



4th announcement

Second European Conference on Primary Science and Technology Education

Science is Primary II

“Engaging the new generation”

October 15 –17, 2006

Stockholm, Sweden

The development of society requires to meet one absolute prerequisite, the intellectual and moral development of Man. From this viewpoint, an early education in Science, inquiry based, should be of great help, not only in order to give children a basis in technical knowledge, but also to aim at international cooperation, research, openness, modesty and civic responsibility, so highly requested in our times.

Science education is broadly defined as the learning process through which young people progressively understand the basis of scientific reasoning, practice/experiment, develop the technical abilities and build-up a detailed knowledge of the natural world, its laws, models as well as the technology to act upon it.

Science education is a challenge for European education systems and the long-term quality of education. Primary school appears of special interest: Numerous studies show that challenging the natural curiosity at an earlier age is essential to develop the proper attitude towards scientific knowledge. In addition, new trends and conceptual views for science teaching have developed in the last decades, based on the importance of investigation. Important progress has been made in various areas such as didactics, hands-on and inquiry learning, cognitive sciences and socio-cultural approaches.



In a number of countries inquiry based science education programs that have been launched in the last decade have already given substantial results but they also require major efforts to be developed towards teacher's training, resource elaboration, and educational research. Although very successful, inquiry based science education has been limited to a relative small number of schools in Europe. Reasons are the need of proper tools, resources and training.

This conference is organized within the framework of the European Science Education Initiative, Scienceduc- Renovation of science teaching in European primary education with inquiry methods.¹ This is a program financed by the Sixth Framework Programme, European Commission. The conference is also possible thanks to the support and collaboration of both the Royal Swedish Academy of Sciences and the Royal Swedish Academy of Engineering Sciences.

The overall perspectives for the conference are

- Inquiry-based Primary Science
- Research and Development
- The European Perspectives in Primary Science Education

The goals of this conference are:

- Analyse methods and practices for extending the inquiry based science education programs to new primary schools,
- Enhance the development of high quality methods for evaluation and research in different countries,
- Exchange about and develop teacher training in high quality science teaching for primary schools,
- Promote contacts and networking between teachers, principals, teachers' trainers, science education leaders, program coordinators, researchers, scientists, policy makers and local authorities.
- Enhance exchanges between European and non-European schools on science education projects,

The conference will gather teachers, principles, policy makers, program coordinators, researchers, scientists, teacher trainers, representatives from school administration and mass media.

Call for contributions

We invite and look forward to contributions from participants. Time will be allocated to contributions and discussions after each of the following three poster sessions on day 2 (Monday, October 16th):

- Inquiry curriculum and assessment (poster session 1)
- Teacher support and training (poster session 2)
- Engaging the new generation (poster session 3)

¹ SCIENCEDUC, project sponsored by the European Commission and integrated to Nucleuscluster, a European science education initiative.

Links: Nucleus website: <http://www.xplora.org>

Each contribution is planned to be a poster 5-min commented followed by a short discussion (questions and summary) closing the session. Contribution abstracts should be submitted online, in the registration form at <http://nta.proof.telia.se/enkatpoll.asp?ProofID=4910> or mailed separately to Kerstin Reimstad, The Royal Swedish Academy of Sciences (kerstin.reimstad@kva.se). **Deadline : March 31st, 2006 (closed).**

Accepted contributors will be contacted at the latest April 30th, 2006. They will be invited to send us by e-mail (kerstin.reimstad@kva.se) a short paper on their presentation (max. three pages) in Microsoft Word Format **at the latest August, 31.**

Registration procedure and fees

The conference is limited to 100 participants. Registration is available online:

<http://nta.proof.telia.se/enkatpoll.asp?ProofID=4910>

Extended deadline for registration only: Some places are still available Please make your registration before August 31st, 2006. Participants will receive a confirmation message at latest September 15th, 2006.

There will be no conference fee. Participants will be served coffee all days and lunch one day.

Please feel free to contact the conference coordination: Kerstin Reimstad by e-mail kerstin.reimstad@kva.se or Pamela Lucas lucas@inrp.fr if you need more information.

The international Scientific Committee

- **Per-Olof Wickman**, *The Stockholm Institute of Education, Stockholm, Sweden (Chairman)*
- **Bruce Alberts**, *University of California, San Francisco, USA*
- **Björn Andersson**, *Gothenburg University, Gothenburg, Sweden.*
- **Saouma BouJaoude**, *American University of Beirut, Beirut, Lebanon*
- **A.L.(Ton) Ellermeijer**, *AMSTEL Instituut, Universiteit van Amsterdam, Amsterdam, The Netherlands.*
- **Peter Fensham**, *Monash University, Melbourne, Australia*
- **Guillermo Fernández de la Garza**, *US-Mexico Foundation for Science, Mexico City, Mexico*
- **Wynne Harlen**, *University of Bristol, Bristol, UK*
- **Chistine Harrison**, *University of London, UK*
- **Ryszard M. Janiuk**, *Maria Curie-Sklodowska University, Lublin, Poland.*
- **Tina Jarvis**, *Science Learning Centre East Midlands, University of Leicester, Leicester, UK.*
- **Norman G. Lederman**, *Illinois Institute of Technology, Chicago, USA*
- **Jean Moon**, *National Academies, Washington DC, USA*
- **Yves Quéré**, *Académie des sciences, Paris, France*
- **Elwira Samonek-Miciuk**, *Maria Curie-Sklodowska University, Lublin, Poland*
- **Dennis Schatz**, *Pacific Science Center, Seattle WA, USA*
- **Sally G. Shuler**, *National Sciences Resources Center, Washington DC, USA*
- **Russell Tytler**, *Deakin University, Australia*
- **Karen Worth**, *Education Development Center, Inc., Newton, USA*

The Swedish Organizing Committee

- Sven-Olof Holmgren** – *The NTA Program/ Royal Swedish Academy of Sciences (Chairman)*
- Anders Jidesjö**, *Linköping University*
- Britt Lindahl**, *Kristianstad University*
- Per-Olof Wickman** *The Stockholm Institute of Education*
- Glenn Hultman**, *Linköping University*
- Kerstin Reimstad**, *The NTA Program*
- Jan Schoultz**, *Linköping University*
- Helge Strömdahl**, *Linköping University*
- Pamela Lucas**, *La main à la pâte - ENS, France*

Practical information

The conference will be hosted by the Royal Swedish Academy of Sciences.

The Royal Swedish Academy of Sciences
P.O. Box 50005, SE-104 05 Stockholm, SWEDEN
Phone: +46 8 673 95 00, Fax: +46 8 15 56 70
Visiting address: Lilla Frescativägen 4 A

Location and directions:

http://www.kva.se/KVA_Root/eng/contact/index.asp

http://www.kva.se/KVA_Root/eng/contact/offices/map.asp

Hotel reservation

Participants are responsible for making their hotel reservations and for paying for all their own accommodation costs.

The following hotels are recommended since their proximity to the underground.

Hotel Scandic Sergel Plaza

Brunkebergstorg 9
Phone +46 (0) 8 517 263 00
Fax +46 (0) 8 517 263 11
E-mail sergel.plaza@scandic-hotels.com
Homepage <http://www.scandic-hotels.se/sergelplaza>

Hotel Kung Carl

Birger Jarlsgatan 21, SE-111 87
Stockholm
Phone +46 (0) 8 463 50 00
Fax 046 (0) 8 463 50 50
E-mail kungcarl@hkhotels.se
Homepage <http://www.rica.se>

Hotel Rica Stockholm

Slöjdgatan 7, SE-111 57 Stockholm
Phone +46 (0) 8 723 72 00
Fax +46 (0) 8 723 72 09
E-mail info.Stockholm@rica.se
Homepage <http://www.rica.se>

Hotell Mälardrottningen

Riddarholmen, 111 28 Stockholm
Phone +46 (0) 8 545 18 780
Fax +46 (0) 8 24 36 76
E-mail receptionen@malardrottningen.se
Homepage <http://www.malardrottningen.se>



Agenda - Preliminary

October 15, 2006

- 13:00 **Welcoming Speech**
Gunnar Öqvist, Ph. D.
Permanent Secretary - The Royal Swedish Academy of Sciences
- 13.15 **Conference introduction**
Sven-Olof Holmgren, Ph. D.
Chairman of the conference - Member of The Royal Swedish Academy of Sciences, Sweden
- 13: 30 **Lisbon 2010: how to speed up reform of sciences teaching in Europe**
Georges Charpak, Ph. D.
Physics Nobel Laureate - Member of the Académie des sciences, France
- 13:45 **European overview of primary science education and scientific career perspectives**
José Mariano Gago, Ph. D.
Minister for Science, Technology and Higher Education, Portugal
- 14:45 **Coffee break**
- 15:15 **Inquiry based teaching and learning - about inquiry and its history**
Norman G. Lederman, Ph. D.
Professor, Illinois Institute of Technology, Chicago, The U. S.
 - the background
 - inquiry- what characteristics
 - different perspectives on inquiry
 - inquiry and curriculum in an American perspective
- 16:15 **Scienceduc¹: Status reports of seven ongoing national EU initiatives – perspectives on inquiry and curriculum**
 - Introduction
 - Estonia
 - France
 - Germany
 - Hungary
- 17:00 **Break**
- 17:30 **Scienceduc: Status reports of seven ongoing national EU initiatives – perspectives on inquiry and curriculum**
 - Italy
 - Portugal
 - Sweden
- 18:00 **Instructional materials, Assessment and Accountability: Lessons learned from two decades of science Education Reform**
Sally G. Shuler
Executive Director, National Science Resources Center, Washington DC, The U. S.
- 18:30 **Questions and conclusions**
- 18:45 **Adjournment**

October 16, 2006

- 8:30 **Summary of previous day and expectations for second day**
- 8:45 **Inquiry, evaluation and assessment in a primary class room**
Judith Sweeney Lederman, Ph. D.
Director, Teacher Education, Illinois Institute of Technology, Chicago, The U.S.
- 9:45 Poster Session 1:
“Inquiry, evaluation and assessment in a primary class room” chaired by
Dr. Judith Sweeney Lederman
(Contributions from participants)
- 10:10 **Coffee break**
- 10:50 **Teacher support and training**
Tina Jarvis, Ph. D.
Director, Science Learning Centre, East Midlands, The U.K.
- 11:50 **Lunch**
- 13:00 Poster Session 2:
“Teacher support and training” chaired by Dr. Tina Jarvis
(Contributions from participants)
- 13:45 **Engaging the new generation**
Brenda Keogh, Ph. D. and Stuart Naylor, Ph. D.
Millgate House Publishing and Consultancy Ltd, Sandbach, the U.K.
- 14:45 Poster Session 3:
“Engaging the new generation” chaired by Drs. Brenda Keogh and Stuart Naylor
(Contributions from participants)
- 15.30 **Coffee break**
- 16:10 **Reports:**
IAP Working Group on Evaluation of Inquiry-Based Science Education Programmes
Glenn Hultman, Ph. D.
Professor, Linköping University, Linköping, Sweden
- Pupil’s learning in science teaching**
Jan Schoultz, Ph. D.
Professor, Linköping University, Linköping, Sweden
- Taking Science to School – How Children in K-8 Learn Science Ideas**
A Report by the National Research Council, The National Academies, The U.S.
Jean Moon, Ph.D.
Director, Board on Science Education, The National Academies, Washington, The U. S.
- 18:00 **Adjournment**

Tuesday, October 17, 2006

Session chaired by: Pierre Léna, Académie des sciences, France

8:30 ROSE, The Relevance of Science Education :

"Students' interest in science and technology - A comparison between primary and secondary schools in Sweden."

Anders Jidesjö,

Graduate student, The National Graduate School for Research in Science and Technology Education, Linköping University, Linköping, Sweden

9:30 Title to be confirmed

Stephen D.Parker, Ph. D.

Head of Sector: Education and Science

Research Directorate General

European Commission, Brussels, Belgium

10:15 **Coffee break**

10:45 **Beyond Scienceduc: POLLEN initiative and its perspectives in Europe**

Raynald Belay,

Vice-director, La main à la pâte, France

11:00 **Discussion about European perspectives**

- What could we learn from the results from Scienceduc? Common elements?

- How to disseminate the process to other countries?

- How to implement networks?

- What can we learn from each other?

- What transfer can we expect?

- Could we implement European development strategies?

12:00 **Conference general report**

Pierre Léna, Ph. D.

Member of the Académie des sciences, France

12:30 **End of the conference**

Welcome!

¹ *Scienceduc* is a project focused on the development of science teaching in European primary education with inquiry-type methods. The main objective is to disseminate best methods, techniques and practices on science teaching on primary schools through the establishment of a European network between 5 countries (Estonia, Hungary, France, Portugal and Sweden) in the frame of the formal education system. This project started on Nov 2004 and actions are scheduled over 2 years. The project sponsored by the European Commission and integrated to Nucleus cluster, a European science education initiative.

Links: Nucleus website: <http://www.xplora.org>

² *Pollen* (European project supported by the European Commission in the frame of the Sixth Framework Program on Science and Society) aiming at the development of a model for a sustainable improvement of science education in primary schools based on a hands-on approach and community participation. The project focuses on the implementation of 12 seed cities for science (www.pollen-europa.net since may 2006).