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Nutrition Education in Accordance with the Principles of Sustainable Development

KEYWORDS ABSTRACT

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The aim of this article is to present a broader scope of nutrition education which includes the knowledge of sustainable development. Presenting such a perspective allows us to create a model of education that helps us shape conscious consumers. In the first part, I present theoretical premises of the idea of sustainable development, along with its impact on the economy, ecology and society. Then I go on to discuss the theoretical approach to nutrition education and its use in early school education. The second part of this article presents a discussion on the methodology of the research carried out among third grade students of a primary school, which is based on the triangulation of survey and interview techniques, where the method of diagnostic survey is used. Then, I discuss the results of the survey and present the children's statements. The results of the research are finally summed up with the recommendations of the students participating in the study. Finally, I present the evaluation of theoretical premises and research results, as well as their comparison with the results of the pedagogical experiment carried out in 2015.

Introduction

Education for the idea of sustainable development combines ecological, nutrition and social education, aiming at giving them new, broader perspectives that take into account a wider context of teaching. This idea is focused around the issues of ecology, economy and society, aiming at the sustainable use of the Earth's resources and human work. Nutrition education is one of the elements of early education which was taken into account in the main document that regulates teaching in classes I-III, i.e. in the core curriculum (*Core Curriculum for comprehensive education*). Nutrition education in elementary education is focused on the principles of healthy eating. Children get to know the food pyramid, they learn about the significance of physical activity and they discuss the results of unhealthy lifestyle, but it often boils down to talking without practical application. Students cannot do rational, healthy shopping, and the campaigns encouraging people to eat fruit and vegetables are not supported by fair trade knowledge, i.e. the origin of products, the way in which they are manufactured, and the employers' attitudes towards their workers.

The presented research which I carried out in January 2020 shows that students know a lot about nutrition, but such education is not supported by the knowledge of sustainable development, reasonable shopping or noticing the differences related to the origin of products. The summary of the research consist of the conclusions drawn by the students after the classes dedicated to sustainable development.

The idea of sustainable development in the context of nutrition education

The idea of sustainable development was born in 1987 when its first definition was formulated: "it is such a social and economic development that aims at satisfying the needs of modern society without infringing the future generation's opportunity to satisfy their needs" (*Report of the World Commission on Environment and Development*). About 300 definitions of sustainable development have been specified until now. The first Polish definition was prepared by ecological movements:

(...) sustainable development, which is also called eco-development (...) is where people can predict the limitations related to the finiteness of our Planet and to the natural rhythm that is independent of humankind (...). It is a strategy to achieve decent life within what is possible in physical and biological terms. It warrants the satisfaction of basic needs of the present and future generations while maintaining the durability of natural environment and the natural diversity of both species and ecosystems (Kafel 2007: 15).

The objective of sustainable development does not only include the satisfaction of material needs, such as home, food, water or clothes. It also refers to broader social structures, such as good life, flourishing nature and flourishing societies in which people maintain good relationships, support one another, decide about their own life and do not have to worry about the future (Gerwin 2008: 3). Such objectives of sustainable development indicate the directions of education that shape the students' awareness by showing them the influence of their consumer attitudes on the quality of the environment. It is us who are responsible for the world and future generations. Sustainable development must be implemented on the basis of proper education (Batorczak 2013: 22) because the society is the subject and object of building the process of sustainable development (Prandecki 2011: 180). Education in sustainable development aims at agreement which comprises synchronic taking into account of economic, ecological and social objectives, searching for their application in everyday activities (Szczepaniec-Cięciak 2004: 232). The objective of such education is shaping a person who is a conscious citizen of the world fighting for peace and order on Earth and consuming goods in a responsible manner. It should be mentioned that education for the idea of sustainable development includes ecological, nutrition and social education, so it is significant in many aspects of life. It is mainly related to lifestyle in which we care about natural environment, i.e. we do not accept overconsumption and we share what we have in excess (Gerwin 2008: 4). The most important assumptions of such education include:

- shaping people's consciousness and making them interested in interconnected economic, social, political and ecological issues;
- making it possible for each person to gain knowledge and skills necessary for the improvement of our natural environment;
- creating new behaviour models and shaping such attitudes, values and beliefs of individuals, groups and societies that take into account environment protection (*Przez edukację do zrównoważonego rozwoju. Narodowa Strategia Edukacji Ekologicznej [Through Education to Sustainable Development. National Strategy for Ecological Education]* 2001).

For many years, ecological education was only perceived as a discipline related to rubbish segregation or environment pollution. In time, the objectives of sustainable development started to be taken into account. New directions of education started to focus on stimulating the critical reflection on people's own actions. They not only taught young people how to care about natural environment, but also how to use and recycle the Earth's resources. Also, the discipline started to consider the way of using natural goods in order not to destroy them. "Environment education occupies a very important position in early school education. It is because it supports the child's cognitive contact with the external world, and it develops his/her perception, observation,

cognitive needs and sensitivity to the problems of a human being's natural environment" (Więckowski 1993: 153-154). While referring to these words, it is difficult not to notice that it is very important, in the school reality, to care about the child's ecological development at each educational stage, taking into account such issues as: the influence of human activity on the environment, increasing the ecological awareness, and promoting the idea of sustainable development (Żeber-Dzikowska 2013: 38). The National Strategy for Ecological Education emphasizes a very important role of ecological education, specifying some objectives that are to be changed into specific actions ("The basic objectives of the National Strategy for Ecological Education"):

1. Promoting the idea of eco-development in all areas of life, taking into account a person's work and rest, i.e. providing permanent ecological education to all inhabitants of Poland.
2. Introducing ecological education as interdisciplinary education at all levels of formal and informal education.
3. Creating ecological education programmes dedicated to voivodeships, districts and communes. Such programmes would be an extension of the National Strategy for Ecological Education, and they would take into account suggestions of particular entities which fulfil educational projects for the local community.
4. Promoting good practices in the methodology of ecological education (*Przez edukację do zrównoważonego rozwoju. Narodowa Strategia Edukacji Ekologicznej* 2001: 10-11).

If we want to teach a young person how to respect and protect the environment, we should also teach him/her how to live in the society, respecting the rights of other people and the resources of the Earth. This is an important element that shapes the proper attitude towards the environment and helps a person find his/her role in nature (Hłobił, 2010: 33-34). Students can learn about nature in two manners:

- a direct manner which consists in a real contact with the environment, based on observations and experiments. This is a source of many emotions that exert a great influence on remembering facts and on shaping one's feelings;
- an indirect manner, which occurs during discussing various issues related to environment protection and sustainable development. The main form of transmitting knowledge includes photos, illustrations and films. It makes it possible for a teacher to stimulate student curiosity, and it helps him/her build their own conclusions and judgments (Żeber-Dzikowska 2013: 106-107).

Nutrition education in the context of sustainable development is perceived in a multi-aspect manner: as the process of the promotion of pro-health attitudes based on strong, balanced diet; and as the knowledge of food and its origin, its production process, and the participants of this process. One of the objectives of broadly understood nutrition education is shaping consumer attitudes that take into account

the principles of fair trade. The idea of sustainable development is focused on caring about other people who suffer poverty, work in bad sanitary conditions and receive a very low salary that is not sufficient to satisfy their basic needs. Thus, within this area we extend nutrition education by the knowledge of the principles of fair trade. They are important because fair trade is a kind of support for farmers or manufacturers from southern countries, which is provided by conscious consumers, as well as some non-governmental organizations and companies. According to fair trade principles, the production of goods should be compliant with democratic values and it should prevent the exploitation of employees and manufacturers.

We live in the times of constant consumption when everyone aims at owning more and more goods, irrespective of the “costs” of their production. Such an attitude results in the fact that shops and big companies earn much, but the manufacturers receive salaries that are inadequate to their effort.

A lot of Polish people know about inhumane conditions in which products of some trendy brands have been made in Third World countries. However, not everyone is bothered by the fact that nice clothes of famous fashion designers, carpets from the Middle East, good footballs or sports shoes have been manufactured by children slaves who do not know anything in this world except for hard work, malnutrition and the machine they not only operate but also use as a bed (*Sprawiedliwy handel* 2020).

Nutrition education that takes into account the idea of sustainable development emphasizes the consequences of mankind’s consumerism and influence on the quality of the environment where food production is often related to exploitation of other people, destruction of ecosystems, environment pollution and overproduction of rubbish. One of the ways of fighting with the exploitation of workers and manufacturers and with environment pollution is education oriented at stimulating the attitudes of conscious consumption, i.e. consumption in which each purchase is a rational choice and not an impulse resulting from the need to chase the trends. Students have to be aware of the fact that their everyday behaviour influences other people – not only local manufacturers but also participants in global markets. Due to nutrition education that respects the principles of fair trade, students may extend their horizons and get to know the relationships and connections existing in the modern world.

This type of education is not a new form of teaching about or promoting Fair Trade products. Fair Trade is treated as a pedagogical tool to teach young people about civil values that help them notice a different world. Nutrition education enriched with the knowledge of Fair Trade is a rightful subject among the issues discussed within the core curriculum as an element of global education. Both the student and the educational objectives, i. e. indicators of his activity, are the most important elements in the whole process of pro-health education. The most important objective of nutrition education

is shaping a valuable young generation. This is achieved in the process of building ecological and nutrition consciousness, which is stimulated by the school. It aims at shaping attitudes reflected in responsibility for the environment and for one's health, in accordance with the principles of sustainable development (Paško 2007: 283).

Early education should develop students' values, attitudes and critical thinking, rejecting the approach in which children only focus on knowledge and skills (Szczepaniec-Cięciak 2004: 258). Each curriculum must be adjusted to students' level and their ability to learn particular contents. The ecological aspect of sustainable development emphasizes moral progress and responsibility for the whole ecosystem and its internal relationships. This is the foundation of life on Earth and each element is important in this system. The Earth's limits have already been crossed. In order to rebuild the ecosystem, we have to implement sustainable development (Berdo 2006: 80) in which life will be sustained in the economic, ecological and social aspect. Nutrition education according to the principles of sustainable development makes it possible for us to get to know a broader perspective connected with the obtainment of goods. The result of actions that take those issues into account in a holistic and multifaceted manner will allow us to obtain the proper amount of information and construct knowledge/evaluate things adequately, which will lead to actions based on respecting ecological and social rights (Szadzińska 2017: 22).

Outline of the methodology of the author's own research

The research was carried out in a primary school. Fifty students of class III took part in it. The objective of the research was to learn about the knowledge and opinion of the students on nutrition education, the principles of balanced diet, the knowledge of product signs and origin, as well as the process of food production. In my research I used the triangulation of techniques within the diagnostic survey. According to U. Flick, the use of this method may clarify some issues that appear in the diagnostic survey through conducting an interview at further stages of the analysis (Flick 2011: 162). Such a research approach enabled a multifaceted analysis of the following research problem: Do the students have / how do they use the knowledge of nutrition education and sustainable development? In my research I used the diagnostic survey method, and my tool was a survey questionnaire aiming at learning what students know about nutrition education and sustainable development. The research experience, as well as the knowledge of early education students' functioning encouraged me to extend my analysis by the interview I carried out with the students. The students are not willing to write the answers to the questions; also, in each class there are some students who cannot read very well. Free talking makes it possible for them

to express themselves verbally, which is much easier than creating written utterances. Thus, another stage of the research was the interview with the survey participants who had filled in the questionnaire earlier.

Analysis of the author's own research

In the first phase of the research, the students were asked to fill in the questionnaire which was to check what students know about nutrition, the origin of foods, production and principles of fair trade. The word “questionnaire” was used on purpose, because experience shows that if the students hear the word “test,” they become nervous and their answers are no longer spontaneous, but they are trying to adjust to what the teacher wants to read. The answers were divided into the following groups:

- good and bad food products – the students showed which products are valuable for people and which of them are not healthy. The questions were close-ended, with only one correct answer. The majority of students, i. e. 47 (94%) chose the correct answers;
- healthy diet: the students filled in the pyramid of food and physical activity. Again, their answers were very good; 80% of them did not make any mistakes, placing all the products in the correct places; 16% of them made one or two mistakes; 4% made three or more mistakes;
- the quality of products: the questions referred to the situation related to shopping. They were to say how they or their parents choose products to buy in a shop. The students gave different replies to this question; 70% of them makes choices on the basis of the price – it is worth mentioning that the reply was formulated as follows: “I look at the price. If I want to buy a box of cocoa, I will choose the cheapest one.” Another popular reply was: “I look at the ingredients, i. e. I check which product contains less sugar.” This reply was chosen by 18% of the students, while 10% selected the reply: “I choose the brand which I know from the advertisement, and 2% said: “I choose a Polish product.”
- fair trade: the questions from this category were open-ended: the students were to describe what fair trade is, how they can recognize products with fair trade certificates, and how they can support food manufacturers. These questions were the most difficult for the students; many children did not reply to them at all. Nobody correctly indicated what fair trade is, and before filling in the questionnaire the students were instructed that they may not answer the question if they do not know the answer. Eighty percent of them used this opportunity, while 20% indicated that fair trade refers to the principles of buying and selling goods in accordance with the law.

The results of the questionnaire may suggest that, at the stage of early school education, children's knowledge is not reflected in specific actions and attitudes. The students do not know how they should make choices in a shop, or how to care about the local manufacturers. The analysis of these results encouraged me to talk to the students. I wanted to know their opinions on healthy eating and check if they really do not know what fair trade is, or perhaps they just did not want to create their own answers to written questions. Before I interviewed them, I presented the students some facts related to food production, I told them why it is good to buy from local sellers, and what the price of, e. g. a banana consists of. The students were eager to participate in the talks. Their reactions and emotions are reflected in the following answers:

- U 1: "The teacher told us that we have to eat healthy food, but what can I do if pizza and chips taste better?"
- U 2: "I didn't know that children can pick up bananas... and they get so little money for this."
- U1: "It is good that these signs [fair trade] are on the products. This way I know what my mum should buy."
- U 3: "Do you think we can find these products in B. [a supermarket name] with my mum?."
- U 4: "We play and go to school, while African children have to work to help their parents. Fair trade is good; maybe these children's situation will change."
- U 5: "I think my parents have no idea about this [fair trade]. I do the shopping with them, but they have never talked about this."
- U 6: "I did not know that, while doing shopping, we have to pay attention to where products come from."

The students who participated in the research were very curious about how bananas or cocoa beans are picked up, and what influences their price. Most of them could not believe that children may work in such plantations. Also, the students were asked to say what we can do to change the situation of the local farmers.

- U 7: "I think we can check if, e. g. potatoes come from Poland."
- U 8: "We can make advertisements of healthy foods to buy in the local shops."
- U 9: "We have to check who picks up the bananas. We can search for this in the Internet."
- U10: "Our parents should learn about this, because they say »eat fruit and vegetables«, but they may not know which ones they should buy."

Conclusion

A fundamental change that should take place is a new vision of the school as a place in which children learn how to carry out a critical analysis of the reality, how to live in the modern world, how to think in a creative and alternative manner, and how to maintain a critical distance to the reality (Szempruch 2012: 9). Such a vision requires starting from the elementary sense of justice, community and responsibility (Ciążela 2005: 181), as well as focusing on the necessity to introduce changes in a person's functioning and education, taking into account the natural environment as the basis of economy and society. None of these aspects is possible without the proper functioning of natural species and processes. We have to overcome our laziness (Prandecki 2011: 185) and consumer attitude in which actions are only undertaken if there are some benefits or if the price is good. It is important for mankind not to aim at satisfying egoistic needs related to the demand for various resources and products. Many adult habits are rooted in childhood, so it is very important to make children sensitive to nutrition education that respects the principles of sustainable development. All educational strategies should be focused on improving children's health consciousness, communication and attitudes (Pérez-Rodrigo, Aranceta 2003: 82). Such an approach is a great challenge, but it also has a great potential in innovative education (Rauch, Steiner 2006: 119).

The above research results confirm my thesis according to which early education students present a very high level of knowledge which, however, is not reflected in their practical actions. Also, the research proves that nutrition education is carried out in a very superficial manner: important aspects of sustainable development related to the origin of products, the quality of their production and employees' work are omitted.

To conclude these considerations, I would like to mention my research conducted in 2015 when I was writing my master's thesis. It was a pedagogical experiment which I carried out with students of grades II and III of a primary school. The classes were dedicated to the knowledge of sustainable development. The thesis was written to discuss the problems of the contemporary world, and to show the importance of teachers in educating conscious future citizens of the world. The greatest pedagogical challenge is teaching and educating students in the sense of security, and preparing them for life according to the principles of eco-development (Żeber-Dzikowska 2013: 38). The research results were appreciated by the teachers working in the school that took part in the analysis. However, this knowledge has not been put into practice: 5 years later, the students' knowledge is still at the same level, even though the idea of sustainable development is even more popular and available in modern educational discourse.

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