



Training Communication and Method Skills to Enrich Scientific Education

Nicole Lengert

Realschule Plus Vulkaneifel, Germany (nicolelengert@t-online.de)

Acknowledging that communication and method skills are basic requirements for a successful education, our school has set the training of these as essentials in the school quality program. Additionally, Realschule Plus Vulkaneifel is a participant in a model project about media literacy¹. In Realschule Plus Vulkaneifel we have made it a priority to provide our students with the tools for becoming responsible and mature adults in general and successful science students as well. To achieve this, the training we implement is in accordance with international and national German education standards. My poster proposes to convey the importance of the training in science classes as well as possibilities to train students.

International and national councils and boards such as EU, OECD, and Ministries of Education have standards on important qualifications including that students need to achieve long-term strategies on communication, methods of a self-organized learning, and media literacy. The Rhineland-palatinate Ministry of Education released guidelines for school quality², listing training communication and method skills as one of the greater aims of education. These have been taken into consideration and are imminently effecting all subjects taught at Realschule Plus Vulkaneifel. We have developed a program, where students “file” their acquired knowledge on communication and methods in a portfolio using those in multiple situations and therefore internalizing them. Our training is based on a competence learning program developed by Werner Loch, Gerhard Leisenheimer, and Kurt Schenk, the latter being a previous principal at Realschule Plus Vulkaneifel, who introduced the training to the staff. It is continually being evaluated and refined. The newly created subject “Naturwissenschaften”³ combines Biology, Physics, and Chemistry with the aim of providing a more global and concept-orientated learning that already incorporates training communication and method/media skills and the idea of an education for sustainable development (ESD). The same is true for the relatively new subject “Gesellschaftslehre”⁴ which comprises Geography, Sociology, and History. The ESD skills stated by the UNESCO have been taken into account when creating our program.

We teach our science students to be able to extract the relevant information from a text and learn how to argue various topics successfully, for example the necessity of ESD. They practice preparing speeches, learn about presentation techniques, in addition how to critically evaluate information brought to them through the media and use them in various contexts. In fifth grade, they start learning phrases and expressions which facilitate communication and debates on scientific topics. Throughout the years – 5th through 10th grade for our high school – the students’ abilities are cultivated by a spiral curriculum provided by the teaching staff. The teacher facilitates independent research by being a consultant rather than a lecturer. The communication and media literacy training is complemented by creating method cards on scientific techniques such as reading and writing graphs, how to record a scientific experiment, research or presentation methods - and practicing these repeatedly.

The program’s success is visible in the students’ achievements. Even politicians and businessmen who visit classes are impressed by the students’ qualifications, apparent in their speaking ability and having the confidence to lead discussions without a teacher’s guidance. The long-term effects cannot be negotiated. The skills they learn at our school through the complex training are important to the students future success as scientists.

footnotes

1 see <http://medienkompetenz.rlp.de/>

2 see <http://www.mbwjk.rlp.de/bildung/schule-und-bildung/schulqualitaet/orientierungsrahmen-schulqualitaetors/>

3 similar to Sciene, www.naturwissenschaften.bildung-rp.de/

4 similar to Social Science