ENGAGEMENT IN AND ASSESSMENT OF INTEGRATIVE LEARNING: USE OF REFLECTION IN A CAPSTONE COURSE IN PUBLIC HEALTH

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ABSTRACT
The purpose of this paper is to describe the use of a reflective method in a senior capstone course for undergraduates in public health developed to promote student engagement and the assessment of student learning outcomes in integrative learning. The aim was to see if the course had an impact on students' ability to integrate the principles and concepts learnt throughout the programme's core curriculum, and assist them in synthesising these materials in a manner that facilitates more integrative learning that could be useful in their future careers. Self-reflection was incorporated into the capstone course through the use of written journal entries. Students were required to submit 2–3 page journal entries to the instructor at four designated times during the semester. Journal entries from students in 2004 (n=69) and 2005 (n=54) were collected. A total sample size of 471 journal entries were coded and analysed using a grounded theory approach. Two independent coders reviewed the documents and a third facilitated the process and assisted in code development. Three primary themes emerged from the qualitative analysis of the journal entries. Findings indicate that the capstone course methods and focus on integrative learning are successful. Students expressed confidence in their abilities to apply capstone course concepts through a greater mastery of their technical abilities within their practicum experiences, gained a holistic comprehension of the public health field and arrived at an increased appreciation of their preparation for their professional life.

KEYWORDS
Assessment, learning outcomes, student engagement, integrative learning, capstone course, role play, reflective writing, active learning

INTRODUCTION
Student engagement is a valuable component of the learning process. Strong correlations between student engagement and learning have been reported (Community College Survey
on Student Engagement, 2007). Engagement in learning and high motivation have been linked to decreased dropout rates (Kushman, Sieber & Heariold-Kinney, 2000). Colleges that foster student engagement provide an environment that is adapted for educational enrichment (Kuh, Kinzie, Schuh, Whitt et al., 2005).

Assessment of student learning goes hand-in-hand with student engagement. When students are actively engaged in the learning process, it is incumbent upon institutions of higher learning to measure the results of this learning for the benefit of students, the faculty and other key stakeholders. To do so, goals and objectives for learning must be agreed to up-front and a thoughtful process put into action for developing assessment methods, measuring outcomes, evaluating and sharing assessment results, and using results to improve the teaching and learning processes (Palomba & Banta, 1999).

Capstone courses offer a vehicle for student engagement and assessment of student learning. These courses are designed to allow students to integrate knowledge from a number of courses and other learning experiences in a safe, yet challenging environment. Capstone courses are often included in a senior year curricula to allow students to assimilate their education and experience to date into a foundation for future use in the real world. This method has become common in many fields including the basic sciences (Orbinger & Kent, 1998), nursing (Mellon & Nelson, 1998) and allied health professions (Dyjack, Anderson & Madrid, 2001).

Capstone courses have three primary goals. First, the integration of core curriculum materials allows students the opportunity to make connections between course content, learnt skills and applied concepts. Second, such courses give students the opportunity to reflect on their college experience. Finally, capstone courses support the transition from students to graduates by providing closure on the college experience and preparing students for graduate work or the professional workplace (Jervis & Hartley, 2005).

The capstone method is widely viewed as a successful intervention for improving students’ learning experiences (Gardner, Van der Veer et al., 1997; Lockhat & Borland, 2001). In capstone courses, students put their knowledge and skills into action through active learning techniques. These techniques include role play, teamwork and self-reflection. Activities such as these are thought to engage students more actively in the educational process and thereby improve the quality of collegiate education (Belcheir, 2003).

Self-reflection in particular is considered a valuable active learning strategy. It gives students an opportunity to think deliberately about the integration of their learning. Additionally, reflection provides students with an opportunity to examine and revise their own arguments and reasoning (Suskie, 2004).

This paper describes the use of reflective writing in a senior capstone course for undergraduates in public health developed to promote student engagement and the assessment of student learning outcomes in integrative learning.

METHODS

The capstone course examined in this study was designed to integrate the principles and concepts learnt throughout the undergraduate public health programme’s core curriculum and
assist students in synthesising these materials in a manner that facilitates integrative learning. This goal reflects central themes of the senior year experience: 1) integration of core curriculum materials, 2) providing students with opportunities for self-reflection, 3) providing students with support during their transition from student to graduate and 4) assisting students in gaining closure on their college experience by recognising the knowledge and skills they take with them.

Self-reflection was incorporated into the capstone course through the use of journal entries. Students were required to submit a 2–3 page journal entry to the instructor at four designated times during the semester. Journal entries from students in 2004 (n=69) and 2005 (n=54) were collected. 21 journal entries were not completed (although all students completed at least three of their four entries). There was a total sample size of 471 journal entries.

Coding and analysis were completed using a grounded theory approach (Mason, 2002) involving an iterative coding technique with two independent coders who reviewed the documents, and a third who facilitated the process and assisted in code development. Coders met regularly over a three-month period to discuss the coding process, come to consensus regarding definitions and appropriate use of codes, and discuss themes emerging from the data.

DATA FINDINGS

Three primary overarching themes emerged from the qualitative analysis of the journal entries. First, students expressed confidence in their abilities to apply capstone course concepts through a greater mastery of their technical abilities within their practicum experiences, gained a broader perspective on their world and community and arrived at a greater awareness of public health practices they encounter as consumers. This was reflected in comments such as:

• "I actually had to use the knowledge I have gained from this class in budgeting recently at my internship...I had to create a line-item budget and was happy to have had this class as part of my requirements for my major”
• "I understand better now what goes into to protecting public health and safety.”

Second, students described their holistic comprehension of public health and the connections they now saw between courses:

• "In my management class, we discussed MIS but I didn’t get a chance to really apply it until now. In my finance class, we went into depth in managerial budgeting so I have been able to help my group in this part of our plan.”

Third, students expressed an increased appreciation of the preparation for their professional life:

• "I used this experience and explained it during an interview for an internship and the interviewer was impressed.”
• "I really feel this class tied up my four years as a college student and I feel really good about entering into the 'real world.'’’
CONCLUSION

Findings from this qualitative analysis of self-reflection journal entries completed by two cohorts of undergraduate public health students indicate that the capstone course's methods and focus on integrative learning are successful. Students expressed confidence in their abilities to apply capstone course concepts through a greater mastery of their technical abilities within their practicum experiences, gained a holistic comprehension of the public health field, and arrived at an increased appreciation of the preparation for their professional life.

Future analyses of the journal entries will include an examination of the development of the themes over time, both with analysis at the individual and cohort levels. Data from surveys sent to alumni one year after graduation will also be used to test the impact of the capstone course methods on integrative learning over time.

REFERENCES


Community College Survey on Student Engagement. (2007). *Committing to Student Engagement: Reflections on CCSSE's First Five Years*. Austin: Community College Leadership Program, University of Texas.


