



Barriers to the Study of Scientific Subjects and Level of Knowledge of Basic Chemistry

ADULT LEARNERS' CASE STUDY

Adult Learner's Case Study N.: 8

Subject Studied, Place: *professional formation, Aosta (Italy)*

Description of the Case Study

The person we interviewed didn't continue scientific studies because he was going to continue his father's job (carpenter) and he consequently chose a specific school. He found difficulties in studying chemistry at school, because he didn't understand it.

His self evaluation of knowledge of chemistry is "poor". He thinks that maybe mass media do not provide adequate information, but sometimes there are programs that try to explain scientific matters using a simple and easy to understand language.

The word "Chemical" is associated with the verb "to distrust".

He answers correctly to the basic chemistry test.

N.B. The text of the interview carried out is available below.



Interview: adult n.8 (English)

1. Why have you decided not to continue your studies in the scientific field after upper secondary school? (Please justify your answer.)

I was going to continue my father's job (carpenter) and I consequently chose a specific school.

2. What are the major difficulties have you found in studying chemistry at school? (lack of basic requisites, cognitive problems linked to some contents, other). (Please justify your answer.)

Difficult because I didn't understand it.

3. How would you assess your knowledge of chemistry? (poor, fair, good, very good).

Poor.

4. Should you have any scientific curiosity, would you try to satisfy it? If so, how would you do it?

I read specific magazines, I search the Internet or I ask more competent people.

5. Do you think mass media provide access to suitable scientific information (particularly on chemistry) that you can understand? (Please justify your answer.)

Maybe not adequate, but sometimes there are programs that try to explain scientific matters using a simple and easy to understand language.

6. What do you associate with the adjective "chemical"?

To distrust.

7. If you melt 5 grams of salt in 100 grams of water, the solution obtained will weigh:

105 grams

between 100 and 105 grams

100 grams

(Please justify your answer.)

105 because they add to each other.

8. We sometimes perceive the presence of some substances through the sense of smell, as they give off a characteristic scent. Do you think it is made of material or immaterial particles? (Please justify your answer)

Material because they are volatile.

9. Can you think of an example of a pure substance in solid state?

Carbonium.

10. Can you think of an example of a pure substance in liquid state?

Quicksilver.

11. Can you think of an example of a pure substance in gaseous state?

Hydrogen.



Interview: adult n.8 (Italian)

1. Per quale ragione ha deciso di non proseguire gli studi scientifici dopo la scuola secondaria? (Argomenti la risposta).

Avevo intenzione di continuare il lavoro di mio padre (falegname), quindi ho scelto una scuola che fosse adatta.

2. Quali sono le principali difficoltà che ha trovato nello studio della chimica a scuola? (mancanza dei requisiti di base per comprenderla, ostacoli cognitivi in alcuni contenuti, altro). (Argomenti la risposta).

Difficile perché non la capivo.

3. Come reputa le sue conoscenze chimiche? (povere, discrete, buone, molto buone)

Povere.

4. Se ha una curiosità in ambito scientifico, cerca di soddisfarla? In caso affermativo, come procede?

Leggo riviste, guardo su internet o chiedo a chi ha maggiori competenze.

5. Ritiene che i mass media consentano al pubblico di accedere ad adeguate informazioni scientifiche (in particolare sulla chimica) comprensibili? (Argomenti la risposta).

Magari non adeguate, ma a volte ci sono trasmissioni che cercano di spiegare argomenti scientifici usando termini abbastanza semplici e comprensibili.

6. Che cosa associa all'aggettivo "chimico"? (Argomenti la risposta).

Diffidare.

7. Sciogliendo 5 grammi di sale in 100 grammi d'acqua, la soluzione ottenuta peserà:

105 grammi

O tra 100 e 105 grammi

100 grammi

(Argomenti la risposta).

105 perché si sommano.

8. A volte ci accorgiamo della presenza di certe sostanze attraverso l'olfatto. Emettono, infatti, un odore caratteristico. Secondo lei, questo odore è costituito da particelle materiali oppure no? (Argomenti la risposta).

Materiali perché sono volatili.

9. Quale potrebbe essere un esempio di sostanza pura allo stato solido?

Carbonio.

10. Quale potrebbe essere un esempio di sostanza pura allo stato liquido?

Mercurio.

11. Quale potrebbe essere un esempio di sostanza pura allo stato gassoso?

Idrogeno.