

## **ECTN-A General Assembly online meeting October 3<sup>rd</sup>, 2020**

### **Item 8 (L. Gros)**

#### **Report on Standing Committee Quality Standards in Teaching (SC-QST)**

Well before the scheduled meeting in Perugia, Leo Gros looked into various possibilities to set up useful projects for ECTN which might develop into grant applications – so to speak a product development in ECTN. This was in part based on discussions he had held with Reiner Salzer and Gergely Thot in Kraków on April 12<sup>th</sup>, 2019. The results were presented to the GA at the end of the Kraków meeting and approved.

As one promising field, a European training concept for teachers was identified. It might consist of pedagogical content knowledge (PCK), pedagogical knowledge (PK) and content knowledge (CK). Objections saying that it would be impossible to balance the multiple and different approaches (schemes, schedules, one- or two-subject teachers) to teacher training in Europe do not take into account that, as in all modern curricula, a syllabus would not be based on contents but on learning outcomes, leaving the way open in which these are approached. Moreover, complexity should be reduced to the basics and applicable knowledge and skills. The ECTN approach to this field would also follow option 3 of WP 12 and adapt the Eurobachelor/-master label schemes (least common denominator, common minimum standards) and include scientific knowledge, social and industrial (real life, application) aspects. It would also be a “distant mirror” of the good old TUNING approach, not pretending to equalize, but to tune different European approaches.

In the first place, secondary school teachers would be the target group.

[In Germany, there is a lack of students who want to become a chemistry teacher; career changers, e.g. from industry or lab practice are invited to join in.]

Based on all these considerations and discussions, Leo had phone calls with several colleagues including Terry Mitchell. Terry gave the advice to contact the German MNU with Bernd Ralle, who had co-operated in developing a common reference for the sciences (GeRRN). With people from this (European) environment, we would have partners who genuinely come from the didactic side and have a European perspective. MNU co-operates with partner organisations in Benelux, UK, F, DK and I. MNU might help to bridge the gap between general curricular work in GeRRN and teacher training by formulating expectations/demands the framework would have with respect to teacher training. Bernd referred to Jürgen Langlet. Jürgen, a secondary school teacher for Biology and Chemistry and 10 years the headmaster of a German Gymnasium and of the German International School in Brussels, had been a member of MNU board from 2010 to 2016 and then headed the commission who developed the third version of GeRRN. Since about one year he is now working as a co-ordinator in the Institute for Quality Development IKB in Berlin and helps to develop standards for the scientific subjects. He had agreed to be invited as a speaker for Perugia and sent an abstract of his contribution (attached).

Given that the Perugia meeting had to be postponed and an intermediate meeting is now held online, we decided to invite Jürgen to the expected Perugia meeting in the spring of 2020. Jürgen and Bernd Ralle see this initiative as a chance to formulate demands and expectations resulting from GeRRN for teacher training.

Should doubts concerning the teacher training approach weigh too heavily, Terry Mitchell suggests to consider an alternative: Why not join MNU and other European teacher organisations in creating a Europe-wide framework for chemistry teaching in schools (curricular, but aiming at outcomes etc.), taking into account the newest didactic as well as content and societal aspects (Leo: chemistry in everyday life, problem based learning, simple-low cost-low energy/material experiments, aspects of problem solving for the future of mankind) ....

Leo himself, as a retired person, does no more have the infrastructure of his university. Moreover, support within ECTN for concrete work in the SC was limited or not sustainable during the GA in Kraków and since then. So he sees himself as co-ordinator who can bring people and possible tasks together. To this effect and to keep the ECTN community informed, this small report was written for the online GA October 2020.

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reading material: <https://www.nature.com/articles/d41586-018-06830-2>