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Main Difficulties in Teaching Chemistry in Secondary Schools

TEACHERS' CASE STUDY

Teacher's Case Study No 10

Subjects: Mathematics. ICT
School: Oberstufenzentrum Informations- und Medizintechnik
Place: Berlin, Germany

Description of the Case Study

1. What do you think are the reasons for major difficulties in learning chemistry at school?
   I am not a Chemistry teacher but I am teaching Mathematics and I am a Physicist too, so I think the problems are the same in this kind of lessons:we don't have enough time and at the same moment there is a great deal of matter to be taught, especially in the upper classes. This often leads to problems with students who need more attention. So in the end only "the strongest" can survive. There should be more time for the weaker students. Our teaching methods often have to focus on more frontal lessons. Even if I do know that other methods are much more efficient and I do what I can but often the daily routines are barriers for that.
2. What major difficulties do you have in teaching chemistry?
   I can answer the question out of the perspective of Natural-Technical Sciences teaching: *if a student is not motivated and does not have positive experience with the subject he will never be a good student. Nothing is more difficult in lesson as to motivate and integrate a student who just isn't interested in the matter. I think that teaching methods as e.g.: cooperative learning have to the standard. This means more time and more teachers*
3. What kind of courses - if any - on didactics of chemistry did you attend?
   none
4. Why do many young people quit learning chemistry and, in general, scientific studies after upper secondary school?
   See above

Education and Culture
Lifelong learning Programme

Education and Training

5. How could young people be helped take up scientific studies after upper secondary school?
   Good advice, good guidance from school to work.
6. Which initiatives has your country undertaken in this direction?
   .I know of a pilot programme undertaken by the Federal Government and the states for increasing the efficiency of NAWI. 180 schools all over Germany can participate in this. I don't actually know the results.
7. Have you ever taken part into a research project concerning scientific learning?
   No
8. Could you mention any recent research you have heard of, that might be useful to our project?
   No
9. Could you suggest any other areas of research that might be useful to our project?
   No