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The Use of Collaborative Assignments to Enhance Experiential Learning in Community College Health Education Courses

Andrea S. Salis
Queensborough Community College, asalis@qcc.cuny.edu

Tony Monahan
Queensborough Community College

Daniel Armstrong
Queensborough Community College

USE of COLLABORATIVE ASSIGNMENTS to ENHANCE EXPERIENTIAL LEARNING in COMMUNITY COLLEGE HEALTH EDUCATION COURSES

By

Andrea S. Salis, Ph.D.

Queensborough Community College - City University of New York

Tony Monahan, Ph.D.

Queensborough Community College - City University of New York

Daniel Armstrong, DPT

Queensborough Community College - City University of New York

Abstract

Experiential learning is a critical part of health education courses. It provides opportunities for students to connect their classroom learning to outside experiences to achieve a better understanding of various issues and concepts. Through experiential learning, students can analyze, evaluate and document outside experiences in relation to their coursework. This study investigated the significance of collaborative assignments in experiential learning using the high impact practice, global and diversity learning for health education courses. The results of this study demonstrate higher scores on analytical reasoning and connections to coursework when experiential learning includes a collaborative assignment.

Study Purpose

This study investigated the effectiveness of collaborative assignments to enhance experiential learning using the high impact practice, global and diversity learning. The purpose of this study was to determine the effectiveness of experiential learning when students engage in collaborative assignments as compared to independent assignments in order to develop students' analytical reasoning skills and connections to the coursework. College-level health education courses were selected for this study as they typically include an experiential learning component.

Theoretical Framework

Collaborative learning refers to a method of instruction where students work together in small groups toward a common goal (Johnson & Johnson, 1986, Gokhale, 1995). It is based on the premise that knowledge is obtained socially, rather than individually (Vygotsky, 1978).

Sometimes referred as cooperative learning or small group learning; collaborative learning creates an interdependent learning situation necessitating student social interaction. This social interaction is considered paramount for higher cognitive functions. Vygotsky (1978) noted students' social interactions with more knowledgeable peers facilitate higher mental functions. "Any higher mental function necessarily goes through an external stage in its development because it is initially a social function"

(Vygotsky, 1981, p. 162). Collaborative learning situations allow students to be "more active as learners, more interactive as teachers, more balanced as researchers, more effective as leaders, and more humane as individuals" (Whipple, 1987, p. 4). Bruffee (1984) considered social interactions through conversation as necessary to the development of thought. "The view that conversation and thought are causally related assumes not that thought is an essential attribute of the human mind but that it is instead an artifact created by social interaction…To think well as individuals we must learn to think well collectively -- that is, we must learn to converse well" (p. 640).

The following characteristics are indicative of collaborative learning:

1. Collaborative learning requires all participants (both instructors and students) to be actively involved in the learning process.
2. Collaborative learning lessons or eliminates the hierarchal teacher – student structure promoting an active dialogue that encourages learning among all participants.
3. Collaborative learning eliminates individual student competition while creating a community of learners working together. This sense of community does not remove individual voices, rather provides support in which individuals can contribute towards a common goal.
4. Collaborative learning is intended to create knowledge, as opposed to the traditional teacher – student knowledge transference. Learning is interactive within and between groups, creating a level of knowledge that is greater than the sum of individual learning (Whipple, 1987).

Research on collaborative learning has demonstrated increased student interest in learning, promotion of critical thinking, increased student confidence, and an increased awareness of differences (Gokhale, 1995, Johnson & Johnson, 1986). A meta-analysis conducted by Springer, et al. (1999) demonstrated that collaborative small group learning "has statistically significant and positive effects on undergraduates…" (p. 38). Reviewing 39 studies, the authors found students in collaborative learning situations demonstrated greater achievement ($d = 0.51$) than students not in a collaborative situation,

showed greater persistence in completing programs (d = 0.46), and expressed more positive attitudes (d = 0.55) than non-collaborative peers. However, these studies represented college-level courses in science, mathematics, engineering and technology, not in health education. There appears to be a need for more research on collaborative learning in college-level health programs. College-level health education courses were selected for the current study as they typically include an experiential learning component that could be enhanced by collaborative learning and other modalities.

Overall, collaborative learning has been shown to have a significant impact on student learning. It is recognized as a high impact practice to enhance teaching and learning. The following section describes the currently recognized high impact practices and the research performed on the effectiveness of multiple high impact practices to enhance student learning.

High Impact Practices

Carol Dweck's goal orientation model (1988) proposes that one's beliefs about intelligence will determine whether or not they are more likely to seek challenges and demonstrate high persistence. According to Dweck's model, if a person believes that intelligence is fixed, that person is likely to seek challenges and demonstrate high persistence only if they believe they are intelligent. Conversely, if a person does not believe that they are intelligent, then they are likely to avoid challenge and to demonstrate low persistence with respect to challenges. However, if a person believes that intelligence is malleable and can be enhanced then he or she will be more likely to demonstrate a mastery orientation, seek new challenges and demonstrate high persistence when confronting challenges. Influenced by Dweck's motivational theory that persistence levels can change, George Kuh's research (2008) used the large datasets of the National Survey of Student Engagement (NSSE) and other indirect measures in order to draw connections between High Impact Practices (HIPs) and student learning. Kuh's research showed students' reports of their learning as their success is boosted by HIPs. That is, the use of HIPs instilled in students the willingness to seek challenges and led to higher persistence rates. The HIPs that

Kuh included in his research were: (1) first-year experience/seminar; (2) common intellectual experiences; (3) collaborative assignments and projects; (4) diversity/global learning; (5) service-learning/community-based learning; (5) learning communities; (6) writing-intensive courses; (7) internships; and (8) undergraduate research. Moreover, Kuh concluded that these HIPs have a pronounced effect on the experiences of underserved students (2005).

Finley and McNair's follow-up study (2013) on the impact of HIPs on college students' academic performance involved underserved populations among NSSE survey respondents and included student responses in focus groups aimed at qualifying the impact of HIPs from the students' perspectives. The study used a mixed-methods approach to examine the relationship between participation in HIPs and the underserved students' success and learning. The study revealed that students who participated in a HIP perceived their learning to be significantly enhanced as compared to students who did not participate in that particular HIP. Further, students who participated in multiple HIPs demonstrated even greater enhancements. Overall, students reported gains in general education, practical competence and personal and social development.

In other research involving the effectiveness of HIPs on student learning, Stevens (2014) described findings from a college's service-learning, writing-intensive, semester-long first year seminar. This first year seminar is designed to achieve the following three student-learning objectives: (1) reading critically; (2) participating productively in course discussion; (3) and writing clearly which are assessed using three rubrics, one for each area. In this study, the first year seminar focused on poverty and public policy with a service-learning component where students contributed to writing grant proposals for various local community agencies to use to support their organizations.

From a scale of 1 (strongly disagree) to 5 (strongly agree), the students self-reported that the service-learning activities increased their understanding of course material (M=4.17, SD 0.94) and helped them see connections between academic content *and the* 'real world' (M=4.67, SD 0.95). Also, students

self-reported that working as part of the collaborative team was helpful to the grant-writing process (M = 4.83, SD 0.67.) The responses to the service-learning activities on improving their writing and argumentation skills were more neutral (M= 3.75, SD 0.97 and 3.50, SD 1.17 respectively). A recommendation from this study noted that in order to support writing development, service-learning and writing-intensive classes may require more explicit in-class instruction in writing.

A study by Mastrangelo and Tischio (2005) included student learning outcomes of a service-learning, learning community with three different disciplinary areas (biology, sociology, and philosophy) in a year-long project called *Project Renaissance*. The service-learning project involved college students becoming pen pals with disadvantaged elementary school students. Composition specialists who worked with the students reported changes in the college students' attitudes about the nature of literacy where students shifted from viewing literacy through the framework of "functional literacy" to seeing literacy as a more complex, socially derived ability that individuals develop unevenly, depending upon a variety of social and personal factors. The authors noted that although changes in writing abilities emerge slowly, making it difficult to measure large changes over short periods of time, they did see some evidence that the college students improved as writers as they demonstrated greater rhetorical sensitivity, expanded their genre awareness, and acquired some of the convections of academic discourse.

The current study investigated the effectiveness of collaborative assignments to enhance experiential learning in conjunction with the high impact practice, global and diversity learning. Global and diversity learning utilizes students' prior experiences, cultural knowledge and performance styles for creating a greater understanding and exchange among diverse cultural groups while fostering the knowledge, skills and dispositions necessary for inclusive excellence. In this study, a collaborative assignment was created using the framework of global and diversity learning to assess students' analytical reasoning skills and connections to their health education coursework.

Methodology

Questions

1. What are the effects of students who participate in experiential learning?
2. Are there differences in students' experiential learning when their course includes the high impact practice – global and diversity learning?
3. Are there differences between students who participate in one or more independent experiential learning assignments and students who participate in experiential learning using collaborative assignments?

Hypotheses

1. Students will demonstrate analytical reasoning skills and connections to their coursework from their experiential learning.
2. Students will demonstrate differences in their experiential learning when their course includes the global and diversity learning high impact practice.
3. Students who participate in experiential learning through the use of collaborative assignments will perform better than students who participate in one or more independent experiential learning assignments.

Participants

The participants are undergraduate Queensborough Community College (QCC) students who are over 18 years of age, and enrolled in a required health course, Health, Behavior and Society. Participants representing the diversity of the College are 24.4% Black, 24.4% Hispanic/Puerto Rican, 20% White, 27% Asian/Pacific Island and 4% other.

Measures

The measures include a student profile questionnaire, experiential learning assignments and other course-specific assignments. A modified Valid Assessment of Learning in Undergraduate Education

(VALUE) rubric for integrative learning (see Appendix A) will measure the assignments. The VALUE rubric was developed through a project by the Association of American Colleges and Universities.

Design

This study uses a mixed-method nonequivalent control group design to assess the effectiveness of experiential learning and high impact practices on students' analytical reasoning skills and connections to coursework. The independent variables are: (1) independent experiential learning assignments; (2) collaborative experiential learning assignments; and (3) global and diversity learning course design. The dependent variables are students' level of improvement in identifying and summarizing experience, demonstration of connection to experience and analytical reasoning skills.

Procedure

Four Health Education course sections were selected to participate in this study. The course sections were divided into three groups: (1) independent experiential learning assignment (Independent); (2) multiple independent experiential learning assignments (Multiple) and (3) global and diversity learning collaborative assignment (Collaborative GDL). All of the groups completed a profile questionnaire and were given experiential learning assignments to document in writing. The Independent and Multiple groups selected from a list of independent experiential learning options where the Independent group completed one assignment and the Multiple group completed four. The Collaborative GDL was assigned to randomly selected groups within their class for a semester-long exploration of the concept "cultural wellness." All of the assignments were measured using a modified VALUE rubric.

Data Analysis

Descriptive and inferential statistics will be run. A repeated measures ANOVA and qualitative analysis will be performed. Inter-rater reliability measures are needed.

Preliminary Results

The preliminary results from a sample of students' assignments (n = 49) in the three groups reveal

that the Multiple and Collaborative GDL groups achieved higher scores than the Independent group for identifying and summarizing their experience (see Appendix B). Collaborative GDL scored higher than both the Multiple and Independent groups for demonstrating connections to experience and coursework. Overall scores for analytical reasoning skills were low. However, students in Collaborative GDL scored higher than both the Independent and Multiple groups. The results will be analyzed for statistical significance between groups and any potential differences within groups.

Qualitative Data

The following are sample student reflections from the Collaborative GDL group.

"The experience added to the HE-102 course material in an obvious and distinct manner. Unlike many courses today, which rely on textbooks, PowerPoints and videos alone, this experience required initiative and footwork; changing would have merely been another fact to memorize into a connection with the past and our humanity…"

"I can't speak for my group, but I, myself, forgot that I was working on a project, and focused more on the message that the exhibit was trying to send, showing what could happen in a world where cultural wellness is essentially nonexistent."

"The experience added to the HE-102 course material by making it easier to understand. The main goal of the experience was to understand what Cultural Wellness is, and that in turn, helped make it easier to understand other themes of the class."

"…when learning about the dimensions of wellness, after going to the Holocaust Center, and working on the definition of Cultural Wellness, I saw how Cultural Wellness played a part in the dimensions of wellness, therefore giving me a better understanding of them."

Conclusions

The results of this study indicate a positive relationship between collaborative assignments, use of global and diversity learning and students' connection to experience and analytical reasoning skills. The

Collaborative-GDL students' self-reflections demonstrate an enhanced experience of student learning. This study can be replicated using a larger sample size, additional learning outcomes such as critical thinking and the inclusion of other HIPs such as service-learning, learning communities and undergraduate research.

Educational Implications

If it is shown that students can effectively demonstrate improved connections between coursework and experience and improved analytical reasoning skills through their participation in collaborative assignments using global and diversity learning then this study has promise to be adapted to other high impact practices, additional learning outcomes and across disciplines.

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Appendix A: Experiential Learning Rubric

Component	4	3	2	1
Identifies and summarizes experience	Identifies and summarizes experience with well-defined supporting details	Identifies and summarizes experience with vague supporting details	Identifies experience and broadly summarizes	Identifies experience with an inadequate summary
Connection to experience	Meaningfully synthesizes connections among experience to deepen understanding of coursework	Effectively selects and develops examples of experience to enhance concepts of coursework	Compares experience with coursework	Identifies connections between experience and coursework
Analytical Reasoning	Provides a detailed description, effectively evaluates experience and makes substantial conclusions	Provides a detailed description, effectively evaluates experience and provides conclusions	Provides a detailed description of experience with a general evaluation	Provides a general description of experience with minimal evaluation

Appendix B Group Measures:

Multiple-Independent Experiential Learning Assignments (Multiple)

Component	Number of students scoring a 4	Number of students scoring a 3	Number of students scoring a 2	Number of students scoring a 1
Identifies and summarizes experience	12 (50%)	10 (41%)	2 (4%)	0
Connection to experience	2 (4%)	5 (20%)	3 (12%)	14 (58%)
Analytical Reasoning	0	2 (4%)	10 (41%)	12 (50%)
	14	**17**	**15**	**26**

N = 24

Independent Experiential Learning Assignments (Independent)

Component	Number of students scoring a 4	Number of students scoring a 3	Number of students scoring a 2	Number of students scoring a 1
Identifies and summarizes experience	1 (10%)	7 (70%)	2 (20%)	0
Connection to experience	0	2 (20%)	2 (20%)	6 (60%)
Analytical Reasoning	0	0	3 (30%)	7 (70%)
	1	**9**	**7**	**13**

N = 10

Global and Diversity Learning, Collaborative Experiential Learning Assignments (Collaborative GDL)

Component	4	3	2	1
Identifies and summarizes experience	7 (67%)	4 (27%)	2 (13%)	2 (13%)
Connection to experience	4 (27%)	6 (40%)	3 (20%)	2 (13%)
Analytical Reasoning	3 (20%)	5 (33%)	5 (33%)	2 (13%)
	14	**15**	**10**	**6**

N = 15

Between Group Measures

Identifies and summarizes experience	4	3	2	1
Multiple	12 (50%)	10 (41%)	2 (4%)	0
Independent	1 (10%)	7 (70%)	2 (20%)	0
Collaborative GDL	7 (67%)	4 (27%)	2 (13%)	2 (13%)
Connection to experience	4	3	2	1
Multiple	2 (4%)	5 (20%)	3 (12%)	14 (58%)
Independent	0	2 (20%)	2 (20%)	6 (60%)
Collaborative GDL	4 (27%)	6 (40%)	3 (20%)	2 (13%)

Analytical Reasoning	4	3	2	1
Multiple	0	2 (4%)	10 (41%)	12 (50%)
Independent	0	0	3 (30%)	7 (70%)
Collaborative GDL	3 (20%)	5 (33%)	5 (33%)	2 (13%)