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## New models of theoretical and practical education in urban environment (On example of experience-based pedagogy in Slovak Towns)

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### Abstract

This paper focuses on education process in children that attend primary and secondary schools, university students and also adults in the field of alternative farming in urban environment, taking as an example theoretical education and practical work. It is experience-based teaching and further education that focuses on new trends in farming (growing food) in urban environment, extending knowledge of alternative means of farming, food protection and ecological thinking. People that participate in such activities get direct experience that should provide them with information and practice. Educational process is realized not only through theoretical teaching, but also practical work outside the school, where children acquire practical work experience, get the idea of working habits, learn to look at land with respect, think ecologically and construct their value ladder.

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### 1. Introduction

We focus in this paper on possibilities for new forms and models of environmental teaching, taking as an example the process of education in primary and secondary school pupils, university students and further education targeted on general public. Education in this field is a largely alternative form of education that is being implemented into

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educational process quite slowly and is often based on voluntary participation, especially in higher forms of education. Education targeted on general public is chiefly a voluntary activity that brings especially ideas for a somewhat healthier approach to growing food and awareness of a more ecological approach to life.

The objective of the paper is the insight into the problem of absence of and the gradual integration of teaching aimed at raising awareness of alternative economy, food policy and environmental sciences in the learning process in the education system as a whole. It is also important to focus on the break in continuity of teaching in this regard and the efforts of its establishing and revitalization. Research on the issue was carried out mostly on the territory of the Slovak capital Bratislava. Therefore it focuses on projects and activities that occur in the examined area and do not reflect a comprehensive view of environmental education in the Slovak Republic. The paper aims to show the current positive influence of examined type of education. This is a newly emerging phenomenon and a critical view on this issue may be brought only after its adequate implementation in the educational process and the practice.

The process of education in this field in Slovakia cannot be seen as systematic. Until 1989 (before the political changes) primary school curricula included a subject called “practical education” (as well as some alternatives). Pupils learned how to work in school fields; they learned about plants, grew vegetables or looked after trees in school orchards. After 1989 came some great changes in the education process, these subjects disappeared and together with them disappeared also school orchards and fields – places where the practical education was performed. Presently, this is a marginal subject and primary schools only teach theory rather than practical education. We can also say that there is a lack of a more complex attitude here.

The form of educational process that we are concentrating on in this paper means a new trend or revival of the idea of ecological education that originally started in the second half of the 20<sup>th</sup> century as teaching through theoretical and practical work. It is one of the ways that lead to a more ecology-based thinking, respecting food and importantly, growing food in urban environment. This paper focuses on new trends in farming and various projects that favour education in the field of alternative farming and growing food in urban environment.

The aspects that we are studying can be understood, in terms of possibilities for education in alternative forms of farming, as a kind of experience-based pedagogy. People who participate in these activities get a direct feeling that is meant to bring information and practical experience.

Experience-based pedagogy is described as an active means of education in in-group activities with the goal of acquiring skills and competences. This kind of teaching incorporates aspects of cooperation, communication, problem solving, adaptation to changed conditions, adjusting one’s approach, integration in groups and similar. (Hlásna, 2013:70). According to Balogová (2004) and Siroťová (2010), the ideal distribution rate is 30 percent of theory and 70 percent of interactive experience-based activities. Using various methods that experience-based pedagogy offers, students learn the skills and values that are based on their own and direct experience. Kopšová (2008) states that the basis of experience-based pedagogy lies in one’s own activity that brings experience. This method requires full engagement – physical, intellectual and emotional, including feelings and senses, previous experience and further processing of the fresh experience. This leads us to a conclusion that the gained experience is not a product of mere activity, but is influenced also by reflection and further consolidation of acquired knowledge and experience.

This approach can be applied in the whole spectrum that is linked with alternative farming, ecological thinking and similar activities. We may say that the relation between man and nature is greatly impaired now. People living in urban areas often do not know how to grow plants and cultivate land. Therefore education in this field is very important and should start from early age. We do not see this as return to self-sufficient living, but as an effort to bring further education, revival of the man-nature bond and turn to home-grown products.

## **2. Education in primary and secondary schools**

In the era of modern technologies and consume-oriented society we see a decline in the link between food and growing food, often children do not know how food is produced and only see food in supermarkets. In urban areas children frequently have few possibilities to watch (or even help) people cultivating land, growing arable crops and looking after plants. The main idea behind environmental education in schools is to make pupils realise relationship with the nature, teach them be responsible towards environment and growing crops. On the other hand however, there is also a link that leads to other subjects that can be taught in gardens.

During socialism they started school fields in Czechoslovakia. These were meant to serve as fields where pupils would grow various crops and herbs. Each class at school was given their own part of this field where children were learning basic care of plants, starting with sowing and finishing with harvest. Some fields survived the change of the regime, but gradually vanished over the course of a few years, others were given up very fast.

Recently we have seen gradual rise of interest to continue in this tradition. The Centre for Environmental and Ethical Education Živica (tree sap) coordinates a project called “Záhrada, ktorá učí” (garden that teaches) with eight pilot primary and secondary schools that are currently participating. The goal of this project is to teach teachers and their students how to use school land innovatively and thus show them practical examples of sustainable lifestyle. During the 18-month-long project teachers and students cooperate and design their new school garden, using some permaculture elements. They install teaching aids that open the possibility to have some teaching sessions outside the school building. It means that the educational process is not limited to just growing plants and looking after them, but the curricula of the already existing subjects enable these subjects to be taught outside, in the natural environment.

Primary and secondary schools in Slovakia started working in the project which has a main goal in creating teaching space outside the school so that student can use all of the senses when they learn. Practical and experience-based teaching increases efficiency of learning and children also remember things easier. The less formal means of teaching also improves relationships between classmates and teachers and supports cooperation in the group.

When they enrol in the project “Záhrada, ktorá učí,” schools can benefit from the help of experienced specialists from the Centre for Environmental and Ethical Education Živica, Czech organization Chaloupky o.p.s. and Norwegian organization of FEE Norway. Živica organizes several-day-long seminars, practical courses and individual consultations for schools and teachers that are willing to enrol in the project. They also prepare information seminars, methodical instruction books, leaflets that show examples and also interactive website with interviews, exercises, photographs, ideas and similar information.

It is possible to put in practice this experience-based pedagogy especially in primary and secondary schools. Such a way of education influences students in several ways - it develops their intellectual power, creativity, social skills, sensorimotor skills, strength and flexibility of the body, will and ability to learn something about themselves. As Gresákova (2010) states, this method differs from the traditional methods of gaining information and experience, because it is based on getting knowledge and especially on practical examples. This way students learn not only what they normally need to know for their school, but also how to look after plants, how to grow crops and establish a relationship with nature and more ecological ways of life.

### **3. Possibilities of teaching university students**

The period in which we are living is characterized by explosion of new information that require a new way of undergraduate education in order to grasp it all and use it practically (Siroťová 2014). In this part of our paper we are concentrating on the possibilities for education process that are not directly linked to study specializations in varying environmental areas. We are trying more to outline some alternative ways and possibilities of educational process within the given field.

#### *3.1. The Socrates Institute*

University students may enrol in a one-year course at The Socrates Institute that offers a programme called “Contemporary Society – Challenges and Visions,” which consists of various workshops. This type of education is again the activity of the Center for Environmental and Ethical Education Živica. The course also teaches topics such as energy policy, ecological agriculture, alternative economical systems, crops growing and many others. There is a possibility to enrol in this course for university students that study in various humanistic, environmental, economic or similar study programmes. Lectures are given by top guest lecturers who specialise in the given fields. However, study sessions are also done through discussions, experience-based and practice filled activities and informal talks. Strong emphasis is given to a direct contact between the lecturer and student. The course *Contemporary Society – Challenges and Visions* is offered as an optional subject taught over the period of two terms at Technical University

in Zvolen. Thanks to the credit-based system of the Socrates Institute, this course can be chosen by any university students in Slovakia.

### 3.2. Global Education

Global education is being gradually implemented in the educational process through a project co-financed by the European Union "Modern education for the knowledge society". This project is taught at universities as voluntary two-semester course assessed according to the credit system. If schools decide to include the course in their curricula, they are provided with the study materials, technical support and the possibility of retraining of teachers through multi-day training workshops.

Global education responds to current issues in the world. Among the basic thematic units that global education focuses on are:

- Globalisation and mutual interconnection
- Global problems and development cooperation
- Multiculturalism
- Environment with respect to global aspects
- Human rights

Respecting possibilities for education in alternative ways of farming, we focus on a thematic unit called *Environment with respect to global aspects*. This constitutes a part of environmental education, which forms one component of global education. Themes relevant to this are climatic changes, waste, environmental migration, air – water – land, using natural resources and alternative sources of energy (The National Strategy for Global Education for the years 2012-2016, p. 9-10).

Global education focuses on linking cultural and historical relations in Europe, commerce, environment and policies. The goal of such education is to develop critical thinking about direct environment, improvement of this environment and revival of values linked to nature and quality food in international context. In Slovakia, global education is taught at various humanitarian universities, the objective of this project is in implementation of global education in study specialisations.

## 4. Education focused on the public

Public education focuses on informing the adults and spreading enlightenment in the area of present alternative means of farming and growing crops. Even though this is not primarily about pedagogical methods, we speak about various ways of spreading enlightenment especially in growing crops in urban areas, but also awareness in the frame of sustainable development and actions in accord with nature.

### 4.1. Permaculture

During the establishing period, growing food in urban area, natural gardens and community life follow the idea of permaculture and sustainable development. Permaculture introduces a designer approach to dealing with problems that occur when the process of growing food is accompanied by respecting the nature. The principles of permaculture design are inspired by functional natural ecosystems and follow examples offered by the nature. The main pillars are represented by evolution and life-cycles (succession and recycling), as well as various three-dimensional patterns such as spirals, fractals, tree-like structures and similar. Permaculture's role is to save hard labour and energy via using natural laws and thus create as efficient a system producing food as possible. Various elements of permaculture are used to build community gardens that operate in the given territory. This is especially seen in the style of composting and usage of the land to grow crops.

The association CS Permakultúra organises regularly various enlightenment events where they teach participants basics of permaculture and crops growing. Among these events are for example permaculture design courses, experience-based courses or courses in growing fruit. The goal of these courses is to make participants change their attitude to world and also change the way they work in order to establish more rational farming while respecting the nature. Content of these courses is designed in order to shift thinking about our relation to environment so that they

understand that things relate to each other. Participants also learn the skills needed to plan gardens and at the end of the course they receive a certificate in permaculture design, which is recognised worldwide in the world of permaculture.

#### 4.2. *Community gardens*

The goal of community gardens is to grow own crops and possibly use the vacant land in urban areas. However, it is not very easy to define precisely the term of community garden. The actual arrangement of such a garden is rather individual - there is no model garden. Gardens may be closed for public or open for public. They are usually started on unused state land, public land or individually owned land, which is thus given to a good use. The key feature that distinguishes such gardens from parks is that there are primarily used for growing fruit, vegetables and fruit trees. They are also characteristic for their structure. They can be controlled by local authorities, civil associations or groups of enthusiasts. Care of these gardens can be shared by all the members, or they may be divided into smaller parts and owned by individual people who look after them. Despite diversity, community gardens should have these four common features:

- land – land where crops is grown
- plants and trees that give edible vegetables and fruit
- community garden members who share responsibility for the garden
- they should be organised (BUDDER, 1990).

Community gardens also offer a possibility for adults to learn something. It is especially people who live in urban areas that become members in such gardens, as these people usually do not possess their own land to grow crops. They learn how to grow plants and look after them in community gardens, but community gardens are often places where seminars are workshops that relate to growing plants are organised, too. Popular are also projects that specialise in keeping beehives in urban area. Currently, this is very attractive for people; beehives are placed on roofs of buildings in city centres, but also in community gardens.

Community gardens can also be understood as a form of pre-school education in this field. Parents often come to community gardens with their children, motivated by the idea of healthy food and also spending time outside - among other people, in fresh air. The side effect of this is in the fact that from young age, children learn about nature and learn the skills that are needed to grow crops. However, community gardens are also started by primary schools. Again, pupils learn here how to look after plants and grow crops, but physically hard work is done by homeless people who, as a form of reward, can take a part of the crops afterwards.

### 5. Conclusion

In this paper we presented a short outline of various forms of educational process that focuses on possibilities of alternative farming, as well as enlightenment in the field of ecology and relationship to nature. We focused especially on such education that brings knowledge through experience (experience-based pedagogy and its methods) rather than theory.

The teaching scope in primary and secondary schools and also colleges is rather institutionalised - given by curricula, or defined as optional subjects. Teaching that focuses on public takes place through spending the spare time and preferring certain lifestyle that is linked to nature and healthy food.

New ways of teaching aimed at primary, secondary and high schools are used by more and more institutions, confirming its gradual successful implementation in a educational process. Success rate of activities oriented on the general public can be evaluated in terms of a gradual increase in the number of individuals involved as well as in terms of increase of similar projects and events.

We believe that this form of education is important for establishing a positive relationship to environment, nature and local food also in urban areas that typically make living in accord with nature more difficult than it is in the rural areas.

In our paper we do not want to dismiss complexity of education in environment, but to offer a choice of alternative possibilities of education in various kinds of schools for students of different age that could change the overall approach to the world, more ecology-based thinking and behaviour in growing food.

Education in this field is a part of education process and as such has its importance especially in spreading enlightenment from the very young age to adult age and in motivating people to lead a sustainable life.

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