

Mathematics Project 6 till 13 February

Namwala High School

There are two kind of recommendations

- a. The personal ones which were discussed in the afternoon after the lessons were visited and are no part of this report
- b. The general ones which concern the teaching at this school and especially the teaching of mathematics. This is the purpose of this report.

The general recommendations can be differentiated in four groups:

1. Aspects on which the teacher can take influence.
2. Aspects which concern the Head of the Maths department.
3. Aspects which will be brought to the attention of the Headteacher of Namwala High School.
4. Aspects mainly of financial nature which can be delegated to Namstift.

1. Aspects on which the teacher can take influence

In a situation where classes contain over 50 and sometimes over 60 students the preparation for a lesson is extremely important, especially in the light of the time management, so that every student has at least one opportunity to talk with the teacher. Furthermore I think that Talk and Chalk teaching remains the most important way of transferring knowledge, because of the financial situation of the school and the size of the classes. People nowadays hope that the computer is going to give release. But the application of a computer is very expensive and has only a limited effect. The students have hardly money to buy a calculator!

What stroke me extremely was the hectic marking of the exercisebooks when the students were solving the exercises. The teacher has the conflict to mark or to help. Mostly he asks the ones who have finished an exercise, to show him their work. The ones who are not ready and have problems, tend to remain behind.

Here I recommend a different system: write the solutions of the exercises also on the board so that the students can see themselves whether their work is correct. Only the ones who have the wrong answer or don't know how to continue, ask for the teacher.

The exercise books are regularly collected for marking, but in none of the classes the exercises of the former lesson were discussed. What is happening with those students who were not able to solve the exercises in the last lesson or in prep?

An other aspect which has to do with time management, is the writing during the explanation of a new topic. Here I am not sure which way is the best: the pupils copy from the board during the explanation which costs less time or do they copy after the explanation, which could mean a better concentration of the students during the explanation, The reaction of the Maths Teachers was clearly in favour of the second situation. It seemed to me, that teachers were not always sticking to this principle in the lessons I visited.

2. Aspects which concern the Head of the Maths department.

Generally I think that the students make too little exercises (prep) to get familiar with a topic. I am sure my students made considerably more exercises. My proposal is the make sets of plastified sheets with exercises on many topics including answers. They are stored in the Maths storeroom and are distributed (and collected!) by the teachers when they need them.

Once these sheets are made, teachers and students save time in the lesson because it requires no copying anymore and it saves costs because the sheets can be used many times.

Secondly: all students have squared (not lined) exercise books. This will make it easier (time!) for example to draw geometrical figures and functions.

The teachers mentioned, that reference books could help them in preparing of the lessons. Unfortunately it lacks here on funds.

The teachers mentioned visiting each other in class can be useful in order to exchange teaching experience or to give support in certain situations.

3.Aspects which will be brought to the attention of the Headteacher of Namwala High School
The arranging of the desks in the class is often chaotic. The teacher has to be extremely slim or needs time to reach a pupil, Desks should be standing in rows of two desks (at the wall preferable in a row of one desk) so that the teacher can go through and has access to the work of the student. Because there is (again?) a lack of desks and chairs, they are often carried around between the classes and this destroys the arranging of the desks.

Lots of students (sometimes up till 30%) are late, and some of them up till 25 min. This is disturbing for the teacher and the class. Sometimes it is caused by a teacher who kept the students longer in class. But for a number of cases the students have no valid reason for being late. The problem is that this coming late has no consequences. The school should take here action. Is the attendance checked every morning by the classteacher?

The ever growing student enrolment is worrying the teachers and they asked; where is the end? At 60 or even at 70 or more students?

This growth has caused a new shortage of school furniture : students are often carrying chairs and desks when they change rooms. This shortage should be covered.

4. Aspects mainly of financial nature which can be delegated to Namstift.

Only a few students have geometrical instruments and only half of the students have calculators, often of different makes. I will try to get hold of these in Switzerland. I can imagine that it is useful to have a number of sets of geometrical instruments which are to be kept in the store room and calculators of one make, sold at a reduced price by the school and should be bought by all students (part of the school fees?).

Most of the remarks above have in one way or the other to do with time management in a class situation where there is little money but lots of students.

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After the presentation of the results three other problems were occupying me.

The timetable does not allow time for changing rooms after the lesson. So teachers and student are bound to come late in lesson 2, 3, 4, 6, 7 and 8. In order to avoid this, one should allow about 5 min for changing classrooms.

The timetable could look like this

Lesson 1 07:00-07:40 Lesson 2 07:45-08:25 Lesson 3 08:30- 09:10 Lesson 4 09:15- 09:55
Break 9:55- 10:15

Lesson 5 10:15-10:55 Lesson 6 11:00-11:40 Lesson 7 11:45-12:25 Lesson 8 12:30-13:10

In one of the lessons of a grade 11 class the teacher told me, that he was teaching a grade 10 topic because this class entered the school in the third trimester last year. Only a few classes in grade 10 exist from the beginning and the rest of grade 10 classes are filled with students who entered during the year. In this light one cannot be surprised by the bad results of the school. It seems to me that one should introduce a deadline: after this day the students have lost their right to enter the school.

The headteacher informed the school about a new instruction of the ministry: students who perform well, have to repeat a year. It seems to me that the majority of the grade 10 student will not be able to get sufficient results because of number of lessons they missed. This would mean, that in 2015 a few grade 10 classes are already filled with the actual grade 10 students and the number of grade 11 classes will be reduced, compared with 2014. This is another reason to make sure that the students enter grade 10 in time. I think the next year parents should be informed in time first about the deadline and introduction of repeating classes should be postponed by a year.