

**WORKSHOP H:**  
**INTERNATIONAL EXCHANGE OF STUDENTS AND TEACHERS**  
**A WAY TO STIMULATE SCIENTIFIC THINKING**

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Which experiences can be gained by means of international exchange of students and teachers? What is the meaning of the term 'scientific thinking' and last but not least: what has the one to do with the other? The discussion in this workshop focused on these questions, proposed a model, reported a wide range of different experiences in international exchange, named problems and suggested solutions.

**Scientific Thinking**

There was an intense discussion about this term 'scientific thinking' and its relationship to international exchange. At the end of the discussion a simple (possibly simplifying) model was constructed setting scientific thinking into the context of rules and regulations of a scientific community (Paul S. Kuhn; see: Tab. 1). Rules and regulations refer to processes of *consolidation* and *change* within and outside of a certain scientific community national or international. Within this context workshop members came to terms to discuss processes and problems of international exchange.

taking" (ger.: Anamnesegruppen) program in Rennes, France, with both, French and German students and reported details about the process of the program's implementation to the workshop.

At Leeds' medical school (UK) a teachers' exchange program was set up. Obstetricians and gynecologists meet regularly on the basis of workshops to exchange experiences and to improve the teaching system.

There was a consensus that international exchanges could allow insights into details of foreign medical education systems, e.g. the curriculum, teaching and learning methods such as offering learning experiences to the students in selected areas of the health-care system. Such organized learning experiences were reported from Poland where students from the third year on have the opportunity to work in low developed rural districts of Poland - a program for about 300 native and another 60 foreign students. In Turkey quite a similar program exists in the area of Primary Health Care. In Tel-Aviv an Exchange-Residency-Training program exists with English speaking staff and patients, fully compensating existing problems with Israel's native language.

Tab. 1

Framework of the term 'Scientific Thinking' <b>Science is a sample of rules referring to:</b>
<ul style="list-style-type: none"> <li>● Definition of problems</li> <li>● Definition of methodology (e.g. data gathering, data processing, performance of results)</li> <li>● Definition of the parameter: 'problem solved' (lege artis)</li> <li>● Definition of communication rules</li> <li>● Definition of controlling routines</li> <li>● Definition of membership in the 'scientific community' (Paul S. Kuhn)</li> </ul>

**International Exchange**

Several examples were discussed referring to students' exchange as well as to teachers' exchange.

Mr. Büttner from Erlangen (FRG) and his colleagues tried to implement a "group on history

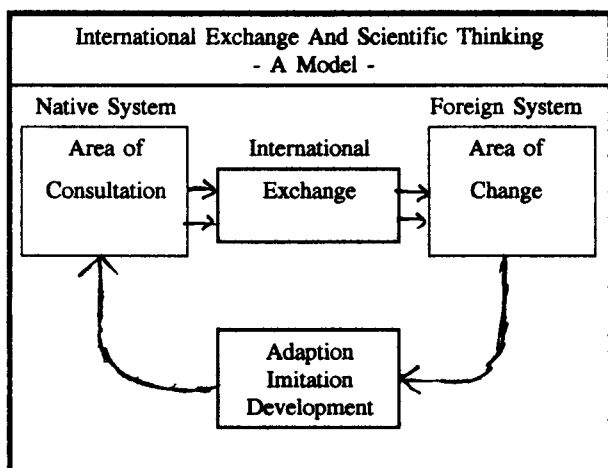
Further examples were discussed based on numerous experiences of students who went abroad. Discussion showed the extreme interest of students to gather experiences in foreign countries, experiences they couldn't make in the fairly overcrowded health system in Germany. Unfortunately the interest of foreign students to come to Germany seems to be low. However the

Karolinska Institute in Stockholm (Sweden) plans to start a student exchange program with the FRG.

In the discussion attention was drawn to the process(es) of change a system, i.e. the system of education, its development and even more to the problems many students as well as teachers are facing in making efforts concerning this change.

The comparison of experiences in foreign countries with those at home could (and should) lead to the realization and evaluation of deviances (Lavalle) in diagnosis and therapy. These deviances can obviously be observed best in the area of Primary Health Care - a fact which makes the work in this area very precious. The process of comparing deviant experiences can enhance reflections and possibly change in the native country. In this way, the emitting countries could profit by the exchange as well.

Tab. 2



If scientific thinking implies to "think in a critical, logical, systematic, and truthful manner and therefore to use appropriate methods", as Prof. Habeck put it in his introductory remarks to the workshop and if we add a definition of the term "scientific thinking" derived from the sociology of sciences as a "sample of rules or standards, like defining scientific problems, the methodology, and communication rules", workshop members agreed that international exchange can positively be a stimulus for scientific thinking.

**Problems and suggested solutions**

The discussion focused on the following crucial problems:

Problems of communicating in a foreign language, especially for students from Turkey, Iraq, Israel and other non-EC-countries. Problems not only arise when trying to understand the lectures and textbooks but especially in the doctor-patient-interaction which is stressed immensely, if the every-day-language is not adequately mastered by the student.

Financial problems of international exchange for board & lodging and insurance, especially e.g. for students from Poland or Czechoslovakia, studying in one of the West-European countries.

Structural problems of the host-country students face when they encounter less than motivated teachers, rigid bureaucracy or restrictions in the number of foreign students allowed to work in the host-country.

Further problems are caused, as many students reported, by bureaucratic state examination boards in Germany. For many courses, exams, and places no credit is given - a fact that restrains students from going abroad and contradicts the political objective of programs like the Erasmus-Scheme and others advertised in so many political speeches.

The workshop discussed possible approaches to solve these problems, not only to help the majority of highly motivated students to gain precious learning experiences in foreign countries, but to improve the transfer of knowledge and change within the EC-states as well as in non-EC-countries, especially those of Eastern Europe.

The **language-problems** can be surely overcome by having conversations with fellow students. However the universities could provide or at least support language courses in collaboration with their own language departments for those students who lack confidence in their capability.

The **financial problems** could possibly be solved by national or EC-funds. The Erasmus-Scheme can be held up as an example which includes a grant plus travelling and other expenses by the EC.

The **structural problems** seemed to be the most difficult to solve. Their solution depends directly on the international cooperation of the faculties.

This cooperation presupposes faculties' motivation and resources and implies regular meetings of both students and professors, listening carefully to each other, realizing the changes and the improvements of medical education foreign faculties already tried to perform.

So the workshop-members strongly recommended the institutionalizing of an AMEE standing committee or group on international exchange for students and teachers in all European countries including Eastern Europe.