

Understanding the Effects of Using Case Studies on Student Learning in the Community College Applied Science Classroom



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Focus Question

How does the use of case study methodologies affect student learning?

Research Question	Data Source 1	Data Source 2	Data Source 3
1. How does student comprehension change with the use of case studies?	Unit pre-test and post-test	Formative assessments	Student surveys
2. How will case studies affect long-term retention of material?	Delayed case study answers	Unit pre-test to delayed post-test (final exam)	Student end of semester survey
3. How do students and the instructor value case studies as a way to learn?	Student surveys	Student interviews	Instructor observation journaling

Introduction

The Pharmacy Technician Program was created primarily as an instructor led, lecture style setting. Transitioning the program has been an ongoing and creative process. Due to limited resources, I focused my attention on case studies which allowed students to actively participate in their learning experience.

Students

For this action research project, 25 students in two sections of the Applied Science for Healthcare Careers II class participated. Students were observed over two units: the comparison unit used lecture-only methods, while the treatment unit used the addition of patient-centered case studies.

Data and Analysis

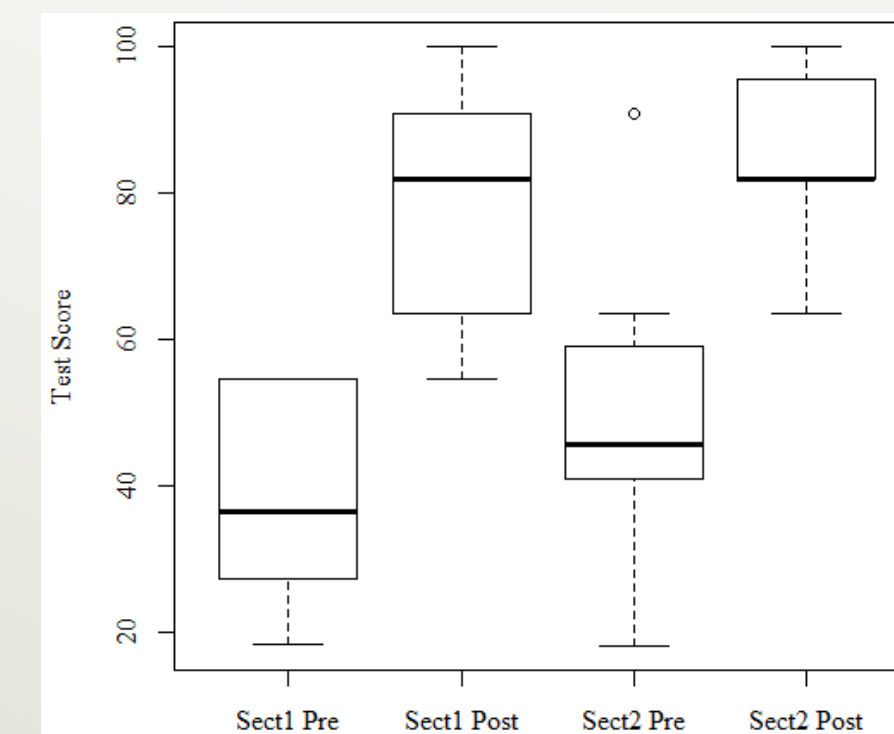


Figure 1. Boxplot of pretest to unit test scores treatment unit. Section 1, (n=14), section 2, (n=11).

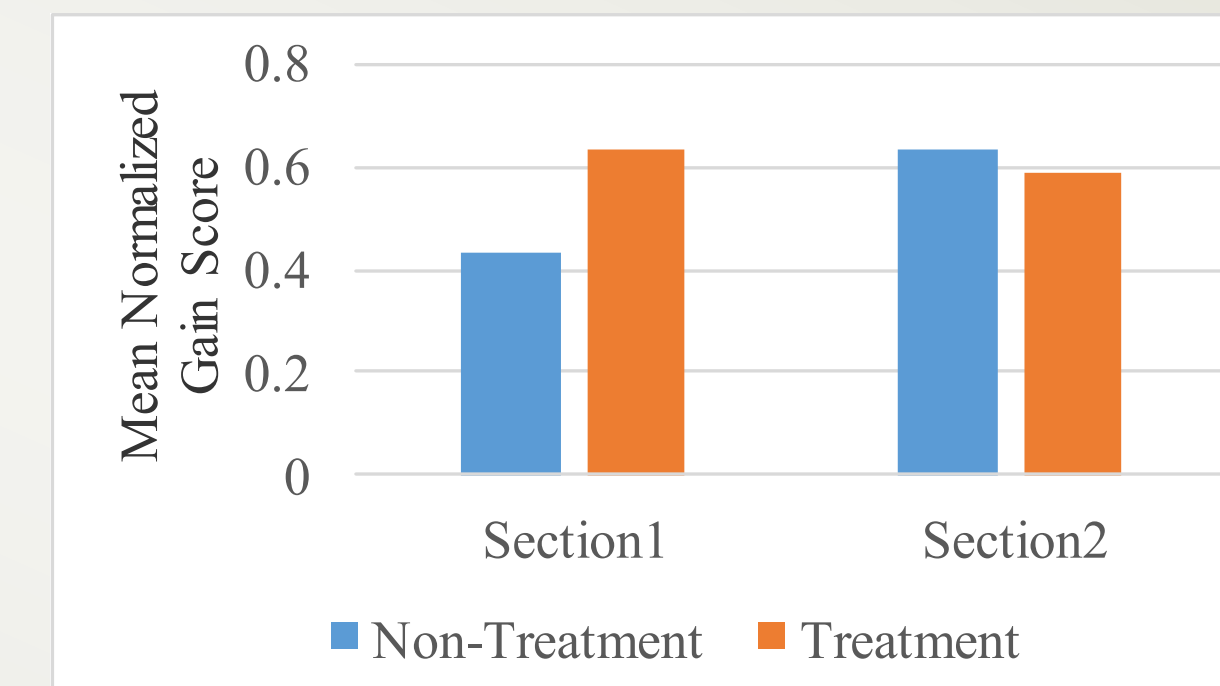


Figure 2. Normalized gain scores for both sections, pretest to unit tests Section 1, (n=14), section 2, (n=11).

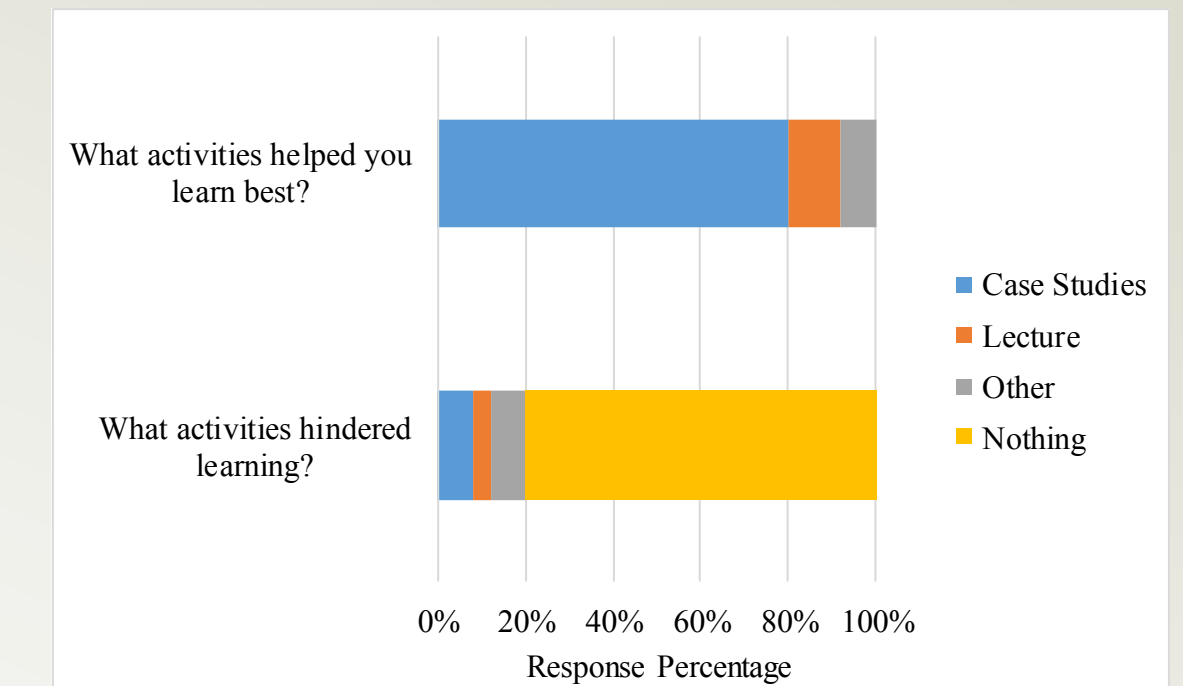


Figure 3. Final student survey responses from both sections, (n=25).

Quantitative data collected during the project was conflicting when comparing learning between sections. However, qualitative data from students and the instructor overwhelmingly indicated that the case study method is an effective tool to support student learning techniques.

Value

Understanding student prior knowledge and misconceptions is key!

Flexibility in instructor planning is necessary!

Transforming to student-centered methods is possible!

“CASE STUDIES are stories with an educational message”