Some Thoughts on Curriculum, good teaching, and mathematics

On Front Line of Fight for better Math Teaching (New York Times, Wednesday, March 29, 1989)

In case you didn't know, but according to the NY times, there's a national debate over how mathematics should be taught. The polar questions are: (A) Can students best learn from traditional method of instruction, which emphasizes memorization of mathematical facts and rules and constant drilling? Or (B) can they best learn from curriculululums that emphaszie reasoning and understanding mathematical princeiples to prepare students for real-life problems, which, unlike those in text-books, are not likely to be predictable and similar in nature? Representing position A is John Saxon of Saxon Publishers, Inc. On the B side is Shirley Frye, President of NCTM and Zalman Usiskin, UCSMP, University of Chicago. Saxon says "yes" to question A and claims his books will cure all your math educational ills. (And if you don't like his books, he'll sell you a used car.) Usiskin's reaction to Saxon's "simplistic" solution: "The ferment that's occuring isn't simple. It's very involved. A lot of people have been working on the problems of mathematics education for a long time. If it were simple they would have solved it." His work and the work of NCTM reflect a yes answer to question B.

I have a hard time with these articles because I can see value in both points of view. Why does it sound like an "either ... or" situation rather than "and"? Common sense tells me that most teachers who may uphold the standards and are position B people may on occasion "drill and practice" their kids. And even John Saxon would encourage some creative thought on the part of his brethern. He even says its OK to use calculators AFTER the kids have learned the basics. I would like to know why the article has to be written in a confrontational tone? Can't Shirley Frye learn from John Saxon and vice versa? But, then, I suppose that would boring to read. It's more fun to be confrontational and try to "prove" that you are right, rather than doing some hard rational thinking in seeking out the truth. IC

Its a myth: Nobody Knows what Makes Teaching Good

According to an article (that I accidently discovered while cleaning out my files) its a myth that nobody knows what makes good teaching. The author (unfortunately unknown) claims that since 1930 researchers have inquired as to the components of effective instruction. Though there are many characteristics of good teachers some characteristics seem to turn up on list after list. In the January/February 1987 issue of the Journal of High Education there is a discussion of 5 such attributes. They are: enthusiasm, clarity, prepartion/organization, ability to stimulate, and knowledge (implying both content competence and and love of subject matter.) Though the characteristics may be the same, the style in which these teachers teach can be very different. There's Mr. dramatic down the hall who dances into and around the classroom. Students are spellbound, captivated, etc. Then there's a group of students who point down the hall to Dr. Dour's room. She is grim, believes the world may end before the semester does. The only way to avoid impending doom is to learn her drab, dusty content. She scolds students, mocks their naivete, and EARNS their respect! They say Dr. Dour is the best teacher they've ever had. One of the questions to be explored: Are the 5 characteristics equal? Or are some more important then others? One attribute that I would have included is that a good teacher genuiely cares about each of her students and her students know that she cares.

Samurai Math gets a tryout!

(Article in the April 10th, 1989 issue of Newsweek) ● ● ● ●

This article is rated 4 antacids. (Very difficult to digest)

Apparently some school districts in this country are using *Kumon* - math the Japanese way - to teach mathematics. This is a rigorous time-pressured, zero-defects drill. The method never varies. A test determines where the student begins. After that each student progresses at their own pace (just like Logo, right?) he or she must score 100% to move on to the next level. Now here's the real kicker: Rather than teaching a principle first and following it with exercises, Kumon's worksheets gradually introduce new concepts through the problems themselves. One the proud principles whose school is using the program says "First we teach the facts and then the concepts come." The company that's selling this stuff to desperate schools in Alabama hopes that within two years all the schools in Alabama will be doing this (good grief). Remember when "Made in Japan" meant something inferior? I think this company is trying to revive that opinion. Δ