

THE UNIVERSITY OF CHICAGO

J. PETER MAY

In 1999, I wrote the University of Chicago's first proposal for a VIGRE grant. Of course, I had input from many colleagues, but I also worked hard to obtain input from our graduate and undergraduate students.

Together, we thought through where we were and what could be improved. Students have constantly been full partners in planning and implementing our program. It is meant to be their program.

I am an incurable optimist. I believe that plentiful exposure to opportunities to learn and to do mathematics and plentiful opportunities to teach mathematics will lead to a plentiful supply of bright young people entering our field. We have put that optimism to the test. Some results are now in, and

the optimism seems justified.

The organizers said we can be controversial.

As a subject, mathematics is beautiful.
Do not deface it by dumbing it down.
THAT SIMPLY DOES NOT WORK!

Mathematics is ideas and proofs. The proofs give the ideas their force. All courses at Chicago are taught rigorously. Period.

We are dinosaurs with respect to calculus reform. We do experiment, for example with inquiry based learning, but we do no experiments at the expense of rigor.

As an activity, mathematics is addictive.
To recruit addicts, give mathematics away

FREE.

Free of pressure.

Free of grades.

Free of exams.

FREE MENTORING.

Maybe even some *FREE FOOD*.

Make it fun. Develop a climate in which it is a popular social activity, where the in thing to do is study and teach mathematics.

The linkage between studying and teaching is intentional and important. Our undergraduates teach. They teach high school students, they teach grade school teachers, and they teach each other.

One of the dumbest things ever said is “Those who can do, those who can’t teach”. There are those who can do mathematics and can’t teach it, and my heart goes out to them.

The pleasure of doing mathematics, teaching mathematics, and getting paid for both is *communicable*.

Pollyanna? NO! We are doing a massive experiment at Chicago. Thanks to the NSF and the program directors at VIGRE: they have allowed us to move resources around and utilize them to the maximum.

CAVEAT: The experiment is expensive. A major challenge is to find the resources to make successful experiments permanent.