

## Rote exercises pay vital role in mathematical education

Daily Herald  
Friday, January 20, 2006

### Rote exercises pay vital role in mathematical education

While it is clear that people learn and think differently, I strongly oppose the premise that repetition and drilling is ineffective or inappropriate.

People who use arguments that denigrate drilling with "rote exercises" have a fundamental misunderstanding of cognitive development and learning.

The old saying that "practice makes perfect" is a key principle not just in mathematics, but in sports, music and the performing arts. Should we replace piano practice with a Piano Investigations Program where our children pound on the keyboard trying to discover their own music? Neither should we replace mathematical repetition with ad hoc "Investigations."

As a working mathematician, I find these new-age programs like Investigations and Everyday Math to be troubling. While I place tremendous value on blended learning activities that promote understanding over sheer memorization, they should be done to in addition to repetition and drilling, but not as a replacement for it.

We need to be forward-thinking in our approach to math and science education. The policies that we implement today will determine the ability of the next generation to stay competitive in this globalized economy.

Continued investment in rigorous math and science education will be key to our success in the future.

Jeffrey Humpherys,

assistant professor

Department of Mathematics

Brigham Young University

This story appeared in The Daily Herald on page A6.