

# Association of Remedial Tutorial to Students at Risk of Failing Anatomy and Their Improved Performance

**Nagaswami S. Vasan, D.V.M., Ph.D.**

Department of Cell Biology and Molecular Medicine  
University of Medicine and Dentistry of New Jersey  
New Jersey Medical School  
Newark, NJ 07103 U.S.A.

Phone: (+)1-973-972-5243

Fax: (+)1-973-972-7489

Email: [vasanns@umdnj.edu](mailto:vasanns@umdnj.edu)

---

## **ABSTRACT**

The purpose of this study is to evaluate the effectiveness of a structured, interactive remedial tutorial intervention program for at risk students. During the period studied, between 10 and 20% of the first year students failed the unit 1 gross and developmental anatomy examination. These students were provided with a highly structured series of weekly interactive remedial tutorials (3-4 hours each for 13 weeks) that specifically involved the application of factual knowledge to clinical problem solving. Their performances on subsequent departmental and National Board of Medical Examiners (NBME) subject examinations were evaluated. By developing a remedial tutorial program in an interactive small group format with specific goals the at-risk students built confidence and acquired the cognitive ability to solve clinical problems. As a result, they successfully completed the anatomy course. Data collected from the last five years firmly supports the concept that, independent of a student's prior experience, consistent practice with problem solving enables successful completion of the first year course.

---