

“MACHT MENGENLEHRE KRANK?” – NEW MATH AT GERMAN PRIMARY SCHOOLS

Tanja Hamann, Barbara Schmidt-Thieme

Universität Hildesheim

In 1968 so-called New Math was introduced as fundamental contents of maths curricula, affecting every type of school throughout Germany including primary school. Comparison of two editions of German 1st grade schoolbooks shows progress and development of the reform and thus makes a contribution to answering the question why New Math has allegedly failed.

COMPARING TWO EDITIONS OF THE SCHOOLBOOK BY NEUNZIG & SORGER

Introduction of New Math in German primary schools led to a lot of protest in public society, reaching a summit with German magazine *Der Spiegel* headlining *Macht Mengenlehre krank?* (“Sickened by set theory?”) in 1974. Although methodical innovations have been implemented permanently from these days on, contents, such as set theory, have been abolished in school mathematics and altogether the reform is said to have failed.

As reason for the failure one finds arguments and problems that can in spite of their diversity be divided into three classes: First of all, there was a wide range of didactical problems. In this place, this means all problems that concerned mainly pupils, including all severities emerging from the new contents and the way they were taught. Then one finds problems seeing teachers as those being mostly affected. Here, all difficulties belonging to class room organisation as well as questions of teacher’s education are included. And finally there are problems related to public opinion – making parents those mainly concerned – and political reactions thereto.

Indications for all three classes of problems can also be found when comparing the two editions of *Wir lernen Mathematik I*, the schoolbook for first form by authors W. Neunzig and P. Sorger ([1], [2]), which *Der Spiegel* particularly refers to ([3], 78 f.). For example, the overall structure of the volume has been modified due to an earlier introduction of numbers in the 2nd edition (probably for political reasons), resulting in a layout less coherent and thus making the book possibly harder to use. Tasks that are still verbally presented in edition one are presented iconically in edition two, obviously as a reaction to problems caused by the fact that first-formers are unable to read the tasks themselves, a didactical problem in the first place. Additional material such as Logic Blocks (as introduced by Z. P. Dienes) is to be used to a further extent with edition 2. This can be seen as a response to organisational problems caused by the teacher’s inexperience with a new kind of math lessons.

It is believed that those difficulties that are indicated by the schoolbooks – the books being a main source for what happened in the classroom – were the ones that prove crucial to the progress of the reform. It is furthermore assumed that a combination of these problems led to its failure.

REFERENCES

- [1] Neunzig, W. & Sorger, P. (c1968). *Wir lernen Mathematik I: Erstes Schuljahr*. Freiburg, Germany: Herder.
- [2] Neunzig, W. & Sorger, P. (c1971). *Wir lernen Mathematik I: Erstes Schuljahr*. Freiburg, Germany: Herder.
- [3] *Der Spiegel* (1974, March 25), 13 (28).