological education, despite the fact that education at lower levels schools has already started.

Total	N	41	8	138	99	514	800
	% of implemented ecological content in your previous schools	5,1%	1,0%	17,3%	12,4%	64,3%	100,0%
	% of pro-ecological education	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%
	% z Ogółem	5,1%	1,0%	17,3%	12,4%	64,3%	100,0%
Chi-square tests							
		Value	df	Asymptotic significance (two-sided)			
Pearson's Chi-square		20,160(a)	4	,000			
Likelihood ratio		20,039	4	,000			
Linear relationship test		10,730	1	,001			
N important observations		800					
and 20,0% cells (2) have an expected number of lower than 5. The minimum expected number is 3,33.							

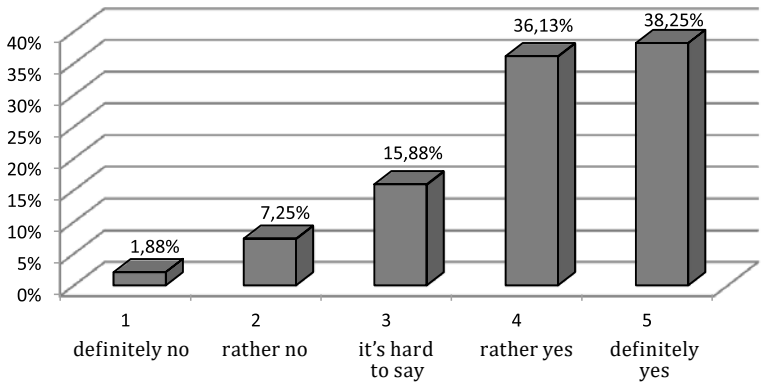


Chart 31. Willingness to participate in actions for environmental protection (e.g. planting trees, collecting rubbish) in the area of the respondents' place of residence

74.38% of the surveyed students expressed willingness to participate in pro-ecological campaign. 15.88% did not express any opinion, and only 9.13% refused to take any measures to protect the environment.

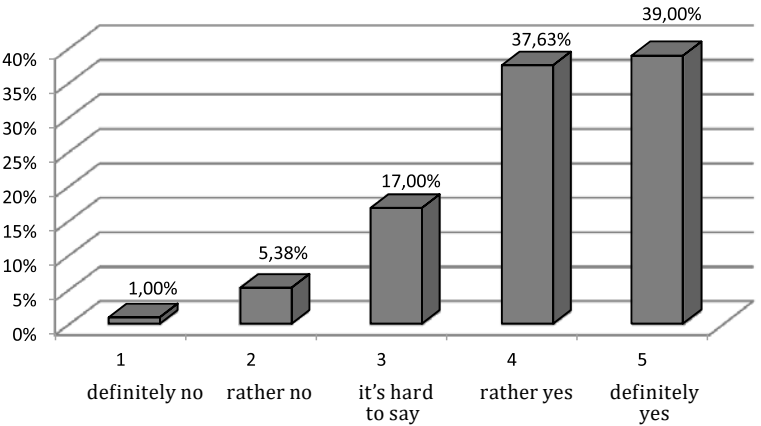
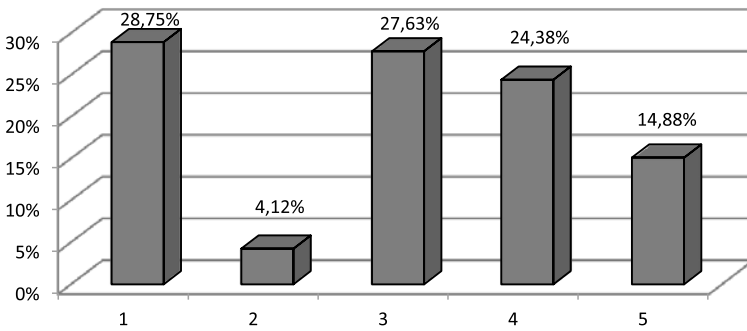


Chart 32. Healthy lifestyle preferences in the opinion of respondents

As many as 76.63% of students are in favour of an environmentally-friendly and pro-healthy lifestyle. Only 6.38% of respondents do not take this health aspect of life into account at all, and 17% cannot make a decision. We assume that the respondents are aware of this concept and accept a healthy lifestyle, but have difficulty implementing it in their work on themselves.



1. I have no opinion 2. I refuse to take any eco-actions 3. I don't take any eco-actions
4. I could take eco-action 5. I take eco-actions

Chart 33. Undertaking pro-ecological actions in the opinion of respondents

14.88% of respondents confirmed active and permanent participation in various ecological initiatives. The willingness to participate in ecological activities was expressed by 24.35% of the surveyed students, while 28.75% are wondering, and only 4.13% refused to take any actions in the field of environmental protection.

Not only role models but educators – deep ecology leaders as well would help in making decisions for pro-ecological activities.

The values of pro-ecological education significantly affect the pro-ecological awareness of students, and thus their choice of lifestyle.

Most of respondents correctly read and understand the values of pro-ecological education and the need to protect the living environment. The axiological awareness of students and its impact on lifestyle is at the level of both *shallow ecology* and *deep ecology*.

Conclusions

The subject of the present publication entitled Values and methods of pro-ecological education in the opinion of students of the State Higher Vocational Schools in Poland, reflects a certain current state of literature of the subject which enabled to identify basic problems presented in the publication in regard to the presence of the value of pro-ecological education in the consciousness of PWSZ students in Poland and their attitude towards the pro-ecological educational process.

The main problem discussed in the publication were the preferred values of pro-ecological education enumerated by students of the PWSZ in Poland depending on the impact of family, school, local, natural and mass media environments. At the same time, we analyzed whether these values are significant in education in the opinion of PWSZ students in Poland. We tried to show at what level (shallow or deep) ecology is the axiological awareness of students and its impact on lifestyle.

On the basis of preliminary data obtained from the observation of the academic environment during professional work as well as analysis of official documents and queries of the literature of the subject, we formulated hypotheses, which in the course of our own pedagogical research have been positively verified to a large extent:

Pro-ecological values are present in the awareness of PWSZ students in Poland. In addition, these values implement other values that are important in education.

Pro-ecological values refer to everything that exists in nature, human behaviour, his social and material activity and all human products. It also serves to maintain the balance between the ecosystem and the biosystem as well as the social system. Some students become aware of deep pro-ecological education and pro-ecological values. It is said that awareness of pro-ecological values influences the lifestyle.

Verification of specific hypotheses:

The values of the ecosystem, biosystem and socio-system as well as in the methodology of pro-ecological education and pro-ecological lifestyle are present in the consciousness of PWSZ students in Poland and introduce to other values important in integral education.

Axiological awareness of some PWSZ students in Poland is at a high level of deep ecology. They appreciate the value of the ecosystem, the biosystem and the sociosystem, and in the methodology of pro-ecological education and pro-ecological lifestyle.

The values of the ecosystem, biosystem and sociosystem as well as in the methodology of pro-ecological education and pro-ecological lifestyle are present in the consciousness of PWSZ students in Poland. In addition, they introduce other values which are significant in integral education.

It is observed that axiological awareness of some PWSZ students in Poland is at a high level of deep ecology since they appreciate the value of the ecosystem, the biosystem and the sociosystem, and in the methodology of pro-ecological education and pro-ecological lifestyle.

The influence of pro-ecological values promoted in school, local, family and mass media environments on the choice of value by PWSZ students in Poland is significant. It is worth emphasising that mass media, which is omnipresent in every area of social life, has the most significance.

The influence of the natural environment on the choice of the values characteristic for ecosystem, biosystem and social system by PWSZ students in Poland is large because the respondents showed ecological sensitivity to the condition of the natural environment in the place of residence as well as studying.

Students responded positively and with commitment to the proposed methodology of pro-ecological education and pro-ecological lifestyle. Most of the respondents declare their willingness, and some are already actively involved in ecological activities.

The values of pro-ecological education exert a great influence on the attitudes (lifestyle) of PWSZ students in Poland.

The examined correlations of the preferred pro-ecological values of PWSZ students in Poland with the conditions of pro-ecological education verify the hypotheses presented in the present publication.

The author found the theoretical analysis and analysis of the results derived from the research of own changes in the awareness (deep or shallow) of PWSZ students in Poland of great significance. In addition, the value of ecosystem, biosystem, and social system as well as in the methodology of pro-ecological education and pro-ecological lifestyle, including learning the understanding of these values by students as well as preferred values by students. Among others valuable sources of defining recommendations regarding the transmission of pro-ecological values and shaping pro-ecological attitudes addressed to the pupils and educators themselves, the following aspects can be enumerated: the impact of promoted values in school, local, family and mass media environments on student choice of values; the impact of the natural environment and the impact of axiology and pro-ecological education methodology on students' attitudes (lifestyle). These source were also useful while shaping pro-ecological attitudes directed at both educators and students.

The present publication can be the basis for many practical pedagogical implications for educators and pupils themselves in the process of pro-ecological

education, paying attention to the importance of axiology in the selection of methods of educational interactions.

The theoretical and empirical material presented in this publication may be helpful in creating environmental and ecological education programmes.

At the same time, creating a social and natural environment subject, including the contents of the "holistic structure"⁷⁰⁹ in various fields of education at universities would enable integral pro-ecological education in the axiological and existential aspects of subsequent generations. Pro-ecological education, together with environmental education, has an integrated, comprehensive content system related to the global, systemic world of life nearby, known today as the biosystem, in which we distinguish the ecosystem and the social system⁷¹⁰.

The results obtained in the course of the research allow to formulate an application directed to educators: Educators should help pupils learn, understand, accept and implement pro-ecological values in relation to others and the environment in which we live, but above all in changing our lifestyle. Pro-ecological education should bring education closer to the maieutics process of a person, i.e. to arouse a person in the pupil. When recognizing the value of the human person as a value holder, there is progress in the process of personal development of the learner⁷¹¹, also in the sphere of acceptance of the axiology of pro-ecological lifestyle.

On the other hand, the request addressed to the pupils themselves is that they are not indifferent and passive, but open to the axiology of pro-ecological education.

This publication allows to a certain extent to fill the cognitive gap in the subject of values in correlation to pro-ecological education methods. The conducted pedagogical research consisted of 800 students what allowed to show the impact of promoted pro-ecological values in the school environment, the local family and mass media on the axiological orientation of students. Thus, the intended purpose of the work was achieved thanks to the research methods used. The collected results of own research and theoretical-empirical analyzes appearing in the present publication paper on the axiology of pro-ecological education certainly do not exhaust this issue but complement it.

To sum up, pro-ecological education is therefore an important field of human education, based on shaping human by obtaining knowledge about ecosystems, biosystems and sociosystems considered axiologically and methodically, and above all existentially.

Dear educators and pupils, it is enough to learn values and act pro-ecologically in regard to them. Living according to recognized ecological values: ecosystem,

⁷⁰⁹ Also M. Sawicki more widely advocates the possibility of creating one subject socio-natural environment for the purpose of integral teaching through the peculiar structure of the content of such a subject; M. Sawicki, *Metodologiczne podstawy nauczania przyrodznawstwa*, Wrocław-Warszawa, Zakład Narodowy im. Ossolińskich, 1981, p. 14.

⁷¹⁰ M. Sawicki, *Metodologiczne podstawy nauczania przyrodznawstwa*, Wrocław-Warszawa, Zakład Narodowy im. Ossolińskich, 1981, p. 10.

⁷¹¹ M. Nowak, *Pedagogika personalistyczna*, in: Z. Kwieciński, B. Śliwerski (ed.), *Pedagogika*, Warszawa, PWN, 2004, p. 243.

sociosystem and biosystem, regardless of the difficulties and abstraction of apparent goods, not to be susceptible to strength or illusions, is a constant challenge for educators and learners in the field of integral education⁷¹².

The contoured theory of human development helps introduce educators and pupils in subsequent layers of education: biological, forming our body; psychological, developing the whole of the psyche; sociological, shaping a social person; cultural, developing a cultural creator in man and finally into a purely spiritual or ideological layer, fully shaping spirituality and its religious and moral side. Each layer has its own development time, requires appropriate external factors as educational influences and there is maturity in the process of merging, i.e. integration. The learner, going through all overlapping layers, thus develops the fullness of his humanity⁷¹³.

As part of an integral education, the comprehensive development of young people, both in terms of shaping their personality and preparation for life in society, is significant. At the same time, the guiding ideal of the "new man" in the system of modern education and also pro-ecological shows that both in the development of personality (the process of personalization, the awareness of one's self, who one really is) and in preparation for social life (the process of socialization, socialization, social adaptation), the "old man" is to be overcome and his natural attitudes towards life and other people are rejected.

So educational upbringing takes place from a natural state to a higher cultural state, and this is due to the internal transformation of human psychological disposition, which causes a change in the egoistic attitude to the dominating altruistic attitude in the process of personalization, and at the same time in the process of socialization, the initial nostic (Latin *nos-we*) attitude is eliminated, which opposes we and they in favour of an illistic attitude (Latin *illiowi*), and therefore service-related involvement in the community⁷¹⁴.

To sum up, pro-ecological education is not associated primarily with providing relevant information, but with shaping pro-ecological consciences and attitudes, releasing personal responsibility for creating on the way to achieve personal involvement in protecting the created world⁷¹⁵.

Therefore, for deeper ideological and attitude-forming experiences, it is worth focusing integral education on Christ also in the ecological sphere. It is vital to integrate all educational functions into the highest function of *christianisare*, i.e. in the spirit of Christ.

Under the influence of human interaction with the grace of Christ, a process and the transformation of a lifestyle into a new one takes place. It was Saint Paul who wrote about it as *metanoia* (Greek: *meta* – transformation; *noos* – thought, reason, spirit; *neosis* – cognition).

⁷¹² L. Wollman-Mazurkiewicz, *Przyroda i edukacja*, in: B. Dymara, S. Michałowski, L. Wollman-Mazurkiewicz (ed.), *Dziecko w świecie przyrody*, p. 190.

⁷¹³ S. Kunowski, *Podstawy współczesnej pedagogiki*, pp. 194-215.

⁷¹⁴ *Ibid.* pp. 170-171.

⁷¹⁵ M. Nowak, *Podstawy pedagogiki otwartej*, p. 455; J. Leśniewska, *Zasady chrześcijańskiej edukacji ekologicznej w rodzinie*, „Ateneum Kapłańskie” 3(2002), p. 190.

“You have to reject the old man who is spoilt by the lusts of falsehood, and renew with a spirit in your mind and put on a new man, created according to God’s model in righteousness and truth based holiness” (Eph. 4,22-24).

At the same time, it also results from Christ’s teaching for pro-ecological education that Christ demands good fruit of life and good works that deserve salvation.

“Not everyone who calls me Lord will enter the kingdom of heaven, but he who does the will of my Father who is in heaven” (Mt 7:21).

We hope that the present work will contribute to some extent to include axiology in pedagogical reflection and the practice of pro-ecological education, and will lead to a certain *metanoia*, which Mieczysław Gogacz describes as a change in thinking. He believes that it involves the readiness to accept what is fairer, truer, more noble, and better. So it is a process of educating the intellect and shaping the will. It is the pursuit to achieve truth and virtue⁷¹⁶.

According to M. Gogacz, humanity arises from *metanoia* because it is the result of human action. It is his being faithful to truth and goodness, and thus his striving to maintain among people personal relationships of faith and hope, at the same time love, required for people’s existence. In this regard, it is a defense of the existence and life of people. In addition, it is connected with protectin a typically human environment, precisely love, faith and hope. It is therefore a service to people, such an activity in which, because of their dignity, man is the goal of actions, and not means for purposes other than love for people, faith in man and hope and that he will continue in his human environment of personal relationships and people⁷¹⁷.

In order to protect the human environment, people must be brought together in love, faith, hope, one must strive to provide each person with the education of his rationality through shaping his wisdom, and one must strive to educate his freedom so that he chooses what is truer and more noble⁷¹⁸.

Thus, education and upbringing require people that undergo educational processes since wisdom and the right decisions are taught not by theories and textbooks, but by a wise man who shows in knowledge what is real, and in purpose, values and people what is good⁷¹⁹.

⁷¹⁶ M. Gogacz, *Człowiek i jego relacje, materiały do filozofii człowieka*, Warszawa, Akademia Teologii Katolickiej, 1985, pp. 21-22.

⁷¹⁷ Ibid. p. 21.

⁷¹⁸ Ibid. p. 21.

⁷¹⁹ Ibid. p. 22.

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She is an assistant professor and head of the Department of Pedagogy at the State University of Pope John Paul II in Białą Podlaską as well as a teacher at the Academic High School of Pope John Paul II in Białą Podlaską. She is a member of the Christian Pedagogy Team of the Pedagogical Sciences Committee of the State Academy of Sciences, secretary of the Polish Hygiene Society - branch in Białą Podlaską and chairman of the Azyl Association, which runs a shelter for homeless animals in Białą Podlaską. She is the author of many scientific publications in the field of health education with ecology, and especially "ecology of the spirit". She was a member of the pro-ecological project team of the PWSZ Pope John Paul II in Białą Podlaską on

"Our environment - our future. She is the organizer of many pro-social and pro-ecological campaigns such as the Gift of the Heart for the Hospice, among others Nie w moim imieniu regarding the humane treatment of farm animals. She was the organizer of scientific seminar of the Institute of Pedagogy of the PWSZ Pope John Paul II in Białą Podlaską for students and high school students on "Human Rights in the 21st Century".



The book by Mrs Ewa Pawłowicz-Sosnowska addresses very current and increasingly noticed issues not only in contemporary pedagogical thought but also in other fields of knowledge. The author addresses the problem - and one can even say - the field of education, which is pro-ecological education and its axiology implemented among students of the State Higher Vocational Schools in Poland. The issue of the book thus conceived indicates such pedagogical subdisciplines as: axiology of upbringing, pro-ecological education, university pedagogy, general pedagogy, health education, biomedical foundations of education, leisure and recreation pedagogy, also to some extent sports pedagogy, methodology of educational work in the field of pro-ecological education - it is carried out in both theoretical and research aspects, ultimately constituting a very interesting study, firstly ordering existing positions regarding the place and role of the axiology of pro-ecological education in PWSZ in Poland, and then revealing the perception of the transmitted content of the value of pro-ecological education and its implementation methods in the opinion of students of these universities. (...) The research aspect of the book is interesting and rich, which provides the reviewed book with many interesting results, extremely valuable for further research and analysis.

The author skilfully points to the bonds of pro-ecological education with other fields of education and even points to them as a place of meeting and unification of individual fields of education, including pro-ecological education. On the other hand, as the features and themes that are particularly worth emphasizing, which at the same time highlight the originality and specificity of the reviewed book, I mention in particular: emphasizing the subjectivity of the person - in this case students of the PWSZ in Poland. Therefore, one should hope that the theses appearing in the publication will contribute to a new look at the axiology of education in the field of pro-ecological education. (...)

The book will certainly be a desired reading for every generation and the information it contains will contribute to the development of culture and pro-ecological sensitivity of non-academic environments, including teachers and parents, as well as environments that carry out this type of activity. I support the print edition of this publication and state that it has a chance to take one of the highest places in the rankings of the desired publications".

ks. prof. dr hab. Marian Nowak



"The value of the publication of Ewa Pawłowicz-Sosnowska, PhD are also her theoretical contexts, which allow the reader to organize and deepen own pedagogical, ecological and methodological knowledge.

The author's conclusions in the field of improving education at the PWSZ are justified, and the postulate of creating an appropriate subject for integral pro-ecological education in the axiological and existential aspect seems to be indispensable in the education of students not only at PWSZ. Thus, the work is a significant contribution to the pedagogy of the university, especially in the field of pro-ecological education, and can be the basis for theoretical and practical postulates, principles and programs.

The publication is an original and valuable scientific work, which should find readers in the scientific community of not only educators, but also others interested in ecological issues. Certainly, it can broaden and deepen the horizons of knowledge, skills and attitudes of students of all faculties, especially the State Higher Vocational Schools in Poland, as well as decision-makers of higher education programs dealing with the state's educational policy. Due to the value of content and language, it can be a popular science reading for those seeking a deeper understanding of contemporary ecological issues".

ks. dr hab. Adam Maj, prof. KUL



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