Pre-Class Online Quizzing as a Catalyst for Pedagogical Change

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PRE-CLASS ONLINE QUIZZING AS A CATALYST FOR PEDAGOGICAL CHANGE

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The Issue

- Coverage of content is a continuous concern for higher education instructors, novices and veterans alike (Weiner, 2002).
- Students, especially those in entry level courses, come with little prior knowledge of the specific discipline.
- It is hard for instructors to cover the content within the limited time in class.
- This concern, hence, has put numerous instructors on the track of engaging students in passive learning.

Presentation at SoTL 2009
Where I was

• As an entry level course instructor, I had concerns about covering the content.

• Partaking in professional development opportunities in the university, such as reading roundtable on student-centered instruction, building online instructional tools, and any other seminars that could help me solve my problem.

• I learned that I was not alone.
Sharing the experience in teaching entry level courses
Confronting the Issue.

- There could be multiple approaches.

- I am sharing a strategy to cope with my issue. Hopefully after this session, you will have an additional idea for teaching and learning in your class, regardless of the discipline.

- Eventually I realized that quizzes might help relieve my concern of content coverage if applied appropriately.

- Quizzes have various purposes and forms. My purpose of giving quizzing was to tackle my concern so that I could change my teaching strategies.
Inquiry Questions

a) What are undergraduates’ perceptions of pre-class online quizzing vs. traditional quizzing?

b) To what extent have my pedagogical strategies differed for the same course with vs. without pre-class online quizzing over a course of three semesters?
Method

- **Study Setting:** One entry level course offered by an early childhood teacher education program in a southeastern state university, USA;

- **Participants:** 26 samples of 30 students in the class were collected, mostly juniors with four seniors and one sophomore; 2 male and the others female.
Data sources

• **A survey of 19 items:** It was developed over two semesters and strengthened with information collected from concept maps created by the students in class as part of the learning activities and focus group discussions.

• **Teaching strategies:** These strategies mostly manifested in the number of slides used for PowerPoint presentations and hands-on activities created for group works. They were from the same course with vs. without online quizzes in consecutive three semesters.
Data Analysis

1. For survey data, mean scores and paired-samples t tests were examined to compare undergraduates’ experiences of traditional vs. pre-class online quizzing.

2. For teaching strategies, the number of PowerPoint slides and the number of activities used in the semesters were counted and converted into quantitative data.

3. The characteristics of the activities were analyzed based on Bloom’s taxonomy.
Results

- See handouts
Discussion 1

- Pre-class online quizzing motivated participants to cover assigned reading materials and helped them understand assigned texts, both of which indirectly helped resolve higher education instructors’ concern about whether or not students are prepared or equipped prior to class in entry level courses.

- This fundamental preparation allowed the instructor to go beyond the box and explore more engaging activities that involve students in higher order learning, as indicated by this study.

- The results indicate that the change of assessment has the potential to foster the change of instruction.

Assessment is only good when students are responding to their works and teachers are making teaching judgment that leads to improving student learning (Pryor and Crossouard, 2008).
Discussion 2

- There was significantly more information sharing among the undergraduates in pre-class online quizzing than in traditional quizzing.

- According to this study, the benefits of pre-class online quizzing induced the undergraduates to willingly prepare for class, felt confident to participate in class, fulfilled the purpose of the instructor, and allowed the instructor for instructional change, which to a large extent surpassed its drawback of not being equal.

Concerns of power and equity when it comes to testing (Taras, 2008).

Testing is not just to see how students score but to provide information for adjusting teaching (Dessorr, 2008).
Limitations of the study

- A small number of participants
  - Expand the size
  - Use multiple classes

- A one-shot survey
  - Pre and post tests recommended
Future Inquiry

- Is after-class online quizzing a type of quizzing as effective in enhancing student learning?
- Others?