

1037-97-130

**Anthony L Peressini\*** (peressin@uiuc.edu), 2311 Milan Court, Champaign, IL 61822. *Guiding high school mathematics teachers to a deeper understanding of the mathematics they teach. A report on a short course for pre-service mathematics teachers at the University of Illinois.*

I taught this 6-week, 1-credit short course to junior and senior math majors interested in teaching mathematics in high school. It was based on methods and content that I had used for workshops for experienced high school teachers. The purpose of this course was to provide these future teachers with an introduction to the following methods of instruction in mathematics: 1) A method called extended problem analysis by Stanley/Callahan for discussing routine high school word problems in a deeper way that reveals their essential mathematical structure, their interconnections, and their connections to more advanced mathematics taught in college: 2) Small-group instruction in which the students work in small groups on worksheets prepared by the instructor. The instructor's role is to observe the group work and guide it when necessary. This short course employed small-group instruction to teach extended problem analysis. A substantial final project was required in which the students proposed and prepared an approved 2–3 day unit suitable for a high school class using these instructional methods. In my talk, I will discuss samples of the course materials and student projects, and compare the responses of pre-service and the in-service teachers to these methods. (Received January 29, 2008)