

Re: What Went Wrong with New Math?

Source: <http://sci.tech--archive.net/Archive/sci.math/2005-05/msg05669.html>

- *From:* hrubin@xxxxxxxxxxxxxxxxxxxxxx (Herman Rubin)
 - *Date:* 31 May 2005 11:22:10 -0500
-

In article <XORme.2924\$s64.76@xx>, W. Watson <wolf_tracks@xxxxxxxxxxxx> wrote:
>Yes, what did go wrong? I believe that got rolling in the 70s but somewhere a
>long the line went out of style. Did something replace it?

It got rolling in the late 50's. It was started because a mathematician found that his daughter, who could do arithmetic well, had no idea what numbers were except objects to be manipulated knowing the formal procedures. This was found in the 40's.

Anyhow, several mathematicians set out to prepare materials to teach the cardinal concept of arithmetic, and these were tested on tens of thousands of children, mainly in private schools. As the results were highly successful, they were able to persuade those who run the schools to incorporate it in the regular curriculum. This was in the late 50's.

There was an unexpected problem; the TEACHERS could not learn that using the cardinality concept and set union could be a basis for understanding the integers! Instead of pointing this out, and arguing that this meant the teachers did not understand the integers, the materials were weakened in the hopes (unmet) that the teachers could handle the weaker parts. This was even worse.

Possibly something could have been done then; the situation now is even worse. Few teachers can understand concepts in any subject, and the educational philosophy is that one can only learn by memorizing examples, and then hopefully finding generalizations. Not only are concepts not taught in mathematics, but grammar is essentially out in language. It took public demand, plus the possibility of teaching reading with phonics fairly easily at home, to get that back in the schools, and there is still resistance to that.

The teachers could not learn concepts then, and if anything are in worse shape now. I believe this is caused by teaching how to calculate; it is hard to teach those who have learned that

Re: What Went Wrong with New Math?

way to understand the basic concepts in mathematics and statistics.`

—
This address is for information only. I do not claim that these views
are those of the Statistics Department or of Purdue University.

Herman Rubin, Department of Statistics, Purdue University
hrubin@xxxxxxxxxxxxxxxxx Phone: (765)494-6054 FAX: (765)494-0558

- **References:**

- ◆ **What Went Wrong with New Math?**

- ◆ *From: W. Watson*

- Prev by Date: **Re: Cantor and the binary tree**
- Next by Date: **Re: Cantor and the binary tree**
- Previous by thread: **Re: What Went Wrong with New Math?**
- Next by thread: **Re: to Dik T. Winter**
- Index(es):
 - ◆ **Date**
 - ◆ **Thread**