# Fostering Integrative Learning through Assessment\*

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With all six regional and four major specialized accreditors calling for some form of integrative learning as an outcome of college (AAC&U, 2005), what has long been an aspiration for undergraduate education is now a common expectation. Campuses are discussing not *whether* integrative learning will be part of undergraduate learning, but rather *how* it will be defined, fostered, and assessed.

Assessment practices in higher education have advanced over the past two decades (Ewell, 2004), but neither standardized tests (for example, ACT's Collegiate Assessment of Academic Proficiency or the Educational Testing Service's Measure of Academic Proficiency and Progress) nor surveys of student opinion (like the National Survey of Student Engagement) directly assess students' integrative work. While some of the exercises used for the Collegiate Learning Assessment (a standardized *qualitative* exam) may require integrative action, the test provides scores only for critical thinking, analytical reasoning, and written communication.

The ten campuses of the Integrative Learning Project (ILP) have, over the past several years, developed a collection of innovative practices to foster and assess integrative learning. Given that integrative learning can be defined in a wide variety of ways, it is no surprise that these locally-invented assignments and assessments vary according to each campus's learning needs. One prime advantage of locally developed assignments and assessments is the enhanced likelihood that teaching and instruction will be aligned intentionally to produce quality learning and that the assessments will have good validity (Leskes and Wright, 2006; Miller, 2005).

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Developing a valid assessment begins by reviewing the whole goals-teaching-learning-assessment-feedback cycle. Validity is enhanced when students complete an assessment task very similar to the experiences and assignments that prepared them for an assessment. Thus, a valid assessment may look very much like previous assignments. Assignments should align with the goals set for student learning and allow sufficient time and opportunity to learn. Goals depend upon the definition of an expected outcome. Complex outcomes, such as integrative learning, while often difficult to define in words, can also be defined operationally – i.e., by what one does when engaged in the outcome. So, by this logic, an assignment can represent nearly all of the teaching/learning cycle – operationally defining the outcome by specifying what students are to do, fostering learning toward goals, producing material for formative or summative assessment, and generating data to improve future teaching and learning. Indeed, assignments and assessments from the ten ILP campuses work in just this way.

#### Defining the Outcome, Envisioning Goals

Each campus in the Integrative Learning Project (ILP) has worked with students to foster a particular kind of integrative learning, defined by what they ask the students *to do*. From writing in integrative learning communities (College of San Mateo), to inquiry-based, integrative senior capstone experiences (Massachusetts College of the Liberal Arts), to using study abroad as a springboard for powerful integration (Michigan State University), the ten ILP campuses each have chosen an approach that makes sense for students in a particular campus context.

While a broad definition of integrative learning can be useful for starting a conversation on campus (Huber and Hutchings, 2004), coming to an understanding of the kind of integration that will match institutional needs can be advanced through analyzing actual student work. Reading through and talking about selected campus assignments, with special focus on the integrative aspects of the work, was an important ILP activity that

generated insights and shared understanding of different expressions of integrative learning. While this was not easy work when done with ten campuses participating – much depended upon conveying a detailed context for the assignments in order to understand the kind and level of work expected – such discussions will be easier for single campuses where the context is shared.

Whether a piece of work is analyzed with the idea that "this is what I want my students to do" or discussed while questioning "is this what we mean by integrative learning?", the conversation can delimit the possibilities, clarify inchoate ideas, and move a group toward stating their expectations for student work. It is hard to overestimate the importance of looking directly to student work to help faculty and administrators answer important questions and inform decisions. The analyses can lead to an operational understanding of the outcome and clarify goals for courses, programs, and the institution.

It is quite possible that an *institution* might choose one integrative goal (say, "connecting learning across disciplines") while a *program* might focus on another (say, "putting theory into practice"). Indeed, an analysis of student work and curricula at Salve Regina University revealed ten variants of integrative learning (personal communication to the author from Stephen Trainor, June 15, 2006). Making high quality examples of student integrative work public (e.g., through Web sites, departmental archives, or institutional publications) will keep faculty and students in touch with expectations for integrative learning and build understanding of how it can be developed.

## Opportunities to Learn, Development over Time

Once expectations for integrative learning have been established, departments and programs should analyze existing curricula to determine whether there are sufficient opportunities to learn. As with many liberal education outcomes, integrative learning is complex and requires time and repeated experiences to develop. When campuses initiate integrative senior capstone projects, they may find that student work is much less rich than

they had hoped. In part, disappointing results can arise from insufficient previous experiences at the institution to prepare students for graduation-level integrative work.<sup>1</sup> Better results can be fostered through a planned series of integrative assignments and assessments that develop student integrative thinking over several years prior to the graduation level project.

Curricula at most of the ILP campuses include integrative experiences for students at points throughout their degree programs. For example, at SUNY Oswego, first year students integrate research and inquiry skills with debate and discussion; advancing students in "Intellectual Issues" courses approach complex problems from multiple perspectives; and seniors complete an integrative capstone that pulls together work in the major and general studies.

Philadelphia University focuses throughout their programs on the integration of liberal and professional studies. They begin with a first year experience integrating co-curricular experiences in the community with general education and professional study, follow with integrative projects in the major, and end with an integrative capstone experience that, once again, utilizes general and professional learning.

#### Focus on Assessment

An overview of the assignments and assessments used by ILP campuses reveals a fairly small number of assessment strategies: papers, projects, presentations and portfolios (any of which might be placed online as a Web site or blog) are student, peer, and/or teacher-assessed through formal or informal rubrics and several kinds of reflection. The approaches often overlap in different combinations, sometimes creating integrative "piggybacking:" integrative projects may be collected in a portfolio after which students write reflections on the work, further integrating and connecting multiple learning experiences.

Writing an integrative paper for a course is nearly universal among the ILP

campuses. For the last four years, a History professor and an English professor at Carleton College have linked their first-year courses using writing and have also required a paper that explores a significant historical issue using quantitative data.

The integration of general and professional studies is a common element driving projects at Philadelphia University and the University of Charleston. A capstone project in historic preservation at Charleston utilizes service learning to engage students with the community where they research and document structures for preservation. Rubrics that include several integrative behaviors are used to assess both the quality of the student-written applications for historic preservation and students' reflections upon their service learning. At Philadelphia University, a detailed rubric assesses an architecture project on traditional urban housing (such as the Japanese screen house) that includes an integrative paper, an oral presentation, and a student-built model of a house.

While different approaches to integrative e-portfolios are in use at Salve Regina University, LaGuardia Community College, and Portland State University, student reflective essays on the portfolio contents are common for all three approaches. At Salve Regina, students select papers written for theme-based first year courses for inclusion in the e-portfolio, writing reflective essays that explain how the papers show their achievement of core learning outcomes. A rubric is then used to assess both the quality of evidence that core goals have been met and the quality of the reflection. Salve is planning to extend this process to the sophomore and senior levels.

In an upper-division science course at Portland State University, Web logs are used to represent a student's research process exploring a current political/scientific controversy. The blogs are integrative in many ways and students are required to post a reflective entry. Assessment is conducted according to clear guidelines provided by the professor and includes looking at 1) entries made over time, 2) evidence of learning and increasingly sophisticated understanding during the project, 3) evidence citing a range of positions for

scientific, political, and other aspects of the issue, and 4) the integrative content of final reflections.

Several campuses have also developed course- or program-level assessments of integrative learning utilizing surveys (completed by students and faculty) and rubrics (that faculty use for "second-scorings" of student work outside of classes). SUNY Oswego gathers program data through a survey (completed four times between orientation and graduation) of how students use their knowledge and skills; whether their education seems coherent; and how college education has changed them. SUNY Oswego faculty members reflect upon professional development intended to improve integrative teaching and learning.

Philadelphia University faculty score samples of integrative projects from first-year experiences to assess first-year program integrative outcomes. A student-completed survey checks for their perceptions of connecting the classroom with the community.

Portland State uses a survey with students to assess their impressions of the integration and coherence of the curricula and a second survey with faculty to discover the extent of integration of international issues into courses. The data collected in all of these efforts are used to improve integrative learning outcomes through changes in teaching, courses, and programs.

#### In conclusion

Faculty discussions utilizing real examples of students' integrative work can substantially advance a campus's understanding of what integrative learning outcomes they value and how they can assess them. If one plans selected assignments so that they operationalize and strategically advance integrative learning (as locally defined), then the product of those assignments can logically be used as a valid (and valued) assessment of students' integrative learning.

## Notes

<sup>&</sup>lt;sup>1</sup> Read the department reflections on senior capstone efforts at Southern Illinois University Edwardsville: <a href="http://www.siue.edu/assessment/depts.html">http://www.siue.edu/assessment/depts.html</a>.

#### References

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