

Report on teaching visit – Wien, Austria – 17.1 - 25.1.2009

Before the visit

When I accepted to contribute to the development of this project, I was aware of the difficulties I would have probably met. In fact, I got my first degree in Foreign Languages and Literatures and, after the nearly twenty years-long experience as a teacher of Italian as L2 (fifth to tenth grades) in a German school in Low Saxony (Federal German Republic), I went back to Italy, since I got a permanent teaching position in the Italian Primary Schools, and I started teaching mathematics in a primary school in Siena.

I was aware that my mathematical knowledge is the result of “field experiences”, in-service training courses, and self-training with texts and papers about the discipline. On the other hand, the nearly twenty years of professional stay in Germany have probably given me a knowledge of the German language, both at oral and written level, good enough to provide me a good autonomy in communication.

Many thanks to professor Franco Favilli, Department of Mathematics of the University of Pisa, and to professors Lucia Doretto and Maria Piccione, Department of Mathematics of the University of Siena, for their moral support.

My teaching activities were planned to take place by mid-December 2008, but a school trip of my class, the Christmas holydays, and a commitment in the first decade of January forced me to postpone my departure to Wien until January 17th, 2009.

The topic of my teaching activities was the equivalence of fractions.

The copies of the pages with the textbook exercises (*Blickpunkt Mathematik*) clearly showed that, to highlight the relation between the unity and its parts, the “concept” of fraction was dealt with using the classic pie divided in several “equal” parts, in association with examples of partition, as operator on sets of homogeneous objects and as classification in a given set. The equivalence among fractions was calculated (*erweitern und kürzen*) by using the invariance property.

Since I was not formerly informed about what parts of the teaching unit had already been introduced to the class, I thought that, taking into account what Martha Isabel Fandiño Pinella claimed in her book “*Le frazioni aspetti concettuali e didattici*”¹, the topic fractions “seen as the set of different representations” could be treated in an interesting way under the point of view of ratio and proportionality in connection with probability or, simply, as a way to show the comparison between the number of favourable occurrences and the number of all the possible occurrences for a given event.

¹ “Fractions: conceptual and didactical aspects”

The visit

In this teaching experience I was accompanied by my School Principle, dr. Maria Donata Tardio: I asked her to be present during the lessons and, since she does not master the German language, to observe pupils' reaction from their body language, particularly in terms of interest or lack of interest in my teaching proposals.

Saturday, 17 January 2009

Arrival in Wien, from Florence.

Sunday, 18 January 2009

First contacts with the teacher Christine Brunner, who informed me about the timetable, the class composition and its proficiency level. Since Christine considered the class "quite weak" in mathematics, she advised me to make a general repetition of the topic 'fractions'. We agreed that I would have spent a few hours in the first, third and fifth classes and observed mathematics lessons taught also by other teachers.

Monday, 19 January 2009

I was introduced to *HR Mag. Walter Holub*, the school principle. He provided me with some information about his school *BGR 6* (Bundesrealgymnasium) and the Austrian school system, in general. Later on, I went to the class II D to observe Christine Brunner's lesson. I introduced myself to the pupils and explained them the aim of my presence in their classroom.

The class, 26 pupils, had not been informed about my visit. Nevertheless, after they quickly overcame their initial concerns, the pupils acted in their usual way, some of them being interested, other not, in what was going on in the classroom.

The teacher gave the pupils their last test, explained the evaluation criteria and the results by level group. Afterwards, she told each pupil the mark he/she would have got in the semester evaluation form, motivating each mark.


I asked some pupils to show me his/her test and I realized that the assignment was about fractions (*Bruchzahlen*) and that the topic had already been fully introduced.

At the end of the lesson, I was "flooded" with questions about Italy, about easy and difficult aspects of the Italian language learning.

I then accompanied the teacher, C. Brunner, in her teaching activities.

Tuesday, 20 January 2009


I introduced the topic of the lesson and, having heard some of the pupils whispering "*Schon, wieder Bruchzahlen!*" (more fractions!), I explained that we were going to make a short and general revision of that topic, actually paying more attention to the notion of equivalent fractions. As I wanted to make use of transparencies, I asked for non-fading markers. I took markers of two colours (black and blue), I put them in a non-transparent box and asked a pupil to extract one of them. Afterwards I carried on in accordance to my lesson plan (*Annex 1*).

The teacher told me (whispering) that it was early to introduce probability  [Videoclip1](#), as it was part of the programme of the following years. I therefore simply calculated on the blackboard the chance for that event and switched to the operational phase. The poor manual skills of a significant majority of pupils pushed me to give up the construction of a dynamical model with transparencies and to propose, instead, to make congruent stripes divided in fractional units, represented by adjacent rectangles.

The activity proved to be difficult, because pupils got surprised by a method that differed from the usual front one and showed many difficulties in manual dexterity.


Wednesday, 21 January 2009


Continuation of the activity according to the *Annex 2*.

Pupils were interested and answered questions with attention and commitment  [Videoclip2](#). A few pupils asked to continue the work at home with other fractional units.

The pupils' involvement was so high that, at the end of the lesson, rushing to answer a question posed by a pupil (the time was over), I made a mistake on the blackboard!

Thursday, 22 January 2009

I continued the activity on fractions starting from the mistake in the previous lesson and its correction, going back to the concept of "ratio"  [Videoclip3](#) introduced in the first lesson.

My teaching experience ended up with the elaboration of worksheets (Annexes 3 and 4)  [Videoclip4](#), the distribution of homework sheets (Annexes 5 and 6) and a scheme for the production of a domino about fractions (Annex 7).

Friday, 23 January 2009:

Observation activity in other classes in accordance to the workplan agreed with Miss Brunner.

Saturday, 24 January 2009:

Free.

Sunday, 25 January 2009:

Arrival in Florence, from Wien.

Conclusions

At the end of my teaching experience I can say that not having a background in mathematics and not having taught mathematics in lower secondary schools represented, at first, emotional constraints, as I feared not to be able to meet the expectations from the disciplinary viewpoint.

To realize that the topic fractions had already been introduced and concluded, as first teaching unit in the programme of the current school year, was surely not helpful

either. In fact, to work on that topic was poorly stimulating and interesting for the pupils, also considering that the results from the assessment test had been evaluated for the semester school report.

Nevertheless, my uncertainties and fears disappeared thanks to the positive feedback I had from the pupils. Also professor Brunner confirmed that she was positively surprised by the pupils' involvement as well as by the way all pupils had got involved, regardless of their learning abilities.

In conclusion, I can say that the experience was interesting, as it allowed me to grow professionally in a school context different for both the language and the mathematics teaching style.

However, I think that the time available was not sufficient with respect to

- **The planning** of the activity: a more direct co-operation between the hosting and visiting teachers in the coordination of the activity as for the “when” and “how” could ensure more fruitful teaching;
- **The observation** of the class-group: one hour was not sufficient to get meaningful information about the pupils' learning level, taking also into account that the topic had already been taught (discussion of tests and marks included);
- **The implementation**: three lessons of fifty minutes turned to be not completely sufficient for the discussion of the topic.

I believe that knowing the language is fundamental: the more it is mastered, the more it supports the work of the visiting teacher. This knowledge, in fact, allows the teacher to rapidly make contacts with pupils and face any kind of requests, especially unexpected ones.