

## 1998 “Survey” of College Students About Their High School Math Education

### Part II:

#### Seeing The U.S. Math Education From International Perspectives

Note: The comments are transcribed exactly as written and it needs to be pointed out that they were given a very brief time to express themselves. All of these students have been educated initially in a foreign country.

#### A. Advice of the U.S. Students

- I have worked with various students, both domestic and international, and ***have found that the international students were far more advanced in mathematics.*** I strongly agree that steps should be taken within the U.S. to streamline programs to be more competitive. [Kolooff] [US]
- ***Irregardless of teaching styles, the high school curriculum does not demand enough of students. As an engineer I am required to have an understanding of advanced math that was never taught in H.S. While I’m luck enough to have picked it all up quickly for college – there are principles which I have never seen presenting themselves everyday. Students from Math & Sci Academics or overseas have frequently already seen these and have a much better understanding of the material as a result. More stringent curriculum and elimination of students who can’t meet it (and only slow other students down) need to occur.*** [96][US]

#### B. Surprised By Calculator Dependency

- I went to school in the Philippines until the 3<sup>rd</sup> grade and so the math competency test they gave in the states in 4<sup>th</sup> grade was pretty easy. I guess in fourth grade I can kinda understand if kids don’t pick up things as quickly, but in the sixth grade, the first week of math was spent doing addition – not difficult addition – 5 + 0 addition. I think the worst was when I was about to take the SAT’s, I figured I’d go to one of those prep sessions they have (more for the English than the math part). ***SAT math is not difficult so I was pretty surprised when some of my classmates couldn’t do simple algebra. SAT math is basic stuff that you should come away with after 12 years of school***  
I think I realized how poorly the system teaches math when I was talking to my sister recently who is a sophomore. She was taking a math competency test and couldn’t do a lot of it because ***she couldn’t remember how to handle fractions without a calculator. The reason is that when she was learning about fractions and decimals they were allowed to use calculators.*** [--, 94]
- I came with a mixed background of education. I grew up in Taiwan & came to the States when I was 14 yr. I was shocked that the students from elementary on are already using calculators for simple addition, multiplication and etc. Not until tri & on shall we have the access to calculators. [Chin, 96]
- I studied math in India & find that understanding conceptually is superior. When something is process based instead of merely being technology or calculator based. [Bhat, 95]

- In Eastern countries, *calculator is not allowed in any class, even in 10<sup>th</sup> grade.* [Mohammad, 90]
- I strongly agree that U.S. should raise their math aptitude. Being from India and not only a high school diploma from there but also my Bachelors *I strongly believe that U.S. school should not use calculators. I have very strong mathematics skills and the main reason is I was never allowed to use calculators even for hard and long calculations.* [Sharma, 90]
- I am in very much agreement with Daniel Philips' statement. It is very true that the American education system is almost a mockery in the international perspective. Asians have proven that they are very good in mathematics. Just by looking at their school systems you can see why. *Children are taught not to rely on technology, like the calculator, and they are taught very thoroughly on each topic.* They also learn at very young ages. With children taking calculus in the 9<sup>th</sup> or 10<sup>th</sup> grade. Their exams are very thorough and *the teachers are not afraid to fail them if they do not prove that they know the subject.* Americans can learn a lot from looking toward the Asian educational system. [Korah, 97][India]
- I am from Trinidad, West Indies. *We were not allowed to use calculators from an early age.* We are taught mathematics based on the English System not the American system. This system is supposed to stimulate logical and deductive reasoning. [Jerahger, 95]
- I totally agree with the old fashioned way of education. *Calculators do spoil one' mental capabilities of calculation.* [Bajaj, 94][India]
- I am from Jordan and I think that 2<sup>nd</sup> grade math classes are 8<sup>th</sup> grade here. *Calculators should not be used a lot.* [Sweis, --]
- I think that mathematics here is kind easy because I did those kind of stuff in Japan already. In addition, I just don't understand *why people living here use calculator to solve problems and questions. Those stuff (calculators) just prevent to grow their math skills.* [Tsukamoto, --]
- I took some math classes, and I felt the way they teach is little confusing. I think American people learn about math little careless. For example, they don't focus on the basic principle or formula. Compare to my country, American students have a problem to memorize formula or multiplication. *I also have a doubt that student can have a calculator to solve a problem.* [Karata, --][Japan]
- U.S. students are not among the top in math due to poor teaching strategies, as well as *increasing dependence on calculators and computers.* [Carbone, 97]
- Besides Daniel Philipps' statement, I think the curriculum should be improved as well. Being transfer student from an Asian county eight years ago, *I surprisingly found that the classmates in my same grade were learning the math which I had taken two years ago.* Sincerely, I thought the math curriculum must be changed from grade on in elementary school, *and no calculator may be allowed to use until college.* [Sun, 94]

### C. Comments of Students

- I think the reason for the low math level is the different math levels that are available to students. ***The school fits the students, rather than having the students fit the school.*** In Asia, everyone learns the same math. Therefore, making people work harder in average. [Jennifer, 98]
- I did my H.S. graduation in India, where the standard is very high and extreme importance is given to solve the problem “the old fashioned way.” [Kannan, 84]
- I had my elementary education in Taiwan. Having experienced a totally different learning style in math, I realized that ***the teaching method of math in the U.S. is very inefficient.*** [Kao, 97]
- American teachers are getting a little lazy. I guess they feel like if they do anything more it would be like doing it for you. So they feel like they gives you the chance to get extra help. It is your responsibility to take advantage. ***But High School students don't want to be responsible. They don't know what's at stake.*** [Mercus, 96]
- I agree strongly. The school system here in the U.S. is terrible. Not only in the math area but every area. The public school system here sucks! ***We have too many teachers & parents that don't care!*** We will never be as advanced as Japan unless we change our system. [--, 93]
- I think the reason why the US is usually ranked lower than other countries is because of ***the attitudes most students have towards education***; they do not feel a need to be well-rounded if they do not care for a subject then they won't study/put any effort regarding that subject & it is okay in the U.S. due to choices. [Regis, 93]
- I have not had the experience of American High School math classes but I do agree that ***too much emphasis is placed on deadlines*** and the acquisition of facts rather than the students ability to use those facts. [Giles, 94][Ireland]
  
- My country seems ***a lot more advanced in the math & science education*** and it is a U.S. territory Puerto Rico [Burgo, 94]
- I think that the math education in the U.S. is horrible. ***Many times students graduate primary school without the knowledge of simple division or addition.*** The change needs to take place from the first grade in the primary school! (if this country wants to enter the 21 century)! [Taiowska, --] [Poland]
- I went to grammar school in Poland so when I moved to the State and began High School ***I noticed the dramatic change, drop in the level of learning, especially math.*** In my opinion math is very important, it is part of our everyday life, and we need to know it, we can't loose the basics. [Gabicki, --]
- When I graduating from high school I already knew most of the math. I learned math in Poland and knew the things that were studied. ***The math I learned was up to 5<sup>th</sup> grade and it was more advanced than U.S. high school math.*** [Stanele, --]
- Totally agree with the author. Coming from another country I can see that the ***high school education in America is far behind*** for example the Swedish one even in math. ***The fact that I got 36 college credits for my Swedish High School says it all, doesn't it??*** [96] [
- The math is very easy compared to Sweden! [Clysen, --]

- I have a four year college degree in Engineering from WSU (United States). I found mathematics and calculus courses particularly easier than rest of subjects. [Qureshi, --][Pakistan]
- The level in math here in the United States & at xxxx is very low or easy! Coming from Greece myself, some of the classes that I've taken here at xxxx can be compared with classes that I've taken in high school in Greece. The material is already known.
- The degree of difficulty of math in the U.S.A. is relatively fair (not too easy not too hard). An important point that should be made is, that math in the U.S.A. is more geared towards application, and this is essential... [Ethiopia]
- Math is a very easy compare to South American Requirement for universities of South America. [Burbaud,--]
- I find it a lot easier compared to Japan. I feel it is about 2 – 3 years behind. [Nakagaki, --]
- I feel that the math classes were easier however the science classes were harder. Classes like physics were also part of my experience in learning mathematics. [Beyene, --] [Ethiopia]
- But does American need to have a high standard in math. Other countries are “less, less” in many aspect so they do not have any choice BUT to excel in all subjects but ***America can afford to pick and choose and develop individual strength***. Something other nations can't afford. [Azhar, 86]
- **High school math is a “joke” in other countries. Even 1<sup>st</sup> year college level is the same. Having such poor math in H.S. *is having a ripple-effect on college courses, because teachers are adjusting the courses accordingly*.** [Abougaha, 96]