TEACHERS' CASE STUDY

Teacher's Case Study N.: 6

Subject Taught, Place: *Maths and Sciences (lower secondary school), Alessandria (Italy)*

Description of the Case Study

The teacher we interviewed thinks that the reasons for major difficulties in learning chemistry at school are that students find cognitive obstacles because the contents are too "high". Her main difficulty in teaching is to supply students with an adequate microscopic model of matter.

The teacher thinks that many young people quit learning chemistry and, in general, scientific studies after upper secondary school because of upper secondary school teachers: students don't understand and start being afraid of the subjects. Furthermore also employment requires other professional profiles: if secondary school teachers did a better job there would be no need of motivating students towards scientific universities.

She knows some initiatives in the field of promoting lifelong learning: some "open days" held by universities. She hasn't any suggestion.

Interview: teacher n.6 (English)

1.What do you think the reasons for major difficulties in learning chemistry at school are? (lack of basic requisites, cognitive problems linked to some contents, other). (Please justify your answer.)
Students find cognitive obstacles, the contents are too "high".

2.What major difficulties do you have in teaching chemistry? (lack of labs, lack of time, other) (Please justify your answer.)
It's not easy to supply students with an adequate microscopic model of matter.

3.What kind of courses - if any - on didactics of chemistry did you attend? (Please specify whether the courses were on based mainly on theory or on practice)
Yes, during SSIS (school that specifically prepares to teaching). Courses were mainly theoretical..

4.Why do many young people quit learning chemistry and, in general, scientific studies after upper secondary school? (conviction that chemistry is difficult, or that a particular attitude is needed, other.) (Please justify your answer.)
Responsibility lies, in my opinion, completely on secondary school teachers. Students don't understand and start being afraid of the subjects. Furthermore also employment requires other professional profiles...

5.How could young people be helped take up scientific studies after upper secondary school? (Please justify your answer.)
I don't know if it's the case of "orienting" young people to take up scientific studies! Of course, if secondary school teachers did a better job there would be no need of "orienting" students.

6.Which initiatives has your country undertaken in this direction?
There are some "open days" at Universities.

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?
I don't know.

9.Could you suggest any other areas of research that might be useful to our project?
I don't know.

Interview: teacher n.6 (Italian)

1.A cosa si devono le maggiori difficoltà che gli studenti trovano nello studio della chimica a scuola? (mancanza dei requisiti di base, ostacoli cognitivi in alcuni contenuti, altro). (Argomenti la risposta).
Gli alunni incontrano ostacoli cognitivi, i concetti sono troppo "alti".

2.Quali sono le principali difficoltà che si incontrano dovendo insegnare chimica (assenza di laboratori, tempo insufficiente, altro) (Argomenti la risposta).
Non è semplice fornire agli alunni un adeguato modello microscopico della materia...

3.Ha mai frequentato corsi che trattavano tematiche inerenti alla didattica della chimica? Se sì, quali? (Specifichi se i corsi avevano un'impostazione più prettamente teorica oppure pratica/laboratoriale.)
Sì, alla (SSIS), i corsi erano prevalentemente teorici.

4.Per quale motivo molti giovani abbandonano gli studi chimici (e, in generale, gli studi scientifici) dopo la scuola secondaria? (convinzione che la chimica sia "difficile", che sia necessaria una particolare attitudine, altro). (Argomenti la risposta).
La responsabilità è, secondo me, degli insegnanti delle scuole superiori. Gli alunni non capiscono e iniziano ad avere paura delle discipline. Inoltre anche il mercato del lavoro richiede altre figure professionali...

5.In che modo si potrebbero orientare i giovani a intraprendere studi scientifici dopo la scuola secondaria? (Argomenti la risposta).
Non so se sia il caso di "orientare"! Certo, se gli insegnanti delle superiori facessero meglio il loro lavoro forse non ci sarebbe bisogno di orientare.

6.Nel suo paese quali iniziative sono state messe in atto in questa direzione?
Ci sono degli open day all'università.

7.Ha mai partecipato a progetti di ricerca sull'apprendimento scientifico?
No.

8.Può citare qualche ricerca recente della quale è venuto/a a conoscenza e che potrebbe essere utile per il nostro progetto?
Non so.

9.Può suggerire altre aree di ricerca che potrebbero essere utili per il nostro progetto?
Non so.