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The Effects of Collaborative Classroom Activities on Student Engagement and Learning

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The Effects of Collaborative Classroom Activities on Student Engagement and Learning

SoTL Conference
Georgia Southern University
Thomas Cornell, Ed.D.
Paula Witkowski, Ph.D.
March, 2013
Engagement???
Background for Research

- Noticed lack of engagement from students during discussions
- Investigated collaborative learning to promote engagement
- Decided to use peer coaching to assist with implementation of specific teaching strategies
- Attended SoTL (Scholarship of Teaching & Learning) conference at Maryville University, St. Louis, Missouri, October, 2011 and 2012.
Our Goals

- To develop optimal learning conditions for our students so that they can become critical thinkers who can apply content information when they enter the workplace as certified teachers.
- To achieve an ongoing awareness of these issues and dialogue among faculty across the global Webster University community.
Applied Research

Research Questions –

1) What instructional methods will increase student engagement and learning as measured through formative and summative assessments?

2) What is the relationship between student engagement and academic achievement itself?
Two undergraduate reading methods classes for students seeking teacher certification

48 undergraduate students enrolled in reading methods classes during the 2011-2012 academic year

47 students enrolled in reading methods classes during the 2012-2013 academic year
Student Engagement
(Fredericks, Blumenfeld, & Paris, 2004)

- Behavioral: on-task behaviors
- Cognitive: ability to achieve higher-level understanding of content
- Affective: student’s attitude towards the subject matter/interest in the topic

- Measured through teacher/research assistant observation and student surveys
Peer Coaching
(Pellicer & Anderson, 1995)

“a process whereby teams of teachers regularly observe one another teaching and provide support and feedback to promote mutual growth for all concerned”

Used as an inter-rater reliability measure when assessing both student engagement & pedagogical methods
Cooperative learning is defined as “small groups of learners working together as a team to solve a problem, complete a task, or accomplish a common goal” (p. 448).

Cooperative Learning

- Limited research to explore this form of pedagogy in higher education (Slavin, 1995; Tsay & Brady, 2010)
- 36% of college students demonstrate no significant gains in learning between their freshmen and senior years (Arum & Roksa (2011). Academically Adrift)
Procedures

- Selected cooperative learning activities to embed into our classes
- Periodically visited each other’s classes to observe and note student participation and response to activities
- Met weekly to debrief and problem-solve
Teaching

1) When teachers stand in front of the room and lecture, students become listening objects (Freire, 2000).

2) Student engagement is a key ingredient in helping students stay in school and be successful (Bridgeland, et al. 2006).

3) What is transmitted to students through lecturing is simply not retained for any significant length of time (Finkel, 2000).
Strategies

Total Participation Techniques (TPT’s)

Similes – students compare learned concepts to something familiar or an object.

Three 3’s in a Row – students seek out experts to answer questions and write down what they say.

Silent Map – students produce a map as a group in silence. They respond to a prompt on the board.
Conceptual Workshop – students work collaboratively to answer a set of questions that all lead to an understanding of the central concepts

Three Sentence Wrap-Up – Students summarize a lecture or class discussion in only 3 sentences

Student Led Seminar – Students develop content-related questions and lead class discussions

Debate Team Carousel – Students debate a position from various angles as prompted on a template
Number = 11
Paula Fall 2012

Number = 8
TPT Cognitive Engagement Model and Quadrant Analysis

1. Low Cognition/Low Participation
2. Low Cognition/High Participation
3. High Cognition/Low Participation
4. High Cognition/High Participation
Cognition/Participation Analysis in Tom’s Class – Fall & Spring
Cognition/Participation Analysis in Paula’s Class – Fall & Spring
Revisions Made to Reading Classes

Tom:

- Increased amount of clinical field experience
- Reorganized class to meet twice a week instead of 3 hours at one time
- Increased amount of application level thinking within collaborative activities
- Created more assessment instruments: pre-test, quizzes on chapters, mid-term, and final exam
- Increased amount of student-directed learning
Revisions Made to Reading Classes

Paula:

- Revised assignment to exclude group work on a Unit Plan and to focus on partner-planning for development of Reader’s Workshop using SmartBoard technology.
- Created more assessment instruments: pre-test, quizzes on chapters, mid-term, final exam, & Cornell notes for text readings.
- Increased amount of clinical field experience using cooperative partnerships.
- Reorganized class to meet twice a week instead of 3 hours at one time.


Cook-Sather, A (2011, October). Keynote Speaker - Scholarship of Teaching and Learning Conference, Maryville University, St. Louis, MO.


Engagement Analysis

Conceptual Workshop

B:

C:

A: