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**Radoslav M. Dimitric\*** (raddimitric@netscape.net). *Components of successful education.*

In contrast to extensive and deep research in mathematics, mathematics education has disproportionately little work in quantified research passed the stage of experimentation. I propose to remedy this situation by introducing quantitative methods that can be used to assess the success of the education process.

The paper concentrates only on the first component: Adequacy of students' background for a particular course. The observations were made in courses of "Elementary statistics", as usually taught to undergraduate students. I have used four different classes in this study, at four different colleges or universities in the San Francisco Bay Area.

To check preparation level of the students in these classes I have made a diagnostic test that the students took at the first class meeting. This test was constructed in the context of the material they certainly need to know in order to follow the course without a having to constantly wonder about basic algebra used throughout the course. Rather basic material (in elementary algebra), is tested, much simpler than the material usually found in the "requirement" for this course, which is "Intermediate Algebra". I analyze the data and make inferences related to students' preparedness and their performance in the course. (Received August 29, 2000)