Improving Student Performance in a Problem Solving Curriculum by Emphasizing Fundamental Mathematical Skills, a Follow-Up Discussion.

The United States Military Academy has reformed its mathematics curriculum to focus on student problem solving through the application of mathematics to open-ended problems. The success of our curriculum reform is frequently challenged by our students’ inability to demonstrate proficiency in the mathematical skills considered fundamental to further learning in mathematics. Specifically, many of our students are challenged by their limited exposure to or their inadequate retention of skills in algebra, geometry and pre-calculus. Over the past two years, we have implemented strategies to address these weaknesses and have assessed student progress in these skills. This discussion will highlight the areas we deem crucial to student success, the techniques we employ to address these skills, and how we assess them. In addition, we will share the results of our preliminary analysis regarding the effectiveness of our program. (Received September 20, 2007)