



STATUS REPORT

On Biodiversity Education and Out of Classroom Learning Programmes and Practices in Hungary

(By the Hungarian Development Team)

In the first part of this report we deal with the biodiversity education and out of classroom learning (OCL) in schools among the 7-15 years old children, concerning the aims of the Beagle Project.

In the second part we detail the situation of biodiversity education and OCL in teacher trainings and in-service teacher trainings and programs.

Biodiversity Education and OCL in Schools

1. Class 1-8: primary school

The branches of Hungarian educational system as ‘environmental basic knowledge’ and ‘nature basic knowledge’ contain that subjects which cover the range of the Beagle Project. These are from the **2nd to 6th** class-group. The biology subject appears in the **7th** class at first, which deals with the characteristic vegetation type and fauna under certain climatic zones, presenting also some impressions about the biodiversity of wildlife and its habitat diversity and likewise about the supraindividual taxonomic categories. Transmitting of these topics mainly depends on the teacher. However the biggest chance and potential of presenting the importance of nature and environment for children is also here in this period. In the **8th** class, the subject is the structure, function and mechanism of the human body. In this school term it is quite difficult but not impossible to find the connection between the main topics and biodiversity. (In relation with some subject matters, like healthy lifestyle, nourishment, we have opportunity to speak about the relevance of ‘nature’s pharmacy’. Or in another occasion, speaking about the breathing we can initiate the expression ‘earth’s lungs’.) We also can refer back to the importance of biodiversity, nature conservation, ecosystem’s stability or sustainable lifestyle, even if the students don’t move out very often and mostly learn indoors.



The average number of nature science and than the biology lessons/week has been reduced in primary schools thanks to curricular reforms in the last few years.

2. Class 9: secondary school

Three basic types of secondary schools are in Hungary (grammar schools, technical colleges and vocational schools). The number of natural science lessons has been reduced also in secondary schools. Generally the biology is completely absent in the first class of secondary school. Only the geography is obligatory in this year.

2.1. Grammar school with average curriculum:

As we said earlier, the biology subject appears only in the **10th** class in the greater number of the schools. (So, the biodiversity topic comes into curricula only in the **10th** and after that in the **12th** school year.) Actually in certain schools the nature sciences occur in integrated form, according with reduced lesson number. However the total number of the lessons didn't change in the new curriculum of tuition plan, thanks to the newly installed modules as 'media', 'drama', etc. Some of these as 'hygiene' or 'knowledge of own country and folk' have parts, which could help us to find the connection with the biodiversity, but we couldn't count really with it. In the **9th** class the geography subject is 'nature geography'. This also contains elements connected with biodiversity (such as wildlife of climatic zones). An important characteristic of our previous educational system in universities (and which is in change nowadays) that we don't have too much teacher with the speciality of biology–geography. The geography teachers' other subject is usually history or drawing. This knowledge can be useful for us if we plan to collaborate with them.

2.2. Grammar school with biology specialization

The education occurs in local curriculum. The special curriculum means raised number of lessons (even 6 lessons/week, opposite of the average 1 or 2) already in the first class. In this case the given teachers have the possibility to prepare their own biology curriculum. However in these lucky cases the biodiversity is a quite strong topic, which is based by the 6th and 7th classes of the primary school.



2.3. Grammar school with special curriculum

In many cases the school is a transition between the primary and secondary school. It means secondary schools with 6 or 8 classes. In these types of schools there are special curricula for the subjects avoiding the unwanted repetition of topics. It means that the children can learn nature sciences fluently under their school years and the curricula can be built up logically.

2.4. Technical college and vocational secondary school

Here the nature sciences mean usually a summarized subject, which occurs in the local curriculum. In many places it appears just in one school year in three or less lessons per week.

3. Further (special) plans of tuition

- E.g. the *Waldorf schools* with their special attitude for nature.
- We have a network in Hungary so called **Ökoiskola (Eco-school)**, which is co-ordinated by: National Institute for Public Education Centre Program Development with the professional and financial support of the Ministry of Education and the Ministry for Environment.



The Network has been running since March 2000 as the Hungarian part of the eco-school program of the ENSI (Environmental and School Initiatives) project, which is a project of the OECD-CERI (Organisation for Economic Co-operation & Development - Centre for Educational Research & Innovation)

The biggest challenge, that mankind is facing the environmental crisis. Developing more environmental conscious ways of life is one of the most important tools of coping with this crisis. Eco-schools contribute to this aim with keeping in view the ideal of the environmental conscious citizen, while educating next generations.

An eco-school differs from the average school in the fact that the principles of sustainability are not only present in education but in all fields of school life from the operation of the school to the catering of the children or to organising camps.



The local community connects to ecoschool work in many ways. Local environmental values and problems form part of the school's pedagogical work embedded in the local pedagogical program.

The Hungarian Ecoschool Network co-ordinates, informs, organises in-service teacher trainings and programs for those schools that put the principles of sustainability in the centre of their operation. The Network is open to every Hungarian institution for public education.

The main activities:

- National meetings

At our meetings we present the most important national and international events, innovations and provide an opportunity for our members to introduce themselves, exchange technical experience, form relationships.

- Website

Our website is continuously updated, (www.okoiskola.hu), and is available with up to date news competitions, foreign outlook and data bases to everyone interested.

- In-service teacher trainings

We continuously help our members to participate in national and international in-service teacher trainings.

- Research

We support the work of our members with action research helping practical pedagogical work and with pedagogical-psychological research providing the theoretical basis of the pedagogy of sustainability.

- Foreign relationships

The members of the eco-school network have shown the results of the Hungarian environmental education with great success at several international events and take part in many international programs with the backing of the Network.



- Pedagogical supplementary materials

The Network helps the creation of pedagogical supplementary materials, books and educational packages, which are important for eco-schools and continuously informs its members about up to date handbooks.

The colleagues of the Network drafted a tender for winning the eco-school-award. The Ministry of Education and the Ministry for Environment are going to invite tenders jointly in September 2002. Every Hungarian institution for general education can apply, which makes a work schedule to meet the eco-school criteria. The tender for competition will contain these criteria and the draft of the work schedule.

The Network is open to every Hungarian institution for general education. The only precondition of joining the Network is a letter containing an introduction of the activity of the school signed by the headmaster, which expresses the school's intention to join the Network.

4. Summary of characteristics of each stage and class

Field studies or just OCL is not obligatory in the national curriculum, however it recommends two field trips per year in primary school. So it is possible that children don't meet the nature during their school years. And that's why the Hungarian biology teachers can take time for such activities only on occasions, just with unpaid extra lessons or in 'green-days' (e.g. Earth day, when the schools are informally required to organize programs for children). In other case the form master organises excursions or 'forest schools' happening once per year. It means that OCL in Hungary is very opportune, there are not official requirements, content depends on teachers' attitude and possibilities.



Useful opportunities for enthusiastic teachers and children

1. Formal education

- Local or national *competitions* between schools in which the children have to make a presentation on their own observations in the nature or the town where they live.
- A 'competition' among schools to gain the *Eco-school-award*.
 - The so called *Forest school programs*: In the last few years great numbers of cheap accommodation have been attached for students; many of them recommend 'green programmes'. These are usually organised by NGO-s, National Parks and forestries.
 - In some schools (especially schools with special pedagogical program) the children have a possibility to take part in *field trips* organized by their teacher or outsider organizations.
 - *Clubs* in schools are good scenes for enthusiastic children to deepen their knowledge about nature.

2. Non-formal education

2.1. Hungarian Ornithological and Nature Conservational Association

The organization aims to protect wild birds, and help to preserve biological diversity.

Sites: IBA Programme and Phare project to implement EU Natura 2000

PROGRAMMES:

Species:

Monitoring Programmes

Bird ringing Programme

Great Bustard Protection Programme

Raptor Protection (including Black Stork) Programme

White Stork Protection Programme

Meadow Viper Protection Programme

Habitats:

Land Stewardship Advisory Service

BirdLife EU Accession Project:





Hungarian Society for Environmental Education

www.mkne.hu

- Our Daily Birds Programme
- Bird-friend Nursery Programme
- Bird-friend School Programme
- Bird-friend Garden Programme
- Butterfly-friend Garden Programme

36% of the connected schools to Beagle project have already a so called bird-friendly school garden, and further 53% would like to join this program.

2.2. There are special local and national clubs, organized by NGO-s (e.g. Nature Science Club for Youth) or governmental organization

2.3. Green Heart Youth Movement for Nature Conservation

was formed in 1989. The basic principle is to educate children to be respectful and loving toward nature.



They organize activities within and outside school. The focus is the protection of valuable environmental features and the environmental education of 6-14 year old children. They also have members who are kindergarteners, secondary school students, university students and adults. The latter ones help a lot with organization and education. The number of members is about 6000 by now. The members work in 200 communities in Hungary as well as in the USA, England, Austria, Belorussia, France, the Netherlands, Croatia, Germany, Russia, Romania, Sweden, Slovakia. The central office is in Pomáz, Hungary. They support individual members and groups from here.

Activities

- Environmental protection

Children choose an environmental feature in their neighbourhood, which they monitor and protect if it is needed. They can protect anything that is a part of nature: a river, stream, meadow, woodlot, wetland, etc. It is practical to choose a place that is close to their residence so they can get there easily. They let the leaders know about their research from time to time in a short study.



- Environmental education

The leaders of the groups are teachers, who are committed to environmental education. With their help children can gain knowledge and come to like and respect nature. The basic principles are contained by the ten rules of Green Heart, which is expected to be kept by the members. It gives the proper basis to establish the green-hearted principles of environmental education. They help the leaders to acquire the professional knowledge and the modern environmental education methods at training courses and workshops. Their nature-researching kit helps in stream examinations, water-chemical researches, biological and environmental condition testing. The kit has an additional workbook, the first issue of Butterfly Pages. The title is Protect Our Streams! The summer camp functions as a training course too, where the activities are led by specialists.

- Methods

They put the emphasis on personal experience and experimental direct observation, so they try to give as many opportunities as possible for the children to meet the nature. The point of doing research and testing with children is to help get information and keep in touch with nature. During the excursion they often find environmental damage too. They make an action plan for the possibilities to stop it. As a part of this plan they inform the local residents and have discussions with adult leaders. Children draw posters and leaflets in a topic and they send it to over the inhabitants.

- Discussion:

Beyond loving and knowing nature and acquiring basic environmental knowledge, the organisation teaches children how to negotiate with adults. Many times children sit down to negotiate with politicians, or directors of companies.

2.4. Numerous summer camps are organized by NGO-s (e.g. the Pangaea Association's 'Süni' (hedgehog) Camp).

2.5. Toad Action Team's Bufo saving program

2.6. The successful river watch program in all over the country.



3. Examples for international projects

- 3.1. **GLOBE** Program is a worldwide hands-on science and education program for primary and secondary schools.
- 3.2. **BISEL** bioindication Program (water certification).
- 3.3. **BBI** – Belgian Biotic Index method, which has a simplified, easily usable version for secondary schools.

4. Nature study trails, educational paths:

These have been built by National Parks, forestries or NGO-s which provided information tables or brochures about the local wildlife and natural and cultural values of conservation areas.

Biodiversity education and OCL in teacher trainings

The whole structure of teacher-training undergoes considerable change nowadays, as we face the transition from the traditional one-cycle (five-year) scheme to the one that conforms to the Bologna process (3 years B.Sc. + 2 years M.A.) of European higher education. In both systems students of biology have compulsory courses in animal and plant taxonomy, usually 2 semesters of both subjects, including practical. These and the also compulsory field course after the second year give the basis – the knowledge of species – for any biodiversity and field studies. The summer field courses are also important in learning species – habitat-relationships. In the third year of studies biology students have at least one semester of ecology. This course varies greatly in terms of topics covered and emphasis depending on the university and the lecturer. In any case sampling methods of certain organism groups are included in these courses especially at universities where field courses in ecology are also offered. There has been a tendency of including more and more applied aspects in teaching ecology, which – in most cases – means the inclusion of conservation issues.

The students of biology and geography (in both the primary and secondary school teachers' trainings) generally have to accomplish a course about the methodology of field studies/OCL



in the frame of methodology of teaching biology or geography. The students may come to know the programs and methodologies of zoo-s, forest schools and national parks, but in many cases in theoretical level. In general the curricula of the higher education institutions have to contain the methodology of OCL, but in many cases the practical materials are not processed. There is no compulsory course about field studies for other students in the higher education in Hungary.

The Hungarian Development Team has a goal to fit the BEAGLE outcomes to the methodology course in University of Szeged by Mária Fűzné Kószó.

In the last 20 years a great number of teacher training programs and in-service teacher trainings have been organized by governmental and non-governmental organizations concerning OCL/field studies. Teaching materials (e.g. convenient handbooks, manuals and guidebooks, identification keys) are available in Hungarian but mainly in English.

The Hungarian Society for Environmental Education

is an NGO, organizing mainly teacher trainings concerning Environmental Education and Education for Sustainability.



Goals and Mission of our Society:

Increase environmental awareness, knowledge and responsibility of those who regard EE for a mission of themselves, and - through them - of whole Hungarian society.

Collect and disseminate knowledge and methods of EE; help environmental educators, encourage and organise their co-operation.

Improve personal effectiveness of environmental educators develop their ability to make contacts with other people.

Study, understand and improve personal relationships for creating harmony amongst people and between people and environment.

Develop ethics based on the respect of nature and man; develop responsible thinking in planetary and century scale; improve cooperation and patience.

Identify, train and practice skills and competences needed for the ecological sustainability of the Earth.



Our Society was established in March 1992 by 53 devoted environmental educators.

By now we have near 1 000 members. Since 1998 it is classified as "of outstanding public benefit".

Our Society was awarded with prize "For Our Environment" in 1999.