

# Horizontal Assessment

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In November, 2004, my school, Calvin College, was reviewed for reaccreditation by the Higher Learning Commission (HLC) of the North Central Association of Colleges and Schools (NCA). As with many other colleges, the final report from the HLC faulted us in the area of assessment, made some recommendations, and asked us for a follow-up report in two years.

As stated in the report, the HLC's recommendations dealt with:

1. *Developing measurable learning outcomes.*
2. *Obtaining quantitative data that will permit measurement.*
3. *Creating feedback loops that will permit faculty to enhance educational effectiveness through curricular and pedagogical improvement.*
4. *Centralizing the administration of academic assessment.*
5. *Implanting a formal program review protocol.*

One statement particularly concerned us, "... the College has not yet succeeded in establishing a coherent approach to assessment." In fact, Calvin had worked hard for several years on assessment by having academic departments develop assessment plans and clearly state anticipated student learning outcomes. But the work was distributed over several offices and it was not the principal responsibility of anyone. Thus efforts were uneven and the results lacked consistency.

The first step Calvin took toward responding to the HLC was to establish a new position – Director of Assessment and Institutional Research (DAIR) – which had overall responsibility for assessment at the college. The next step was to develop a philosophy of assessment compatible with our institutional culture. We strongly affirmed the concept of assessment and framed it within the concept of reflection. That is, the standard procedure for meeting the assessment requirement of accrediting agencies is a three step cyclical process: clearly identifying educational objectives, measuring their achievement, and using that result to improve the quality of education. This is the same process any reflective person or community engages in – asking where they are going, how they are progressing, and making adjustments along the way. Thus for us, developing a "culture of assessment" came to mean fostering a climate in which we are encouraged to be reflective people, not just as individuals, but as departments and as a community as a whole. The role of assessment data is to provide content for that reflective process.

We then developed a process of assessment that has worked well for Calvin. One of the most influential writers on assessment, James O. Nichols, lays out a plan for implementation of assessment in a college or university<sup>1</sup>. Nichols' approach is based on the above three steps but it involves thoroughly completing each step of the process for all outcomes before going to the next one. The list of outcomes is often long and hence so is the list of measurement instruments. The relationship between these two lists is complex and many-to-many. Nichols lays out a timeline for the process; in Nichols' approach, it takes four years before the initial consideration

of possible changes in courses or programs occurs. From what we have seen in the assessment literature and at assessment conferences, Nichols' approach is common.

We call Nichols' plan the *vertical approach* because of the lengthy lists of outcomes and measures it entails. Instead, Calvin has opted for what we call a *horizontal approach*. That is, rather than asking academic departments to identify every desired outcome of its program, we ask departments to identify one or more outcomes that are especially important to them and about which they have a concern. Our DAIR then works with departments to clarify these outcomes and identify an appropriate measure for them. The measure is applied, data are collected, and faculty members discuss them in departmental meetings. At this point, departments typically make policy or pedagogical adjustments and ask for more data. The entire cycle occupies anywhere from a few months to a year.

We have found this approach to be more satisfactory than the vertical one on three grounds:

- Prior to adoption of the horizontal approach, assessment at Calvin tended to bog down and the feedback loop was rarely closed. The effort involved in developing lists of outcomes and choosing metrics produced resentment partially because no fruit was realized from that effort and partially because it simply required so much time. Assessment was viewed as a bureaucratic imposition from without, not as something organic to the college's life. The resentment was counter-productive in fostering a culture of assessment.
- The horizontal approach produced notable results. In many cases our faculty members have found the results very helpful; this experience has gone a long ways toward fostering that culture of assessment.
- Our faculty members report that this approach has eased their sense of being pressured in the area of assessment.

The horizontal approach to assessment is not original with Calvin College. The concept originated in a software development methodology called *agile programming*. This approach aims to yield small amounts of software quickly that are useful to a customer and to build a larger system from there. It's an alternative to the classical *waterfall model* that was based on extensive detailed design first and that often produced incomplete and/or cumbersome systems.<sup>2</sup>

It has many parallels in other disciplines, though. It's similar to a social work methodology known as the "strengths approach" which focuses on understanding clients' individual decision-making processes and helping them make incremental constructive changes rather than beginning with a comprehensive treatment plan.<sup>3</sup> It reflects the way many businesses go about quality control; for example, failure testing involves stressing a product in a particular way until it fails thereby identifying its strengths and weaknesses in a specific area. It is also modeled on a growing movement in science education – undergraduate research. That is, unlike the graduate education model – developing an encyclopedic knowledge of a discipline before starting research – undergraduate research aims to give students the chance to probe a small area in sufficient depth that as an undergraduate they can experience the joy of discovery. With this experience behind them, students will be motivated to learn more and to expand their research into new

areas. Similarly, we are seeing that faculty move toward assessing more objectives after they have had the experience of learning from assessment results.

We recognize the principal limitation of the horizontal approach – that it is not as comprehensive as the vertical approach. However, studies of software developed using the waterfall model have shown that 64% of the capability built into such software is rarely or never used and we suspect a similar situation holds for assessment data collected via the vertical approach.<sup>4</sup> Thus we believe that this limitation is more than compensated for by the fact that the data collected are of critical importance to departments and hence will be used, that they get the results quickly, and that as departments complete the assessment of one area, they will move on to assessing other areas.

The results? Within the first year after the reception of the HLC report, the college adopted a set of SLOs for the curriculum as a whole. Individual departments completed their own SLOs. Within the next year, of our 26 departments, 15 closed the loop for at least one assessment task and 6 additional departments put structures in place for reviewing assessment data and responding to them. Several different modes of assessment are currently being used: fourteen departments are using grading rubrics; six are using standardized exams; three are using student interviews; eight are using various other assessment tools including embedded questions in tests, student oral presentations, activity and placement records, periodic curricular review, advisory boards, NCATE grids, and locally developed assessment tests. Several changes have been made in response to assessment data: six departments have modified course syllabi, three have introduced new courses, and three have modified departmental requirements. Other changes include development of a new student handbook, selection of a new text, increased student feedback, increased usage of service learning, and addition of an in-service training program for adjunct faculty. Assessment procedures were also put in place for the core curriculum. Based on assessment data, the entry course to the core that all Calvin students take was significantly modified and its subsequent evaluations improved markedly. A rubric was developed for assessing student work in that beginning core course and similar rubrics are being developed for the senior capstone courses; use of these will provide a rough before and after measure of student academic development during their years at Calvin.

The HLC's response was positive as well – the college's reaccreditation was awarded without qualifications or request for further action.

In summary, then, use of the horizontal approach has dramatically changed the tone of the conversation about assessment on our campus – from being seen as a bureaucratic imposition, assessment has moved to something that departments find doable, helpful, and not burdensome.

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<sup>1</sup> Nichols, James O., *A Practitioner's Handbook for Institutional Effectiveness and Student Outcomes Assessment Implementation*, 3<sup>rd</sup> edition, 1995, Agathon Press, NY, NY

<sup>2</sup> See, for example, <http://agilemanifesto.org/>.

<sup>3</sup> There are many sources for information about the strengths approach. For example, see <http://www.practicebasedevidence.com/strengths/strengths-principles.html>.

<sup>4</sup> Larman, Craig , *Applying UML and Patterns*, 2005, Prentice Hall, Englewood Cliffs, New Jersey