

## Highlights of the 1<sup>st</sup> International PROFILES conference

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Vital exchange during the interactive poster session ©FreieUniversität Berlin

From the 24<sup>th</sup> until the 26<sup>th</sup> of September 2012 the first International PROFILES Conference on Stakeholders Views regarding Inquiry Based Science Education took place in Germany at the Freie Universität Berlin. We would like to express our gratitude to the team of the Freie Universität Berlin whose organization of the PROFILES conference had been very successful! Among the more than 100 participants not only project partners from 20 different PROFILES countries could be found but also colleagues from schools, school-administration and universities that were interested in Inquiry-Based Science Education (IBSE).

Top-class keynote speakers held presentations on selected topics. Peter Gray (Norwegian University of Science & Technology) examined the relevance of IBSE as well as current global



Lecture Hall © Freie Universität Berlin

developments considering this topic. Shirley

Simon (University of London) gave a review on current indicators for Continuous Professional Development (CPD) for teachers, as well as an insight into the support of teacher ownership. Olaf Köller (IPN – Leibniz-Institut für die Pädagogik der Naturwissenschaften und Mathematik, Universität Kiel) gave a presentation on the promotion of scientific literacy in natural sciences. Moreover, he focused on the motivation of pupils as an educational goal and which conclusions could be drawn from empirical studies considering this topic.

In addition, the conference offered teachers a good possibility to “get on stage” themselves: Chrystalla Lymbouridou from Cyprus, Ilmars Rikmanis from Latvia as well as Funda Tunaboynu and Simge Akpullukcu from Turkey reported their experiences with PROFILES and discussed successful as well as problematic issues, which occurred during the course of PROFILES activities, with the audience.

An interactive poster session took place with a buffet including plenty of food and drinks for the conference participants. The posters, which had been created by teachers and partners beforehand, offered a selection of good-practice examples, practical experiences and results of researches considering natural science education and Continuous



Interactive Poster Session© Freie Universität Berlin

Professional Development (CPD) for teachers, stimulated further discussions and gave suggestions for the implementation of PROFILES modules in classes. In the course of the poster session conference participants exchanged their experiences, knowledge and examples of using IBSE. This session was perceived as very enriching by the participants.

Further suggestions by the PROFILES work package leaders gave insights into results of current developments in the following areas: Stakeholder Involvement and the analyses considering the “PROFILES International Curricula Delphi-Study on Science Education” (Theresa Schulte & Claus Bolte); the creation of innovative learning environments (Jack Holbrook & Miia Rannikmae) as well as measures to support Continuous Professional Development (CPD) and to increase teacher ownership (Avi Hofstein, Dvora Katchevich & Rachel Mamlok-Naaman). Last but not least Franz Rauch pointed out how involvement of participants in the ISBE-Network could be improved.

In 10 parallel workshops, additional PROFILES-topics were elaborated in greater detail. In the light of the Bologna Process, Declan Kennedy from the University College Cork sought to elaborate the meaning of learning outcomes within PROFILES teaching modules.

Thomas Mühlenhoff and Vincent Schneider from the Freie Universität Berlin gave an insight into the statistical analyses of survey data via R-Commander, a software which is seen as very appropriate in analyzing data e.g.

the PROFILES Delphi Study on Science Education or other data collected in the context of PROFILES (e.g. regarding students gains) or other interventions.

The project partners from Turkey, Finland and Cyprus showed examples how information and communication technology (ICT) can support PROFILES science teaching and learning via different programs and tools: e.g. including robotics in PROFILES modules (Bulent Cavas, Yasemin Ozdem & Pinar Cavas), using social software in pre-service teacher education (Sirpa Kärkkäinen, Anu Hartikainen-Ahia, Tuula Keinonen & Kari Sormunen) and including WebQuests as a focus for student learning via IBSE (Laura and Gabriel Gorghiu). Peter Labudde from the University of Applied Sciences of Northwestern Switzerland (Deutsch: Fachhochschule Nordwestschweiz) identified an interdisciplinary Science-Technology-Society (STS) approach to science teaching in line with the PROFILES philosophy. A focus on the development of classroom teaching modules meeting the intentions of PROFILES was highlighted by Jack Holbrook (ICASE), while Ingo Eilks (Universität Bremen), Rachel Mamlok-Naaman (Weizmann-Institute of Science, Israel) and Franz Rauch (Alpen-Adria-Universität Klagenfurt) focused on the potential of action research in overcoming issues so as to develop exemplary practices in the implementation of PROFILES teaching. Josef Trna and Eva Trnova from the Masaryk University in the Czech Republic gave a



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detailed input on the inclusion of

experimentation within different levels of IBSE.

Avi Hofstein, Dvora Katchevich & Rachel Mamlok-Naaman (Weizmann Institute of Science, Israel), Franz Rauch (Alpen-Adria-Universität Klagenfurt) and Dace Namsone (University of Latvia) explained the need to establish evidence of teacher ownership and leadership which goes beyond levels of self-efficacy in utilizing PROFILES teaching modules.

Finally, the “external evaluator” Wolfgang Gräber as well as the “critical friend” Peter Childs presented their thoughts about IBSE, and in particular about the activities of the PROFILES project. The conference was rounded off by a very entertaining and instructive popular scientific evening presentation: The presentation entitled “Some

The overall feedback on the conference from organizers and guests was very good and participants stated that they are already looking forward to the next conference, which is going to take place at the end of August/ beginning of September 2014 in Berlin.



Lecture: “Some like it hot” ©FreieUniversität Berlin



Conference Participants ©FreieUniversität Berlin

like it hot” by Klaus Roth gave need-to-know-trivia about the history and botany of the chemistry of hot pepper.

Similar to the procedure of the whole conference also the final conference dinner offered a friendly atmosphere for the possibility of vivid discussions and exchanges of experiences between the participants.

All articles, keynotes, lectures, posters and workshops were published as a book. This book can be accessed via the internet: <http://ius.uni-klu.ac.at/misc/profiles/articles/view/29>