

Using a Case Study to Assess Student Learning of Principled Problem Solving

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Introduction

Guilford College requires all FYE 101 interdisciplinary courses introduce a college initiative, principled problem solving (PPS), to all first-year students. The initiative strengthens the transformative education of Guilford College. Principled problem solving has three tiers through which students learn: (1) foundations, (2) stories and narratives, and (3) application. The use of case studies is an effective method to assess the students' learning of principled problem solving. This poster session explains how a case study was utilized effectively in a specific FYE interdisciplinary seminar.

About Principled Problem Solving

Principled Problem Solving (PPS) is an initiative that strengthens Guilford College's students' experience in transformative education. The initiative is guided by the college's core values of community, diversity, equality, excellence, integrity, justice, and stewardship.

FYE 101 and PPS

In 2008, all FYE 101 interdisciplinary courses were required to include PPS in a specific learning outcome:

Students should be able to describe a complex problem with ethical implications using at least two different disciplinary perspectives.

The Course

The course in which the case study was utilized assess the learning of PPS was an interdisciplinary course titled "The Value of College Sports." As part of the course's curriculum, students received lectures and collaborated on in and out of class exercises

on ethical problem solving and creative problem solving. Ethical problem solving was addressed with lectures adapted from Crosset & Hums (2009) and DeSensi and Rosenberg (2003). The students were introduced to definitions of ethics and ethical dilemmas and to methods utilized in addressing such situations.

Creative problem solving was addressed with lectures adapted from Weston (2007) and collaborative exercise in and out of class. Students were introduced to problem solving techniques including brainstorming and "exotic associations" (Weston, 2007, p. 33). Students applied these techniques in individual and group assignments involving small scaled hypothetical problems and puzzles.

The Case Study

The case study utilized in the course to assess students' learning of principled problem solving was developed by the instructor in 2009. The case concerned the decision of Winston-Salem State University (WSSU), an HBCU located in Winston-Salem, NC, to realign its intercollegiate athletics program with NCAA Division II rather than move forward with plans to move to the Football Championship Subdivision of NCAA Division I. The case involved economic, social, and historical implications in addition to ethical implications.

Assessment

A pre-post test was utilized to assess the students' learning of PPS. Students enrolled in the course (n=17) were given the WSSU case study as an in-class assignment with 45 minutes to complete their assignment. The

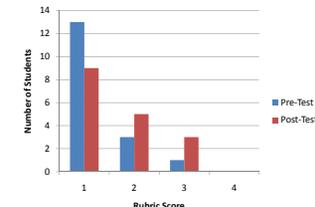
following questions guided their analysis of the case.

- Who were the affected people in the case?
- What is the issue or problem facing the institution?
- What are some potential solutions to the case? In other words, how might the issue or problem be solved?

Rubrics adapted from the AAC&U VALUE Rubrics (AAC&U, n.d.) by the Institutional Research Director of Guilford College and rubrics developed by the instructor were utilized to assess the students' responses to the questions. The rubrics scored the students' responses on a 1 to 4 scale.

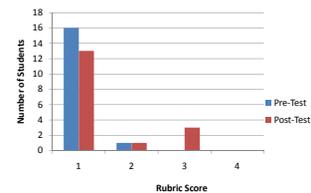
Results

Identification of Ethical Dilemma & Use of Ethical Decision-Making in Solutions



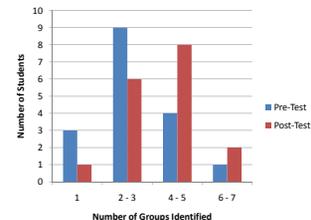
Score	Criteria
1	Does not consider ethics in the solution to the problem
2	Identifies ethical dilemma but does not use ethical decision-making in solution
3	Identifies ethical dilemma and considers ethical decisions in solution
4	Identifies ethical dilemma and uses ethical decision-making in solution and explains the impact to groups

Use of Interdisciplinary Perspective in the Identification of the Problem

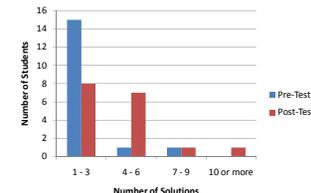


Score	Criteria
1	Does not clearly identify topic and/or does not identify two disciplines providing perspectives on the topic
2	Identifies a complex topic and states two disciplines that provide perspectives on the analysis of the topic, but does not provide information regarding the perspective
3	Identifies a complex topic and presents information from at least two disciplines that represent various perspectives/points of view/approaches
4	Identifies a complex topic and synthesizes information from at least two disciplines to reveal insights, differences, or similarities regarding various perspectives/points of view/approaches

Number of Groups Identified as Affected by WSSU's Decision to Realign with NCAA Division II



Number of Potential Solutions Identified for the Case Study



Discussion & Conclusion

Cases have long been used in higher education for students to apply their knowledge and skills in non-threatening settings. Case studies can be utilized in teaching students "to evaluate a situation or identify problems" (Naumes & Naumes, 1999, p. 10). The results from the pre-test and the post-test in this study indicated that students learned to incorporate PPS in their decision-making process for the assigned case study. Students included ethical decision-making methods at a greater level following the instructional intervention. Additionally, students included many more people affected by the decision in the post-test showing that they had learned the complexity of the problem.

Instructors of first-year students have opportunities to develop case studies from current events and issues to enhance their students' learning experiences. As demonstrated in the current application, case studies can be useful as a classroom assessment method for a first-year experience course when coupled with well-developed rubrics.

References

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