Faculty Governance Embraces Outcomes Assessment

Lance Schachterle
Associate Provost, WPI
Worcester, MA 01609 les@wpi.edu

Abstract - Outcomes assessment of student learning typically originates with academic administrations, because they have the resources for gathering and analyzing data and usually are responsible for preparing for accreditation visits. However, for such assessment to be really effective as well as sustained, faculty buy-in is crucial. This paper describes four steps which led to responsibility at WPI for undergraduate outcomes assessment being shifted from the administration only to the faculty as well.

- First, faculty leaders recognized that assessing student learning was part of the faculty’s role in assuring the quality of undergraduate learning. While assent is not unanimous, many faculty regard the time spent in assessment as worthwhile in terms of assuring continuous improvement in teaching and learning.

- Second, department heads, who were involved in assessment at WPI which began in the mid-1980’s, supported early administration-led efforts at every stage and eventually claimed ownership of assessment activities within their disciplines.

- Third, faculty governance (at WPI, the Committee on Academic Policy or CAP) voted in spring 2003 that, following a second ABET general self-study under the new Engineering Criteria in 2002, ongoing assessment should fall under a standing CAP subcommittee rather than within the Provost’s Office.

- Finally, a Web site (www.wpi.edu/Academics/Outcomes) used to post the results of assessment work—including identifying weaknesses and how they were being addressed—ensured internal and external transparency for assessment work. This site proved especially important for informing and involving the whole community about assessment work, and includes annual updates of continuing work to respond to concerns identified in both ABET and regional self-studies and visits.

First, the role of faculty. In the late 1960’s, the WPI faculty adopted a new undergraduate program making professional-level performance in projects a major requirement for graduation. The requirements included a nine-credit-hour project in research or design in the major field, a nine-credit-hour interdisciplinary project on science, technology, and society, and a three-credit-hour project capping five courses constituting a minor in the humanities or arts. Given the unusual demands made on both students and faculty of the interdisciplinary project, faculty began conducting peer reviews of completed interdisciplinary reports in the 1980’s; in the 1990’s, the process was expanded to both the capstone research or design and humanities/arts projects. Thus, when ABET announced the new EC2000 outcomes-based accreditation criteria, in 1996 WPI was one of the first universities to prepare an accreditation self-study based on outcomes already defined for these projects and with several iterations of assessment already performed. WPI had already

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developed a faculty culture amenable to outcomes assessment, and efforts expanded significantly between 1996 and 2002 (the date of the second outcomes-based ABET visit) to define much more clearly the anticipated outcomes and objectives, as well as their assessment. During this period, more than one quarter of the roughly 210 tenure/tenure-track faculty participated significantly in assessing undergraduate student outcomes, and most of the remainder experienced some changes in the way they taught and assessed. (For a more detailed study of this process, see my 2002 FIE paper “Sustaining a University-wide Approach to Comprehensive Outcomes Assessment.”)

Second, the role of department heads. Of necessity, department heads led the preparation for the 1996 and 2002 ABET visits. President Edward Alton Parrish, himself one of the architects of the EC2000 Criteria, in 1999 appointed a joint faculty-administrative “Student Outcomes Assessment Steering Committee” (“SOASC”) to facilitate sharing of best practices among all departments. SOASC involved heads of the major engineering departments, and provided support to nurture the development of best practices by departmental stakeholders to best assess their own programs. (WPI had decided consciously not to impose a central-administration “one-size-fits-all” assessment package from above, but to develop procedures within departments, even at the expense of some incongruities among assessment programs.)

With professional support from WPI’s “Center for Educational Development, Technology, and Assessment,” directed by a part-time faculty member, department heads met regularly in the preparation of the 2002 ABET self study to develop and refine effective outcomes and objectives, and to strategize how to involve faculty in funded summer assessment activities of both projects and courses. In addition, heads helped to develop and champion relevant surveys of graduating seniors (using the EBI instrument) as well as an internally-designed alumni/ae survey. Finally, SOASC was instrumental in forming an AITU coalition to use the National Survey of Student Engagement (NSSE or “Nessie”) to gather data on what WPI undergraduates do with their 168 hours a week.

Third, the role of faculty governance. SOASC was administratively-appointed, and while it involved several faculty active in governance, it was not an instrument of faculty governance. As associate provost, I led the regional and ABET self-study and re-accreditation efforts in, respectively, 2001 and 2002, working closely with SOASC. Our hope and expectation within SOASC was that after the 2002 visit, faculty governance would formally adopt on-going assessment work. Our fear was that after two major self-study efforts, faculty interest and involvement would lapse—as it always had in the past after major accreditation efforts.

Consequently, in fall 2002, the Committee on Governance (which oversees faculty governance including the committee structure) queried CAP, SOASC, and the department heads how to sustain WPI’s post-accreditation visit assessment program. CAP indicated its willingness to discuss bringing assessment into faculty governance as a primary responsibility for academic policy. The head of ME and a SOASC member, responded that:

“I think it is important that there is some institute-wide body that looks at outcome assessment and as it appears that CAP (which is, I believe, the most natural body to assume the responsibility) has a full agenda, a permanent subcommittee would be the next best thing. I am, as most of us are, wary of adding yet another permanent committee, but as outcome assessment is fundamentally a faculty issue (as well as being something that we both must and should do), I cannot see how it can be dealt with except in a faculty committee.”

Finally, SOASC responded with a structured argument that outcomes assessment should continue as a part of faculty governance. Because of the issues raised and arguments made, the SOASC response is presented in detail:

Arguments for faculty governance embracing outcomes assessment:

- Outcomes and their assessment have been an integral part of our academic program since the early 1970s. Assessment is important to our program but prior to SOASC was only sporadically performed.
- Accrediting bodies have “raised the bar” with respect to acceptable outcomes assessment. For example, WPI was forcefully criticized by ABET in its 1996 visit for not having a campus-wide assessment plan (as distinct from those in individual departments). We can’t afford to not have such a campus-wide committee. WPI will look very bad to our accreditors and other institutions if we disband our assessment committee as soon as the ABET visit is over.
- Some, but not all, of our programs are accredited by ABET. The others will contribute more effectively to the achievement of ABET outcomes, and should improve the education of their majors, if they are part of an institutional assessment plan. ABET outcomes are not institutional outcomes!
- Coordination of assessment efforts among various campus entities such as ABET programs, Interdisciplinary and Global Studies, departments that provide service courses, alumni office (alumni survey), Provost’s office (NSSE and EBI) is crucial in order to both cover all the bases and streamline their efforts. For example, SOASC is currently engaged in an analysis of assessment measures for the purpose of eliminating redundant efforts.
- We have a working assessment system now; it is easier to keep it going than to restart it.
Points of agreement about the structure of such a committee were:

- SOASC is generally reluctant to expand the number of faculty governance committees.
- However, assessment work must be done within the faculty governance structure, or it will be difficult for the issues and recommendations that emerge to become institutionalized.
- Although assessment could well be viewed as a set of academic policy issues, CAP has too many responsibilities as it is, and is unlikely to be able to take on outcomes assessment in addition.
- There was general agreement that reconstituting a SOASC successor as a subcommittee of CAP is a good idea.
- An assessment committee should contain representation from staff and students as well as faculty. A subcommittee structure would seem to lend itself to such broad representation.
- A faculty committee cannot do useful and thorough data analysis. The assessment committee should work with a paid assessment professional, with the committee providing direction and bringing policy issues to the faculty, and the professional overseeing data collection and performing data analysis.

Discussions among SOASC, department heads, and faculty governance continued in spring 2003, leading to a CAP proposal, accepted by the faculty in the April meeting, that a new sub-committee, the “Undergraduate Outcomes Assessment Committee (UOAC),” be formed as a CAP subcommittee, with elected faculty members and administrative support from the associate provost and CEDTA director.

In fall 2003, the UOAC was elected and began work under the leadership of the head of Biology and Biotechnology. The subcommittee has made considerable progress in the 2003-04 academic year, concentrating on three immediate and important topics:

- **Managing an effective data-gathering and interpretation program.** During the run-up to the 2001 and 2002 accreditation visits, considerable faculty time and money (over $50,000 annually for several years) was devoted to a half-dozen departmental and university-wide assessment initiatives. Effective resource management precluded sustaining this level of activity. UOAC recommended that student outcomes be measured over a three-year period, with the incoming class in fall 2002 being the baseline. Since these students would typically complete their humanities/arts requirements as sophomores, the interdisciplinary project as juniors, and the research or design capstone as seniors, the UOAC proposed that these project reports be peer-reviewed by relevant faculty in the summer of 2004, 2005, and 2006 respectively. Moreover, since the NSSE was administered to the 2002-03 incoming class, UOAC further proposed that this large-scale instrument not be used again until this class graduates in 2006. The UOAC is now working specifically on effective means for mining useful data from the NSSE (which had already been used to begin a review of first-year programs.)

- **Finalizing and obtaining faculty approval for a set of undergraduate learning outcomes.** SOASC and CAP had been working on draft university-wide outcomes for several years, departments having developed theirs several years ago. The UOAC reviewed and tightened the previous language, and more importantly, assured the outcomes were aligned with one or more existing assessment and interpretative instruments. The final list, to be presented to the faculty this spring, is as follows: Graduates of WPI will:
  - have a base of knowledge in mathematics, science, and humanistic studies.
  - have mastered fundamental concepts and methods in their principal areas of study.
  - understand and employ current technological tools.
  - be effective in oral, written and visual communication.
  - function effectively both individually and on teams.
  - be able to identify, analyze, and solve problems through sustained critical investigation.
  - be able to make connections between disciplines and to integrate information from multiple sources.
  - be aware of how their decisions affect and are affected by other individuals separated by time, space, and culture.
  - be aware of personal, societal, and professional ethical standards.
  - have the skills, diligence, and commitment to excellence needed to engage in lifelong learning.

Adoption of these outcomes is presently before faculty governance for a final vote.

- **Managing information flow to faculty and others about outcomes assessment.** The UOAC took over responsibility for maintaining a Web site reporting on learning outcomes activities, which previously had been overseen by the associate provost. Designing this information tool is discussed as our fourth initiative, below.

*Fourth, the Web site.* Through the sponsorship of the New England Association of Schools and Colleges, in 2001 WPI created a Web site (www.wpi.edu/Academics/Outcomes) to enable the WPI community as well as external visitors to see both the processes and results of learning outcomes assessment at WPI. The site provides an overview of all assessment activities, departmental, programmatic and university-wide. Included are all the instruments used to assess outcomes and reports of how weaknesses are identified and addressed. The ABET section gives examples of ABET self-studies; more importantly, annual updates which indicate the on-going efforts post-ABET are provided. For the NSSE,
the site provides a professional consultant’s overview of what this instrument has shown us about student learning. The site indicates areas needing improvement as well as strengths by reviewing candidly what WPI has done to respond to weaknesses disclosed in the visit, and the available. Again—what matters here is what the university is doing to respond to weaknesses disclosed in the visit, and the site specifically addresses steps taken in 2002-03 by faculty and administration to deal with areas where our NEASC visitors indicated improvements would be worthwhile.

Our hope is that other universities will find the actual instruments used to measure student learning and the steps taken to address the inevitable problems they disclose helpful in developing their own assessment and continual improvement strategies. Some issues we found crucial in trying to involve faculty and governance in outcomes assessment are:

- **Developing assessment tools, procedures, and expectations.** Many of the institutions reporting at the 2002 ABET assessment conference relied on assessment professionals to design and manage their assessment systems, which has advantages in uniformity and expertise. Given WPI’s history and culture, we elected to develop assessment tools department by department, sacrificing uniformity and slowing the learning curve to assure greater faculty ownership later on. *Advice: decide first what approach will be most sustainable in your culture.*

- **Resource support.** With most faculty on nine-month contracts, summer support was instrumental in enlisting those faculty wishing to dedicate a significant amount of their professional development (and merit review) to the assessment effort. Once the funds available in preparing for the regional and ABET self studies and visits were scaled back, faculty governance had agreed to take on assessment and to be responsible for designing an on-going system that was both effective and respectful of time and dollar resources. *Advice: be prepared for an on-going commitment at the level of at least one faculty FTE.*

- **Transparency.** Assessment invariably increases tension on campus, since at its core is identifying problems in student learning which require faculty responses. Consider a vehicle like the WPI assessment Web site where annual assessment reports can be posted for all internal stakeholders to see. *Advice: demarcate the admittedly slippery boundaries between program assessment and merit review; make sure all assessment reports are available for full stakeholder scrutiny.*

- **Closing the loop.** Assessment will matter and be sustained if the community sees the return on investment clearly. At WPI, periodic formal department and program review (every 2-3 years) does demonstrate problems found and solved. Assessment has also made some difference on university-wide planning and resource allocation, most significantly in an on-going program review of learning in the first year. *Advice: prioritize programs where assessment review can show immediate results; add new and more difficult tasks annually as confidence develops.*

Issues currently under consideration include expanding the outcomes data on the Web site beyond learning, including, for example, reports on sponsored research. Also before us is the thorny question of whether our highly detailed and very public Web site has any marketing value, especially for admissions. (It may be a perilous stretch to tell prospective students and their parents that we have problems but that we have identified them and are working on solutions!) A new president succeeding the retiring incumbent will need to define how the current system fits into on-going and new planning efforts and strategic resource allocations.

What WPI has done, as disclosed on our Web site, clearly shows the degree to which we have engaged the support of many faculty, and have institutionalized outcomes assessment within faculty governance.

**REFERENCES**


