

## **External Expert's Opinion on the Activities of the Colabs Project in Hungary**

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### **ICT in the Hungarian State Education**

The Hungarian educational administration has long been supporting the application of ICT at schools. In the framework of the School-net program every secondary school was equipped with a computer room with Internet access in 1998 and by the end of 2005 the primary schools will have also received a free and fast PC lab Internet access. At the portal, which is operated by the Ministry of Education, a lot of digitalised educational material and knowledge database are available. The National Curriculum regards the information and communication culture as a field for special development and recommends teaching its application even at primary school level. In its requirements it shifts the emphasis from knowledge-based teaching onto developing the competence of the pupils.

In order to support the establishment of the so called digital literacy, both the Ministry of Education and the National Institute for Public Education prepared a development strategy for ICT. Since our EU accession in 2004 the need for a co-operative to join the educational organisations at European level has strengthened. Hungary is open to adopt international innovations and to welcome international co-operatives that intend to improve the current situation of public education or the spreading of new learning-teaching methods.

### **The Objectives of the MINERVA Project**

The objective of the MINERVA Co-Labs is in absolute harmony with the most recent educational policies: developing an educational environment which is based on co-operation, which uses the opportunities offered by the World Wide Web and which supports discovery techniques in the learning process. The most important idea and aim of the project was to establish international co-operation between pupils based on non-traditional learning methods. In order to achieve this, we had to develop some educational resources based on a special authoring system that could help pupils from different countries to improve their skills and get hold of information in a collaborative way, using concept of e-learning. They obviously had to overcome the obstacles created by language difficulties and thus could expand their language knowledge. That is why the project team identified the learning strategies, developed the objectives for both the pupils and the teachers and improved tools that facilitated the collaboration.

## **The Project Activities**

The project took place according to plan in Hungary. The coordinators continuously facilitated the work of the selected nurseries, primary and secondary schools, ensured the right conditions for the software use and the availability of the methodological resources and organised consultations for the participants on a regular basis. The educational organisations received feedback on the quality of their work in the project evaluation. Even two degree theses were written in connection with the project, using its results.

I observed the project activities from the very beginning. I also regularly checked the presentations of the results including the EUROLOGO conference in Portugal in 2003 and the IFIP WG. 3.5 International Workshop in Budapest in 2004. As I was also one of the organisers and lecturers of the latter event, I had the opportunity to hear not only the outcome of the Hungarian project but also that of the partner countries such as Slovakia, Poland and Portugal. On the so called 'Hungarian Day' all of those innovative pedagogues were able to take part in the workshops and learn about the main methodological ideas and results of the project who had long been using ICT in everyday work and therefore are likely to actively take part in the spreading and the adaptation of the experiences and products of the project in the years coming. Besides this, the results have been presented several times to informatics teachers in national conferences.

## **The Pedagogical Values of the Project**

Despite the efforts and investments of the Ministry of Education, ICT is not yet used to the extent and with such modern methods as the infrastructure could provide. It is also common that the schools get stuck with just teaching the technical knowledge of ICT (like working with a word-processor or tables) instead of leaving the old-fashioned teaching methods behind and turning to the pedagogical opportunities offered by the Internet, which could be used in almost every subject. According to our research, project work, teamwork, differential group work and e-learning are still quite rare in the learning-teaching methods used. The digital format of the traditional books and materials are not very attractive to teachers and they do not feel comfortable about multimedia applications or other more developed authoring systems either. (Although the 45-minute lessons are often not suitable for this either.)

The project therefore has chosen the system of tools that facilitated communication and collaboration very well. The reason why the Imagine authoring system was suitable choice was because it is based on the application of micro worlds known from Logo pedagogy. Logo is very popular in Hungarian schools: the teachers adopted its principles and philosophy at a very early stage. However, the needs of the 21<sup>st</sup> century have well outgrown the opportunities the last version of Logo bought on a national scale (Comenius Logo, 1997) can provide. For the sake of developing pupils' creativity, self-expression and problem-solving skills as well as for the sake of establishing co-operation on an international basis we need to use a much simpler and more user-friendly software system, which is also 'subject-independent', can be used with any age groups in almost any areas of education and, based on local needs, can be further developed.

A great achievement of the project is that it created and used such ICT-based educational environments and methods that were not only capable of extending pupils' knowledge but also made their own works (such as games, worksheets and handcraft objects) available to their Hungarian and foreign peers, thanks to the system tools and forums that support foreign language communication. The success and the pedagogical applicability of the system were facilitated by the fact that its elements could be extended, exchanged, modified and moreover, at a higher level it was also possible to create new elements. Game-creation, story-writing, picture communication and creative writing were all popular with the pupils. The application of the micro world 'Fractions' was particularly successful in developing the thought processes of disadvantaged pupils. This is discussed in the analyses of the schools.

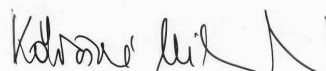
### **The Dissemination of the Developments**

The best way to measure the success of a project is to observe how much its products can be disseminated, or how effectively the target groups can use them. In other words, whether its results can be adopted in other locations: in other nurseries and schools. The products of this project are not one-off developments, which expire after the project. Even at the experimental stage the developments were very popular. They caught the attention of teachers from different schools and motivated them for later trial and use. The varied interactive resources of the web portal developed by the project are suitable to further encourage collaboration between peers and thus to spread the new pedagogical methods that are much needed in Hungary.

### **Summary**

Several important products have been developed during the project that filled the gaps in education, met the needs and conditions of the Hungarian education system and could be utilised in institutions for public education. The main achievements of the project were the encouragement and spreading of new pedagogical methods and learning habits suitable for the 21<sup>st</sup> century. The project activities caught the attention of those innovative teachers who are open to new ideas and who are suitable for adapting and further spreading the products of the project available.

Budapest, 13<sup>th</sup> January, 2005



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