Students are casualties of math wars

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While debates rage over how to teach math, kids aren't learning and teachers are struggling. In spite of valiant efforts on the part of Washington educators, too many students are underperforming on the WASL, SAT and other national tests.

It's no surprise, then, that mathematics education reform is the focus in the Washington Learns report, Gov. Chris Gregoire's P-20 (preschool through college) Council and the Office of the Superintendent of Public Instruction.

Teacher preparation in math education needs a new direction if we are to ready our children for the challenges of life in the new century. Students need to know how to solve problems using the conceptual framework of mathematics and scientific inquiry. They need math teachers who can show them how.

Leaders need to work together to solve three problems in order to produce enough qualified math teachers: the so-called math wars, math phobia and math teacher funding.

State curriculum leaders must step out of the paralyzing impasse of opposing philosophies about how to teach math. On one side are those who say students need basic math skills, including memorizing formulas and practicing drills. Their opponents say students need to understand the concepts underlying mathematical reasoning, an approach that emphasizes real-world story problems. Curriculum leaders must close the gap between memorizing an abstract mathematical formula and solving the same problem in a real setting. For students to learn math and be able to use it for their lives, they need both high-level skills and problem-solving knowledge learned in a hands-on setting.

Too many elementary teacher candidates in Washington lack the knowledge and skill to teach math. In training teachers, math is the only area in which college professors consistently must teach content as well as methods of teaching. Those who wish to teach elementary school are often math phobic -- and fearful teachers do not give enough classroom attention to math. Is it any wonder that children have not learned?

As professors in colleges of education, it is our job to prepare secondary teachers, but we need the assistance of a strong K-12 pipeline, clear curricular leadership by OSPI and legislative support.

We need more teacher education scholarships from federal and state government to recruit more high school math teachers. We must pay more for teachers willing to work in this high-demand field, even if that means they get more than other teachers. The Professional Education Standards Board needs to open this conversation, and the Legislature must step up and allot funding in the next session. Business and industry actively recruit graduates with math ability. Schools cannot compete. Do the math: A graduate with a bachelor's degree in chemical engineering starts at $56,000, economics/finance at $45,000 and a Washington teacher at $32,000.

We must also expect more from students. Passing the 10th grade WASL does not mean a student is prepared for college math. Students must work on college readiness after they take the test. The Washington State Transition Mathematics Project -- a collaborative project of K-12, community and technical colleges, and baccalaureate institutions -- has

recently published a comprehensive set of college readiness standards. Adopting them will help us train math teachers.

Teacher educators and OSPI must leave the math-war battlefield and provide a consistent, balanced curriculum that includes skills, fluency and natural approaches to problem solving. OSPI must collaborate with colleges of education in designing and implementing this balanced approach to teaching math for real-world results. Our students are counting on us.

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