



Dean's Undergraduate Research Fellows

Fall 2005

Title: Effectiveness of Computer Aided Instruction Versus Conventional
Methods in Learning Musculoskeletal Special Tests
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This study is designed to provide further research regarding the effectiveness of computer aided instruction (CAI) in assisting student physical therapists in learning psychomotor skills, versus more traditional learning methods. With advancements in technology, computer aided methods of instruction have become a tool widely available to educators. The education of physical therapy students involves a complex interaction of educational experiences directed toward developing the many skills and knowledge necessary to become an effective practitioner. To date, there is little evidence in the literature specifically examining the effects of CAI on learning physical therapy musculoskeletal special tests.

This is an educational based study which is designed to test the effectiveness of CAI in teaching psychomotor musculoskeletal special tests within a Doctor of Physical Therapy curriculum. To conduct this study, I will recruit subjects that are currently enrolled in the professional phase of the DPT curriculum at Daemen College. Subjects will be recruited through mass e-mail and class announcement. Once I have obtained a sufficient sample size I will randomly assign each subject to one of the three instructional groups (CAI, live demonstration, and textbook instruction). Each subject will initially

complete a written pre-test and a psychomotor practical pre-test prior to receiving their respective method of instruction. Immediately following the pre-testing, the subjects will receive their randomly assigned method of instruction regarding the special tests.

Following the intervention, each subject will immediately complete an identical written and practical post-test. Following completion of the immediate post-test the subjects will be asked to study the special tests in preparation for the delayed post-testing 2 weeks later. The subjects will be asked to utilize their designated method of instruction only during the 2 week period. The subjects will not be allowed to discuss the special tests with subjects from other groups. Over the course of the two week interval, students will be asked to fill out a log sheet that will provide evidence to the quality and quantity of studying. Two weeks following the pretest and immediate posttest the subjects will be asked to return to complete a delayed post-test assessment. Data will be analyzed to compare scores within and between groups.