

Turning Up Learning in Brazil

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Abstract

• Peer Instruction (PI) offers instructors a research-based methodology for transforming student learning. In this poster, we demonstrate how one instructor implemented Peer Instruction and clicker technologies for the first time in two introductory physics courses at a major Brazilian research university. This case focuses on the transition from a mixture of collaborative learning and lecture methods, to one focused Peer Instruction with clickers. The poster highlights the process of teaching at the intersection between technology and innovative pedagogy and provides an inventory for instructors seeking to take scientific approaches to pedagogical change.

Case Description

Electromagnetism
(introductory course)

15 physics majors

One semester (2011)

Federal University of
Rio Grande do Sul
(UFRGS) - Brazil

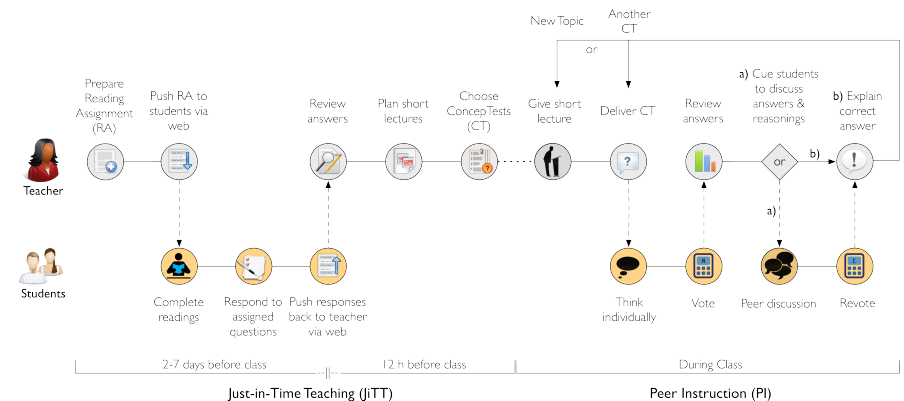
Questions Posed

What are the results on standardized tests of student conceptual understanding when JITT/PI with clickers is implemented within the context of a Brazilian university with a unique profile (small class size, mixed among physics majors and education majors)? How do those results compare with US implementation and different student profiles?

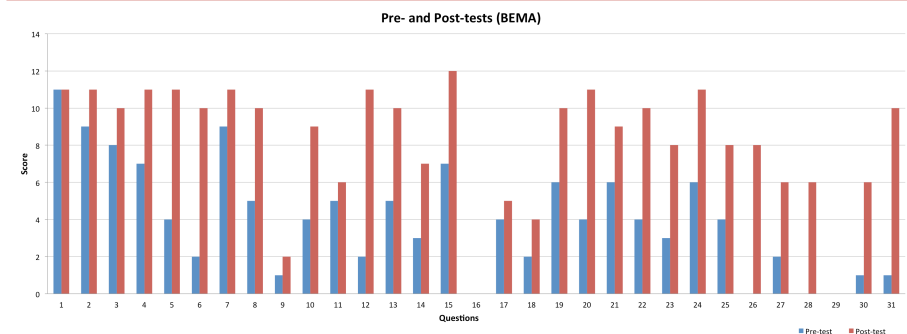
Data Sources

- Student demographics
- Pre-Post Brief Electricity and Magnetism Assessment (BEMA) Scores
- Clicker response data
- Academic performance
- Student Interviews

Implementation process



RESULT: 57% Normalized Gain on BEMA in 2011 JITT/PI Pilot



REFERENCES: Mazur, E. (1997). *Peer Instruction: A user's manual*. New Jersey: Prentice Hall.
Novak, G.M., Patterson, E. T., Gavrin, A.D., Christian, W. (1999). *Just-in-Time-Teaching: Blending active learning with web technology*. New Jersey: Prentice Hall.

