



Science Section

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Research of PPP IBE: Good practices in scientific non-formal education. Research on science courses

What you read, you will surely forget. What you see you will remember. What you do yourself, you will understand. Following this path, we first show them some of the things that interest them, and if they get interested, we encourage them to do it for themselves, and then, they will surely understand it better.

Entertainment can also be part of environmental education. Students while having a good time can also spend time using a compass, pine-cones identification, bird identification

The most important goal is to encourage students to take an active role. Asking questions. Looking for answers... Student guidance. In fact, our goal is to make them feel like outside the classroom(...) so they can freely exchange ideas.

(statements from employers of the surveyed non-formal education centers)

Potential to foster scientific skills by the Centers

Centers content

- ✓ Research and teaching staff
- ✓ Infrastructure and equipment: access to a modern, wide range of features and facilities (i.e, laboratory), teaching aids, museum exhibits
- ✓ Scientific core facilities: Parks, nature reserves, lakes and ponds, habitat of birds and others;
- ✓ Freedom in shaping the program offered, qualification and training of teaching staff and freedom in planning operations.
- ✓ Inability to assess student performance in a similar way like in the school environment

Didactic content

- ✓ Classes in small groups, individualized work with the student, supporting independent and creative student's work and participants motivation.
- ✓ Methods improving students' active roles, practical methods (laboratory exercises, observation and workshops), experimentation and observation.
- ✓ Organize classes by programs, sections and periods.
- ✓ Preparing in advance students for the classes
- ✓ Classroom time extension.

Documentation of activities



Map of surveyed centers



Range of coverage, school year 2010/2011

50 centers

500 000 actively engaged participants

Aim of the study:

To determine how the scientific program of non-formal education centers can assist schools in shaping and developing scientific reasoning skills.

Research subjects:

Non-formal education centers i.e: non-governmental organizations, universities, research centers Polish Academy of Sciences science centers, industrial centers of research centers and educational institutions, and centers run privately.

I stage – 348 centers
II stage – 50 centers

Methods:

Analysis of existing data,
Case Studies - monitoring, evaluation activities,
individual in-depth interviews, analysis of materials