15 Why Johnny Can't Do Math

On January 22, 1999, the author received a letter containing the following account:

> Our daughter Jena is 10 years old. She is in the 5th grade. She attends the Deephaven, Minnesota elementary school. My wife, Monica, and I work with our children on their homework each evening.
>
> Recently we have seen a disturbing trend in math education. It is called "guess & check." This was brought to our attention with our daughter's homework assignment. Her math problem was stated in word context: "John is twice as old as Mary and Steve is 3 years older than John. The sum of their ages is 54. How old is John?
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> This was a real strain on both of us to recall the math equations which solve the problem with the correct answer. We asked Jena for her textbook for some assistance. She said there were no textbooks. This is "guess & check." She explained to us that it was not necessary to get the correct answer, it was more important to just guess and see if it works.
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> We created the math equation which solved the problem (try it for yourself). It was rejected for not achieving the required "guess & check" mastery skill. So much for the mastery of the fundamental building blocks of math. Let's hear it for excellence in our schools.
>
> Bill & Monica Wenmark
>
> Deephaven, Minnesota

This is not quality education. Students learn math much better when they are actively being taught the genuine building blocks of mathematics.[126] Why, then, is this abuse of our children's education taking place? The reason is because Minnesota education is increasingly marching to the drum-beat set by the education revolutionaries. For example, the *Minnesota Goals 2000 Technology* Plan says:

> The classroom teacher must be one who facilitates learning rather than inculcates "instruction." Such learning is situational, enabling students to draw meaning from the learning experience in a context...[teachers] must depart from the traditional teacher-learner role and become facilitators of active learning for every student in the classroom.[127]

How will students learn mathematics if they are not given "instruction"? They must "discover" it, of course. (Known as "discovery learning." See chapter 18.) The Minnesota education planners additionally place a low priority on learning basic math skills. Minnesota's *Goals 2000 Technology Plan* says:

> ...no longer should teachers be constrained by the artificial restriction to numbers that children know how to employ in the paper and pencil algorithms of arithmetic...because the calculator will be able to add or multiply the data even if the children have not yet learned how." [Emphasis added.][128]

That is, knowing the basic math skills is unimportant because students will use calculators anyway.

Along the same lines, knowledge of basic mathematics is regarded by the new system as being "lower order thinking skills." Knowing such facts is, therefore, unimportant to the education planners.

The new system of education also insists that real learning must be "situational" as illustrated in the problem above. Keep in mind that mathematics has always used story problems to enable students to practice and apply the skills they are learning to real life situations. Notice, however, the difference between the traditional approach to mathematics and the new one. The traditional approach taught students the basic skills and concepts first; then students were asked to apply what they had learned. The new approach often avoids teaching students the principles they need to make the applications. Why is that? The philosophy of the revolutionaries is more important to them than whether it works.

Please recognize that the revolution in education views mathematics far differently than our nation has viewed it in the past. Minnesota's *Goals 2000 Technology Plan* defines mathematics as "a tentative exploratory discipline in which risks and failures yield clues to success."[129] Is this an accurate definition of mathematics? Is math really "tentative" and "exploratory"? It is not, of course, but to the education revolutionaries, objective truth doesn't exist. All knowledge is "socially constructed." Everything is subjective. From that world-view, the experience of the child is more important than whether the child knows the real world. The real world is defined as the subjective experience of the child. That is why mathematics is viewed as being "tentative," not objective or true.

Remember that one of the new overall goals of Minnesota education is that students must be "self-directed." On the surface, the example above appears to be that, but was Jena really self-directed in this instance? Notice that her answer was judged to be wrong. If education is really self-directed, then there should be no wrong answers. The reason for the inconsistency is because education, by definition, is directed learning. The only question is who is doing the directing?

"Self-directed" education really means that the education elitists in Washington and St. Paul are directing the education of our children, not the teachers, parents and elected school boards. Answers that conform to the radical world-view of the elitists are "right"; answers that don't conform are "wrong."

Notes:

126. "The Education Industry Report," p. 7.
127. Goals 2000 Technology Plan, p. 4, 11 & 15.
128. Goals 2000 Technology Plan, Appendix G.
129. Ibid.