

How Graduate Professors and Students Understand the Relationship between Higher Order Thinking and Pedagogical Practice: An Exploratory Study

Abstract: (50 Words)

University professors often wonder why their students are not capable of applying higher order thinking (HOT) skills. Using a qualitative approach this exploratory study seeks to examine how graduate students and faculty describe/view/understand the relationship between pedagogical practices and the development of higher order thinking skills.

Supporting Summary (1,000 Words Max)

Statement of the Problem: (200 Words)

Many professors struggle to incentivize their students to use higher order thinking or scientific thinking (Vygotsky, 1978), but few problematize their pedagogy as the source of their students' lack of HOT skills. Oftentimes, graduate students look for specific content to be memorized for the test or *best practices* that can be applied as remedies for their classroom practices and resist exercises and activities that they cannot specifically see as content that will contribute to their final goal. This study seeks to understand how graduate faculty members view their students' higher order thinking skills. It also explores the faculty members' description of pedagogical practices and techniques that will lead to the development of higher order thinking in their graduate students.

In addition, the perspective of the student will be considered. Given that the dialogical relationship between faculty and student is of utmost importance to the development of higher order thinking skills, the study will focus not only on the perspective of the faculty member, but the student as well. Ultimately, the problem of developing programs that foster higher order thinking cannot be addressed until both faculty and students are committed to fostering the development of an engaged community.

Purpose and/or Research Question(s): (50 Words)

Overarching question:

How do professors and students understand the relationship between pedagogical practice and higher order thinking?

Sample Sub-questions:

1. How do professors describe pedagogy that leads to the development of higher order thinking skills in their students?
2. How do students describe the development of their higher order thinking skills?

Literature Review: (250 Words)

Of utmost importance to a project that is aimed at exploring the topic of 'higher order thinking' skills would be to define the concept. Weissberg (2013) claims that the concept of 'critical thinking' has "mesmerized academics" and that a clear definition and definitive way of measuring the construct has been difficult to point out. Nevertheless, he focuses on the importance of coming to consensus as necessary to provide focus for both the teacher and the learner and ultimately, recommending the definition put forth by the National Council for Excellence in Critical Thinking (Scriven & Paul, 1988):

Critical thinking is the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action. In its exemplary form, it is based on universal intellectual values that transcend subject matter divisions: clarity, accuracy, precision, consistency, relevance, sound evidence, good reasons, depth, breadth, and fairness.

Research has shown that in a community of learners, the learner's performance is increased as a result of being part of a collaborative learning model (Wang, 2007). The teacher can serve as a motivator, encouraging students to develop their critical thinking by reflecting upon different divergent ways of teaching/learning.

Research Methodology: (200 Words)

Qualitative research seeks to answer questions that are exploratory in nature; therefore, a qualitative approach will be taken to this study. The primary goal of this exploratory study is to examine how graduate faculty and students understand the relationship between pedagogical practices, strategies and techniques and the development of higher order thinking skills in graduate students at a small, private, liberal arts university in South Florida. Participants will be full time and adjunct faculty members teaching graduate level courses and graduate students currently enrolled in ADSOE programs at Barry University. Data will be collected via classroom observations, interviews and document analysis. Faculty participants will be observed in their classrooms and later interviewed. Faculty participants will provide their syllabi for document analysis. Students will be interviewed individually. A semi-structured interview protocol will be used to guide interviews with both faculty and students.

Having been approved by the Barry University IRB in the Fall 2014 semester, data collection for this study commenced in the Spring 2015 semester. To date, five professors teaching graduate level courses have consented to participate in the research study. Student volunteers will be recruited for participation in the study within the courses being taught by the participating faculty.

Findings or Results (200 Words)

Given that data is in the process of being collected by the researchers, it is unclear what the findings will be at this stage in the project. Nevertheless, the researchers are encouraged by the enthusiasm that has been shown thus far for participation in the project. One recruitment email went out the first week in January, prior to classes beginning this past week. From the first recruitment email, five faculty teaching graduate level coursework have consented to participate thus far. Upon completion of the class observations, the follow-up interview will be scheduled with the faculty member and student participants will be recruited from the classes. The researchers have put forth the following time line for data collection and analysis:

January & February: Recruitment of faculty teaching graduate level courses

January/February/March: Class observations and faculty interviews

February & March: Recruitment of students taking graduate level courses

March/April/May: Student Interviews to be conducted

May/June: Data analysis and preparation of poster for SFERC presentation in early June

Implications for the Field (100 Words)

As graduate programs consider the major goals of their program and the outcomes that are expected of their graduates, the question of how to measure higher order thinking is inevitable. Therefore, this project will enable faculty to consider how to measure the effectiveness of teaching higher order thinking skills at the graduate level, by first considering how to define it and coming to consensus on what it is and examples of how it might be imparted in graduate school. Most importantly, the interrelationship between pedagogy and higher order thinking will be explored which will give practitioners much to consider.

References:

- Scriven, M. and Paul, R. (1988). Critical thinking as defined by the national council for excellence in critical thinking. <http://www.criticalthinking.org/pages/defining-critical-thinking/766>
- Vygotsky, L. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: The President and Fellows of Harvard College.
- Wang, L. (2007). Sociocultural learning theories and information literacy teaching activities in higher education. *Reference & User Services Quarterly*, 47(2), pp. 149 – 158.
- Weissberg, R. (2013). Critically thinking about critical thinking. *Academic Questions*, 26, pp. 317 – 328.