

DK – Jeanne Christensen and Nadia Kjelsmark, student teachers

Report on teaching visit – Prague, Czech Republic – 30.11 – 5.12.2008

Before the visit

We had a brief contact with the teacher, Petra Svrckova, before our departure. We told her when we would arrive and what we had planned to teach. We were free to plan the teaching within the topic of Pythagoras in which we had to adjust the teaching to an eighth form. Most of the contact took place between Petra and Niels, the teacher with whom we travelled. We agreed that Niels was to be the link to Petra, so that there would be only one person to take care of this, which made things much easier for everyone. Therefore we had a running contact to Niels about various practical matters.

Our comments on teaching observations

Very soon we observed that the structure was not so strict and old-fashioned as we had assumed; yet, the pupils stood up when the teacher entered the class and did not sit down until they were told to.

During the lesson there was a pleasant and relaxed atmosphere. The relations between the teacher and the pupils were respectful, and it was evident that both parties cared for and appreciated each other.

The pupils were hardly distinguishable from Danish pupils: They chatted, made jokes with each other and were hanging across the tables. An important difference from Danish pupils was that the Czech pupils generally worked more seriously with the tasks given, both individually and in class.

The pupils' academic level and knowledge turned out to be much higher in comparison to a peer group in Denmark. The pupils were much better at mental arithmetic; they did not use calculators because they knew their tables from 2 to 20 by heart, both when they were to raise to the second power; and also when they were to find the square root.

However, the pupils' high academic level was not due to the fact that they had new and exciting teaching materials, because compared to the teaching materials in most Danish schools, they were worn down. We saw their maths books, and even though we did not understand all tasks, it was obvious that there was far more text in the Czech maths books in comparison to the Danish ones. Petra characterized the maths books as useless within certain fields, and therefore she made a good deal of the teaching materials herself in the form of maths games.

Much of the teaching we observed in years seven and eight was conducted as teacher-directed teaching at the blackboard; however, the pupils were included as they were to make calculations on the blackboard, which they willingly did. We also observed a lesson in a fifth form in which most of the teaching was group work where the pupils were sitting on the floor making calculations in small groups. From our observations we conclude that the primary way of organizing teaching is in the form of teacher-directed classroom teaching in which the focus is on the teacher and on what happens

at the blackboard. However, it was obvious that the pupils had much experience in group work and in individual work, too.

Comments on our teaching

Together with the pupils we were to prove Pythagoras' theorem, and the pupils were to learn to use the formula. At home we considered thoroughly how we could explain to and show the pupils the proof without the language becoming a barrier. We decided that we would do it the same way in Prague as we would have done it in Denmark. We chose to make the proof very visual, and therefore we planned that the pupils so to say were to cut out the proof in cardboard.

There was a nice relaxed atmosphere in the classroom as we were teaching. Our first lesson was between 2 and 3 p.m. The pupils were visibly very tired; they joked and laughed, and it was difficult for them to understand what they were to do, when, how and how much they had to cut. In the second and third lessons (in the morning) the pupils were much more serious; they participated, they understood what they had to do and they solved the tasks with a lot of involvement.

The pupils welcomed us warmly; they were kind and co-operative. In the beginning they were rather shy and found it difficult to express themselves in English. The fact that they did not understand everything we said limited and frightened them; but they fought assiduously to follow our teaching. It was evident that although they did not understand the spoken language, they were able to profit from the teaching because of the written language, mathematics, which is common to everyone. They understood the mathematical terms and in that way they were able to profit from the teaching. This means that we must conclude that it is not of great importance that the teaching of maths is conducted in a foreign language – it just means that both the pupils and the teacher have to adjust to the situation.

When we saw how fast the pupils solved the tasks, we feared that that we had not brought enough material along; but it turned out that the amount of material was satisfactory, though. The pupils needed calculators to solve some of the tasks as it was demanded that they could find the square root of numbers which are not square numbers. Not all pupils had brought calculators, and the school did not have any they could provide the pupils with. We soon agreed that it was a good idea the whole time to sum up on the blackboard in order for all pupils to catch up, get the results if they did not have calculators and understand how the problems were solved, which all of a sudden made everything take more time, and consequently we had brought enough material. Many of the pupils wanted to go to the blackboard and show how they had completed the task. Often the results were correct; but they found it difficult to make themselves understood in English. Even the formula $a^2 + b^2 = c^2$, which we had repeated over and over again, was suddenly difficult to remember in English when they were standing at the blackboard in front of the whole class.

After the visit

We quickly realized that the pupils' academic level was higher, and that they were much better at mental arithmetic as they did not use calculators because they knew tables from 2 to 20 by heart, which gave us food for thought. We have seen and

experienced the importance of the pupils' learning the tables by heart which prevents them from being limited by the calculator, but rather liberated from it. The calculator should not be used in maths lessons until the pupils have learned the four basic arithmetical operations and tables. If the pupils learn how to use their heads, they will do much better in education later in life.