# RESEARCH BRIEF

## Student Learning: Some Lessons Learned

**OFFICE OF INSTITUTIONAL EFFECTIVENESS**

**PEPPERDINE UNIVERSITY**

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## OVERVIEW

This research brief provides examples of assessment of student learning at Seaver College. The examples were gathered from program reviews, annual assessments and a mini-grant. They exemplify the outstanding work of faculty, but even more importantly, they demonstrate the reflective nature of assessment – the process of stepping back and thinking collectively about student learning and teaching.

## INTRODUCTION

The need to demonstrate academic quality and improved transparency has come to higher education through our accreditation agencies as a result of pressure from multiple external constituencies, particularly the federal government and the public at large. This has placed new demands on faculty who now have to add assessment practices to their growing list of responsibilities. Regional accrediting agencies have re-focused and shifted their criteria from a collection of data inputs (such as number of faculty or size of facilities) to student success and learning outputs. The expectation for accreditation is that all decisions are data driven, especially decisions about curriculum. This new criteria has redefined and think about the success of our students.

## UNDERGRADUATE EDUCATION AND ASSESSMENT

Although the assessment movement is more than ten years old, skeptics, especially among faculty, still exist. Faculty frequently pose the question: with all of the time and energy that has been put into assessment, has education and student learning really benefited? What have we learned? How has it impacted our teaching?

Pepperdine is relatively new to the process. Our assessment activities became systemic just two to three years ago. Our activities have primarily involved setting up the structures needed to carry out assessment and our data collection is just now beginning to measure authentic student learning.

"Department chairs, faculty at all ranks, deans and provosts, and even college university presidents finally realize that educating undergraduates is arguably the most important mission of higher education today. For those of us who have watched the focus shift from graduate and post-baccalaureate professional education to the education of traditional and nontraditional four-year students, the change is both powerful and palpable. Teaching undergraduates well is now a dominant focus in higher education. We are not suggesting that educators and administrators should not attend to the important and pressing concerns of graduate education; rather, we believe that the best support graduate and professional

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schools can receive is to send them well-prepared students" (Dunn et al, 2010).

It is at the program level that assessment of student learning reflects what a student has achieved in their undergraduate education. It is also at this level that pedagogical practices have their greatest effect and assessment leads to changes in the curriculum. In 2013, the Western Association of Schools and Colleges (WASC) implemented changes to the accreditation standards and institutional reporting structure. WASC refers to these changes as the "Redesign." Under the new WASC design, they ask colleges and universities to report on the meaning, quality and integrity of degrees. Assessing the meaning of the degree can be accomplished through learning outcomes that are carefully planned and meet national and industry level standards. The next step for assessment is establishing the quality, integrity and rigor. These have always been determined innately by faculty from years of experience working with students and working in their discipline. WASC expects that we have been collecting data on student learning for the past 10 or more years and now it is time to begin assessing the quality and challenge of learning. At many institutions like Pepperdine we have chosen to use our own tools for assessment (course-embedded assessment). This allows a rich form of assessment that is much more meaningful and can be applied to our analysis of learning as well as curriculum and pedagogy.

Course-embedded assessment has the potential to be integrated into our practice of teaching much more easily than an add-on, or nonintegrated form of assessment. The use of rubrics nationally has allowed us to avoid national standardized tests and not suffer the fate of the public K-12 school systems. We now must move on to benchmarking, comparing ourselves to other institutions and or to ourselves, over a period of time. "Benchmarking is the process of assessing a program's qualities by comparing them with –and trying to shape them to conform to—what are considered to be best practices or ideal program features. In essence, benchmarking provides a snap shot of program performance that helps the relevant constituents understand how particular educational activities within key domains compare with acknowledged standards" (Dunn, 2010).

Our other big challenge is for our assessment of student learning to be more cohesive. Ewell (2013) reports that we need "to examine students' learning experiences in piecemeal." We need a more holistic plan that examines the entire student experience instead of isolated experiences that occur at one time in one class. The use of portfolios and capstone courses help us work towards a more comprehensive assessment plan.
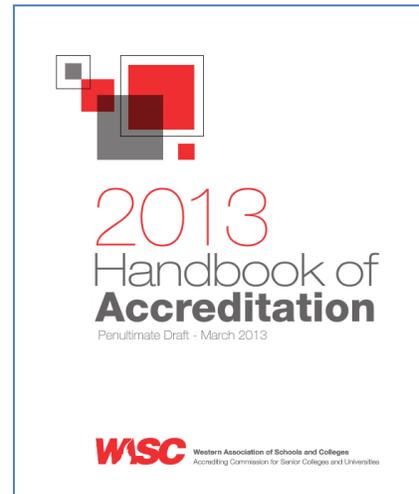


## EXAMPLES OF ASSESSMENT FINDINGS AT SEAVER COLLEGE

For this research brief we have chosen three examples of assessment at the undergraduate level. These three came from a mini-grant, program review, and annual assessment. They are not meant to be examples of perfect research designs for faculty to follow as a template, but rather they are for faculty to look at as a process for assessment. They each demonstrate a thoughtful examination of student learning followed by analysis, reflection and change. They represent a mindset that has taken assessment practices and used them to learn about their students through a systematic analysis. They each used the information to improve teaching, learning, and curriculum. Juanie Walker and Dorothy Andreas received a Mini Grant from OIE and presented their research at the WASC Regional meeting in 2012. The Theater Department's Bradley Griffin and Rick Aglietti used assessment to make major programmatic curricular changes during their 2012 program review and the Biology Department's Rodney Honeycutt and Tom Vandergon used their annual assessment to measure and report on one of their student learning outcomes, using an in-class assignment and a rubric.

## EXAMPLE 1: COMMUNICATIONS

### Shifting Mental Models: Mapping, Engaged Reflection, and Transformative Practice
Juanie Walker and Dorothy Andreas

#### INTRODUCTION
Our inspiration for creating assessment practices draws from Barge's (2008) ideas about engaged scholarship: that it is a practice of mapping, engaged reflection, and transformative practice. As educators, our goals for assessment were twofold: (1) recognize how students' mental models and paradoxical thinking changed and (2) shift our mental models about assessment to become a more holistic and engaged process.

#### LITERATURE REVIEW
Mental models are cognitive frames that individuals use to guide their thinking of a worldview or way of operating in an organization (see Argyrs & Schon, 1978, Senge, 1990). We believed that if we could better understand students' mental models of organizational communication upon entrance into the major, we could better address students' learning needs (see Morgan, Fischoff, Bostrom, & Atman, 2001) and better gauge their increase of cognitive complexity about the subject area. Paradoxical Thinking (Fletcher & Olwyler, 1997; Lewis, 2000; Walker, 2001, 2008; Westenholz, 1993) is the ability to view organizations from multiple lenses to form a larger frame that encompasses rather than attempts to resolve organizational paradoxes (mutually exclusive contradictory truths), which in turn is used to solve problems and create change in organizations.

#### METHODOLOGY AND FINDINGS
In January 2011, we administered an open-ended survey to juniors designed to elicit student responses on a variety of organizational communication topics and then re-administered the survey to the same group in December 2011—after the students had taken two courses in organizational communication. In September 2011, we administered a survey as a pre-test and then again in December 2011, as a post-test to senior students majoring in organizational communication to assess their knowledge, skills, and abilities for paradoxical thinking.

**Results of assessment of mental models revealed:**
1. Students' mental models increased in their cognitive complexity about organizational communication.
2. Students' mental models gained a greater amount of specificity—they named concepts and actions more specifically.
3. Students' mental models reflect increased cognitive complexity in the areas of the key organizational paradigms that we address in our program learning outcomes.

**Results of assessment of paradoxical thinking revealed:**
1. A progression of metaskills used to identify paradoxes in their personal lives in the form of oxymorons; and
2. An ability to reflect on paradox (abilities to live with it; clarify levels and connections; and reframe and eliminate defense mechanisms, Clarke, 1998).

#### CLOSING THE LOOP
Student involvement in assessment caused faculty and students to engage in meta talk about the learning, for faculty to adjust methods of teaching to student feedback, and for students to move from the role of learner to the role of teacher as they prepared training and assessment of paradoxical thinking for organizational clients. Thus, as student mental models become more complex and they improve their abilities to address the paradoxes and challenges of this complexity, they can better meet program learning outcomes. Faculty shifted their mental model of the major from being an organizational change agent to a more general frame of developing a transformed and wise mind in organizations.
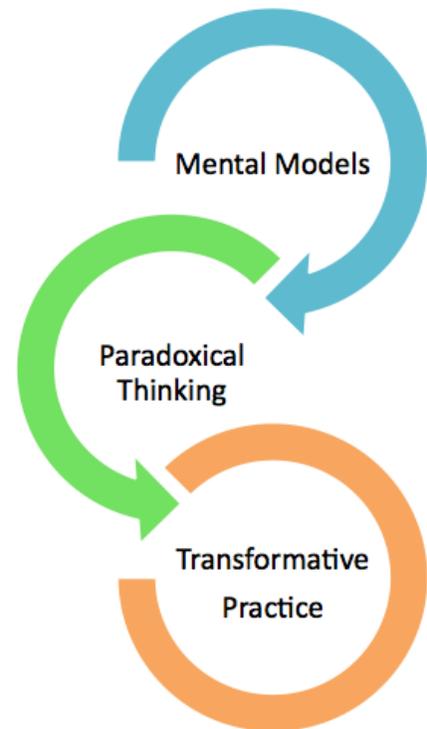
# EXAMPLE 2: THEATER

## *2002 – 2007 Theater Assessment*
Rick Aglietti and Bradley Griffin

**QUESTION:** How are our specific courses meeting the newly-identified program learning outcomes?

**METHODOLOGY:** We adopted a three-pronged approach, gathering data from three courses: THEA 240: Stagecraft 1, THEA 150/350: Ensemble (majors who are cast in main stage productions have the option of enrolling in this course for up to 2 units of credit), and THEA 593: Senior Showcase (the capstone course for majors with an emphasis in acting).

**Data Collection**
1. THEA 240:
   **QUESTION:** Does THEA 240 meet PLO3 (demonstrating proficiency in modes of theatrical communication?)
   **METHOD:** Data collection was through embedded test questions.  We compared the results of the Week 4 test from a random sample of students in the course with the Final Exam from the same group of students. Rick Aglietti and Bradley Griffin were responsible for gathering this assessment data.
   **RESULTS:** There was, as a class, an improvement in the students' understanding of stagecraft vocabulary and concepts at the end of the semester as compared to the beginning of the semester.
2. THEA 593:
   **QUESTION:** Does THEA 593 meet PLO 2 (demonstrate artistic self-expression grounded in analytical thinking)?
   **METHOD**: INDIRECT ASSESSMENT (ALUMNI SURVEY)
   **DATA COLLECTION:** We sent an alumni survey to 200 graduates ranging from the Classes of 1981 through 2007. We had a 43.5% response rate, with 87 individuals participating in the survey. 2008-2009 ASSESSMENT we continued analyzing the data from our alumni survey and closing the loop on the THEA 593 assessment that we had conducted in 2007-2008. Based on the results of our alumni survey and the other assessment instruments we had employed up to this point, we spent 2008-2009 discussing what a revised curriculum would look like. These discussions were based largely on indirect evidence.

**DATA ANALYSIS:** During the 2008-2009 academic year, Fine Arts Chair and Theatre Program Coordinator Cathy Thomas-Grant held 10 planning meetings with Assistant Professors of Theatre JD Sargent and Bradley Griffin to determine the changes necessary to bring the theatre curriculum into alignment with current practice.

**CLOSING THE LOOP**: Based on our data collection and our analysis of the results, halfway through the 2008-2009 academic year, we presented our ideas for curricular changes to the members of our professional staff who serve in an adjunct capacity and who teach many of our courses in technical theatre. In a discipline that trains students to enter the field of live performance, it is important for us to work with adjuncts who maintain active careers in the entertainment industry. We incorporated their feedback into our proposals. In May 2009, the theatre faculty presented the Seaver Academic Council (SAC) with 29 proposals for significant changes to the theatre curriculum. SAC approved the changes, as did the University Academic Council. These changes went into effect in the fall of 2010.  Following university approval of the curricular changes, the theatre faculty met for a one day planning retreat. During the retreat, we discussed the need to mentor senior thesis projects in production/design more carefully.

Finally, we addressed two perceived weaknesses in the assessment process. First, we acknowledged the need to distribute student evaluations of directors. In the past, we had only gathered student feedback from the main stage theatre season informally. We also planned to become more intentional in assessing our main stage season by asking every student involved in a main stage production to complete an anonymous online survey. Second, we talked about the need for scheduled, post-production meetings. For the first time in our program's history, we scheduled post-production meetings for every main stage production, including the opera. These meetings provide closure to the project and provide an excellent opportunity to assess the strengths and weaknesses of each production, including direction, design, acting, and advertising.

# EXAMPLE 3: BIOLOGY

## *Assessing Program Learning Outcomes*
Rodney Honeycutt and Tom Vandergon

**ASSESSMENT PLAN:**
Assess Program Learning Outcome 2:

- **PLO2** - Students will be proficient at applying principles of the scientific method to problems in biology, including the formulation of a hypothesis, implementation of a research project, collection and analysis of data, and interpretation of data in both written and oral formats.

Application of Scientific Method:
"Mastery" is the skill-level expected for students' completing this program learning outcome. Most of the exercises related to this learning outcome were performed in the laboratory portions of Biology 311. This course was used to assess PLO2. During the first portion of the weekly lab sessions, students were taken on multiple fieldtrips, where they learned experimental methods and were exposed to various local environments and organisms. After each laboratory, students were required to provide three scientifically relevant questions, and address one of these questions through an investigation of the scientific method.

**METHODOLOGY:** The second portion of the laboratory sessions was dedicated to the development of an independent research project. Eight research teams, consisting of two to three students each, were formed, and each team was required to design and implement a research project that addressed a specific concept and/or hypothesis related to ecology. Each team was responsible for developing a research proposal that outlined the question to be addressed as well as the experimental design to be used in answering the question. This required a primary summary of the literature, and the development of both an oral and visual presentation. The visual presentation involved a poster that followed the basic format required by professional scientific societies at their annual meetings. Two professors (Dr. Rodney Honeycutt and Dr. Tom Vandergon) used a grading rubric to independently assess all eight research projects.

**RESULTS**: Since all of the students in Biology 311 had previous experience with independent research projects and the presentation of results, we expected the average score to be 75%. The average scores provided by both Honeycutt (87.6%) and Vandergon (83.6%) exceeded this expectation. The figure below provides a breakdown by group of the scores provided by these two professors.
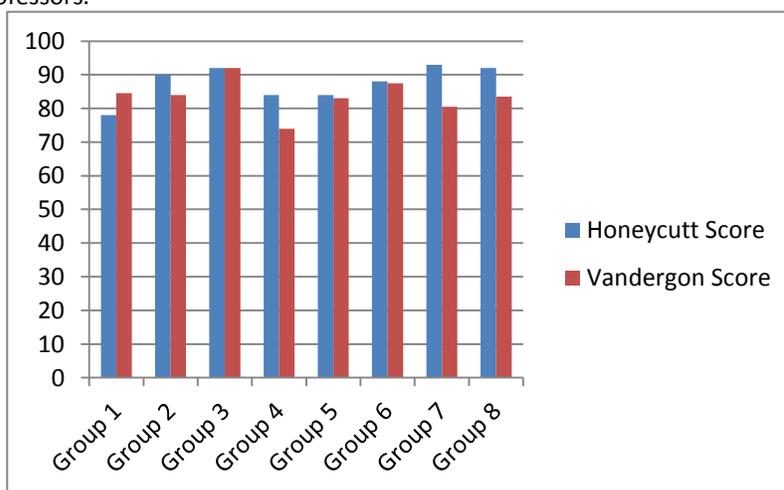


*Average scores for each group based on independent evaluation of each research project.*

**CLOSING THE LOOP:** Several consistent errors in formulating a hypothesis were identified. Moreover, there were some errors that in a lack of attention to detail, especially as it related to presenting and interpreting research results. We are now coordinating with Steve Davis, who teaches BIOL 213, in an effort to provide consistent training in implementing a research project and presenting those results. Dr. Davis is now using the same rubric that we use in BIOL 311. Most students entering BIOL 311 in the fall of 2013 had BIOL 213 during the spring of 2013. Therefore, we will be able to assess whether they show improvement in these areas.

## CONCLUSION

The purpose of assessment is to "connect and reinforce teaching and learning." It will hopefully make us better: better teachers and decision makers, ones who arrive at decisions about teaching, learning and curriculum from evidence. We are beginning to see the benefit of assessments as we reach the reflection and change stages. Hersh and Keeling (2013) reported, "only by taking learning seriously can we understand the necessity of good assessment and how it can and should support learning….pervasive assessment is a necessary condition for providing appropriate and timely feedback to students and faculty required for benchmarking individual student and institutional excellence."



Here is where assessment plays a key role in aiding a culture of change for learning. Systemic, cumulative, formative, and summative learning assessment powerfully signals and reinforces the institution's learning expectations and standards, and in turn, it requires faculty, administration, and staff consensus on what they mean by cumulative and coherent

## SELECTED REFERENCES

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