

Report from the Front Lines: Pilot Proofs of Concept at Scale Using Rubrics to Assess Undergraduate Student Learning.

Dr. Daniel F. Sullivan, President Emeritus, St. Lawrence University and Senior Advisor to the President, American Association of Colleges and Universities (AAC&U)

Keynote Address, UB Assessment Day:
Assessment 4.0: Defining Quality

February 26, 2016

Believe it or not it's great to be back in Buffalo—even in February. I grew up in Holley, about halfway between Buffalo and Rochester; my wife grew up in North Tonawanda; my son is head of IT and robotics at Nichols; my family also has a close association with The Gow School in South Wales; and we are longtime members of the Chautauqua Institution community just a bit south. So even in winter it's good to return to these roots.

I love all the titles associated with today's workshop—Center for Educational Innovation; Assessment 4.0 (suggests both high achievement already and high aspirations for the future); and Defining Quality, which has been one of AAC&U's and my very highest priorities. And, of course, the focus on rubrics to assess what students know and can do couldn't be more central to the big issues we face in American higher education just now. Congratulations to UB for doing this and to all of you for coming.

I'm here today, I believe, largely in my current role as Senior Advisor to the President and in recognition of my history with AAC&U. I served as a trustee from 2004-2009 and as board chair in 2008. Then and since I have been deeply engaged in AAC&U's efforts, working closely with its members, both to define quality in American higher education—a main purpose of today's meeting—and then to assess undergraduate student learning, a second key purpose of today's meeting.

UB is, of course, a long-time member of AAC&U, which some of you may not realize. AAC&U, which celebrated its centennial in 2015, is the only national higher education membership organization that is **wholly devoted to advancing the quality and vitality of undergraduate liberal education.** AAC&U currently has more than 1,350 private and public college, university (including two- and four-year institutions), and state system members. It does no lobbying; it works with the full range of higher education institutions in America; and its highest priority is to help two and four-year colleges and universities raise the level of undergraduate student achievement on key capacities—what we call the Essential Learning Outcomes—that are critical to work, democratic citizenship, and life in the 21st century. In case you haven't encountered them, here they are. The first section emphasizes disciplinary content. The balance emphasizes important higher-order learning goals. AAC&U's rendering resonates nicely with your draft general education learning outcomes here at UB. **[Slide 1]**

In my view, more than ever before in our nation's history there is alignment between these essential learning outcomes of liberal education and what the nation needs for its own flourishing. It is the habits of mind and skills of liberal education that employers have told us over and over in a series of surveys that they want more of from higher education in America.¹ Any serious national effort both to assess the performance of colleges and universities and aid their efforts at continuous quality improvement **must also have at its center assessing the attainment of these learning goals.** That's where you're headed here at UB, and that's where I will take us in a moment.

¹ See Hart Research Associates, "It Takes More than a Major: Employer Priorities for College Learning and Student Success," April 2013, Association of American Colleges and Universities. See also Anthony Carnevale, Georgetown Center for Education and the Workforce, analysis prepared for Association of American Colleges and Universities Presidents' Trust, "The Economic Value of Liberal Education," June, 2009.

FIGURE 1. The LEAP Essential Learning Outcomes

Beginning in school, and continuing at successively higher levels across their college studies, students should prepare for twenty-first-century challenges by gaining:

▶ **KNOWLEDGE OF HUMAN CULTURES AND THE PHYSICAL AND NATURAL WORLD**

- Through study in the sciences and mathematics, social sciences, humanities, histories, languages, and the arts

Focused by engagement with big questions, both contemporary and enduring

▶ **INTELLECTUAL AND PRACTICAL SKILLS, INCLUDING**

- Inquiry and analysis
- Critical and creative thinking
- Written and oral communication
- Quantitative literacy
- Information literacy
- Teamwork and problem solving

Practiced extensively, across the curriculum, in the context of progressively more challenging problems, projects, and standards for performance

▶ **PERSONAL AND SOCIAL RESPONSIBILITY, INCLUDING**

- Civic knowledge and engagement—local and global
- Intercultural knowledge and competence
- Ethical reasoning and action
- Foundations and skills for lifelong learning

Anchored through active involvement with diverse communities and real-world challenges

▶ **INTEGRATIVE AND APPLIED LEARNING, INCLUDING**

- Synthesis and advanced accomplishment across general and specialized studies

Demonstrated through the application of knowledge, skills, and responsibilities to new settings and complex problems

Before I do I want you to notice that I and AAC&U use the term “liberal education” not “liberal arts education.” In our muddled and conflicted national discourse about what the goals of higher education should be some argue for liberal arts education while others—a growing number—argue for a practical, applied, pre-professional or professional education. Those advocating a liberal arts education, focused on the content of the traditional liberal arts disciplines, often just assume that the habits of mind and higher-order skills of liberal education

will be achieved if one just studies liberal arts content. But experience and growing evidence show that won't happen unless teachers of liberal arts courses set liberal learning goals above and beyond content goals and devise assignments and practice designed to help students achieve them. At the same time, one can't teach for liberal learning outcomes in the absence of content—it's during the thoughtfully designed study of content that well-guided students also develop the habits of mind and skills of liberal education.

Others argue that a narrow, practical, applied, pre-professional and professional undergraduate education should be our national goal—"we have too many philosophers"—but AAC&U's position is that students pursuing practical, job-oriented fields also need a liberal education, and that one can develop the habits of mind and skills of liberal education in courses of study outside liberal arts disciplines if teachers intentionally include the learning goals of liberal education in their curricula and syllabi. This must happen if students today and in the future are to have the education they need for the 21st century. How can students in programs like undergraduate nursing not be expected to develop analytical skills, critical thinking skills, written and oral communication skills, integrative and quantitative reasoning skills, real-world problem-solving skills and ethical reasoning skills? It doesn't have to be either/or and it must not be either/or.

Another false distinction, in my view, is the argument that students do liberal education in their general education courses while majors are and should be primarily about content. But surely advanced courses in the disciplines especially need to include liberal learning goals beyond content. Advanced courses must also teach students to achieve advanced capabilities in analysis, inquiry, integrative thinking, reflective thinking, quantitative reasoning—the whole

thing—and that won't happen, evidence shows, unless those goals are intentionally pursued in advanced courses.

Finally, I believe that we must commit to a definition of quality that requires it to be inclusive. The learning goals of liberal education must be a part of the undergraduate education of all students. If the way we structure access to liberal education means that it is far less available to disadvantaged students we ensure that whole segments of our population will never participate fully in American economic and political life. Without the higher-order skills and habits of mind of liberal education they will not be able to compete for the jobs that represent the upward mobility we so often—wrongly for at least three decades—proclaim as America's distinctive societal characteristic.

I cannot stress enough that deciding what we mean by quality in higher education **is the most important decision we have to make as a profession and as a country. Everything follows from that.** It is impossible to assess our performance, or whether higher education costs too much, if the goals are unspecified.

VALUE (Valid Assessment of Learning in Undergraduate Education)

I've said, clearly I hope, what I think we should mean by quality in undergraduate education. But if liberal learning goals, in addition to disciplinary content, are going to be at the center of it we need a way to assess student achievement of these goals that is every bit as much embedded in our practices as the testing and grading we do now to assess student learning of content. Everyone has a stake in knowing whether students are developing analytical and problem-solving capabilities—the kinds of capabilities addressed in AAC&U's Essential Learning Outcomes—in the context of their early and most advanced studies. Everyone has a stake in knowing whether students and graduates can draw knowledge and skill from different

contexts, both academic and field-based (such as internships), as they tackle new problems and projects. And everyone has a stake in knowing whether and how much students improved in the areas identified in the Essential Learning Outcomes during their time in college and how this improvement compares to students' learning gains at similar institutions or across higher education as a whole.

That is where AAC&U's VALUE initiative comes in. VALUE stands for "Valid Assessment of Learning in Undergraduate Education." It is a form of authentic assessment using rubrics that places students' effortful work—projects, research, writing, performances, portfolios, both course-based and field-based—at the very center of the assessment equation. VALUE argues that we must hold ourselves accountable for assessing our students' best work, not just the very small set of general skills captured in the most widely used national tests. And we must evaluate progress over the full range of students' introductory, "milestone," and "capstone" levels of learning.

AAC&U launched VALUE in 2007 to develop assessment rubrics for a broad range of its Essential Learning Outcomes. Rubrics for sixteen liberal learning outcomes—above and beyond knowledge and competence in specific content fields—have been developed by teams of faculty and academic professionals from more than a hundred campuses. Learning goals covered are inquiry and analysis, critical thinking, writing, integrative learning, oral communication, information literacy, problem solving, teamwork, intercultural knowledge, civic engagement, creative thinking, quantitative literacy, lifelong learning, ethical reasoning, global learning, and reading. Validity studies, which estimate the extent to which an instrument (in this case a rubric) is actually correlated with the underlying trait it seeks to measure, and reliability studies, which

estimate the extent to which multiple raters reach the same conclusion on a rating using a particular rubric, are under way with very encouraging results.

As of a year-and-a-half ago 35,000 unduplicated individuals had accessed the VALUE section of AAC&U's website. I suspect that number is perhaps 45,000 by now if the trend line continued—and of the more than 6,500 institutions represented in these downloads 2,800 were American colleges and universities. And you may have seen last week's announcement by AAC&U from its most recent Hart survey of chief academic officers reporting that:

Most institutions assessing learning outcomes report using rubrics applied to student work most (87 percent) use institutionally created rubrics 42 percent of AAC&U member institutions report using VALUE rubrics, and well over half of those using locally developed rubrics say the VALUE rubrics informed their development.

About one-third of AAC&U member institutions report using standardized tests of general knowledge and 38 percent report using standardized national tests of general skills, down from 49 percent who reported using these tests in 2008.

Why is there this rapidly accelerating adoption of a VALUE approach to college student learning assessment by highly diverse kinds of colleges and universities? In our view, it is because VALUE goes with, rather than against, the grain of American faculty and institutional teaching and learning value systems. It comes from the higher education community, rather than being imposed on that community from without. It respects and raises up the importance of the work faculty ask students to complete as part of their academic program, while at the same time providing feedback to faculty on what works to improve student learning, especially for those least advantaged under the current assessment practices.

A fatal flaw in previous efforts to reform and improve college student learning is an implicit assumption that all can be made better in American higher education without engaging faculty as partners in the process. The national narrative regarding what is wrong with higher education casts faculty as the problem, just as teachers are seen as the obstacle to be gotten around in the reform of K-12 education. Faculty surely are part of the problem, but inspiring faculty leaders on campuses all over America, like those of you who are here today, are also creating the solution.

In my view no significant improvement in student learning outcomes in American higher education will happen in the foreseeable future without a national strategy for the development and support of faculty. VALUE is a key piece of such a strategy. This is why we believe that, in the next three to five years, VALUE will become the national higher education student learning and institutional outcome assessment standard.

Three large beta tests—we describe them as “proofs of concept at scale”—are under way in nine public state-systems (the Gates-funded Multi-State Collaborative), in a ten-institution Spencer-funded public/private collaboration in Minnesota, and in a Sherman Fairchild-funded collaboration among nine private colleges that are members of the Great Lakes Colleges Association—over ninety institutions in all.

The Multi-State Collaborative got started first and so we actually have some preliminary data we can share with you just to illustrate. Our three beta tests have focused in their first year primarily on three learning outcomes and their associated rubrics of high interest to the campuses: written communication, critical thinking, and quantitative literacy. We have data from 59 of the participating Multi-State Collaborative institutions—28 four-year institutions and 31 two-year institutions—including data from institutions in all nine states. We have over 7,000

student work products in all. Students from whom work was collected all had completed 75% of their two- or four-year courses of study. While protocols for obtaining representative samples have been developed and will be implemented in the second year of this project, the data we have now are not from representative samples. They enable us to get the kinks out of all stages of the assessment process, but the results I will show you cannot be generalized back to a population. That work is still ahead.

So, just to whet your appetite let me take you through some results on Quantitative Literacy. Where the assignment included expectations that the student would use quantitative reasoning to make an argument it was scored using the QL VALUE rubric. Here is how the faculty working group that produced the Quantitative Literacy VALUE Rubric defined it.

Quantitative Literacy (QL) – aka Numeracy or Quantitative Reasoning (QR) is a "habit of mind," competency, and comfort in working with numerical data.

Individuals with strong QL skills possess the ability to reason and solve quantitative problems from a wide array of authentic contexts and everyday life situations. They understand and can create sophisticated arguments supported by quantitative evidence and they can clearly communicate those arguments in a variety of formats (using words, tables, graphs, mathematical equations, etc., as appropriate).

After months of back and forth and a great deal of on-campus testing the group agreed that there were at least six critical dimensions of quantitative literacy that needed to be assessed separately looking at any particular student work product:

Quantitative Literacy—Six Dimensions

Interpretation: *Ability to explain information presented in mathematical forms (e.g., equations, graphs, diagrams, tables, words)*

Representation: *Ability to convert relevant information into various mathematical forms (e.g., equations, graphs, diagrams, tables, words)*

Calculation

Application/Analysis: *Ability to make judgments and draw appropriate conclusions based on the quantitative analysis of data, while recognizing the limits of this analysis*

Assumptions: *Ability to make and evaluate important assumptions in estimation, modeling, and data analysis*

Communication: *Expressing quantitative evidence in support of the argument or purpose of the work (in terms of what evidence is used and how it is formatted, presented and contextualized)*

And in the next slide we show the process by which the student work was collected and scored:

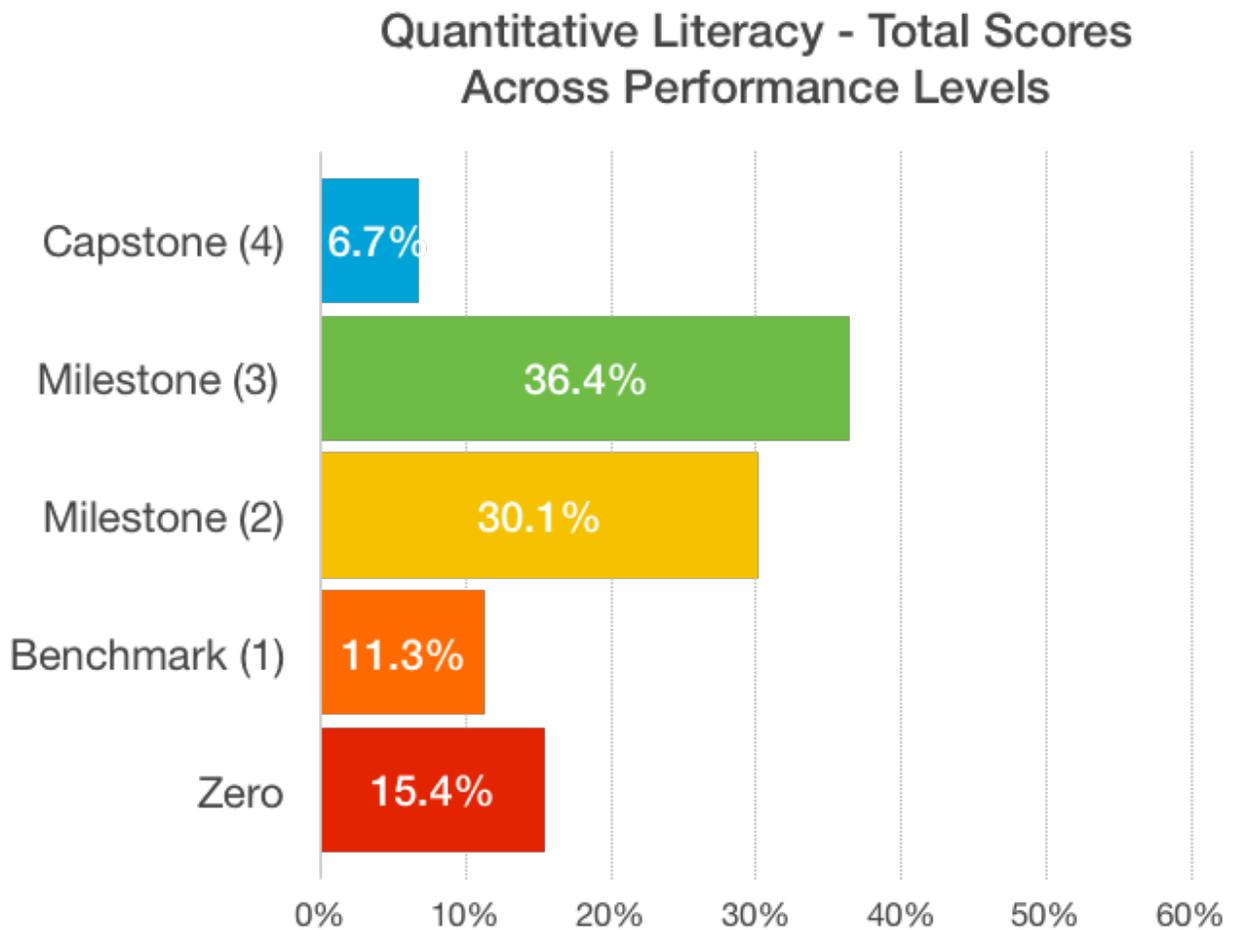
Samples of work were collected on MSC campuses produced in response to an assignment that asked for quantitative reasoning.

Faculty from all campuses were brought together and trained to score student work involving quantitative reasoning.

Most pieces of work were scored more than once; faculty never scored work of students from their campus; scoring was done remotely from home campuses of faculty.

Work samples, assignments, and scorings were uploaded to a database designed for AAC&U by Task Stream. Database creation was funded by Bill and Melinda Gates Foundation, and is now available for campuses to deposit student work for scoring.

And the next slide shows the percentage of QL student work products that were assigned scores in five categories of quality **averaging the scores of each of the six dimensions together:**



Again, remember that these pieces of student work were produced by students 75% of the way through their undergraduate programs and that for perhaps half of the students that is 75% of the way through a two-year program and for the other half 75% of the way through a four-year

program. The data are not representative but they do illustrate the kind of challenge we have in improving our students' quantitative literacy. 43% of students overall scored at the capstone or milestone (3) levels of competence in quantitative literacy.

But, just like a standardized test score the results in this figure really don't tell us anything that is actionable—you can't really get your arms around what to go to work on.

That's where analyzing the results for each of the six dimensions of the Quantitative Literacy Rubric comes in. So let's do a little of that by examining results from two of the six Quantitative Literacy dimensions—Calculation and Application/Analysis.

The next slide [**Slide 6**] describes five levels of competence on the Calculation dimension, and scores run from zero to four.

Capstone Level (4): Calculations attempted are essentially all successful and sufficiently comprehensive to solve the problem. Calculations are also presented elegantly (clearly, concisely, etc.)

Milestone (3): Calculations attempted are essentially all successful and sufficiently comprehensive to solve the problem.

Milestone (2): Calculations attempted are either unsuccessful or represent only a portion of the calculations required to comprehensively solve the problem.

Basic Level (1): Calculations are attempted but are both unsuccessful and are not comprehensive.

Does not meet Basic Level (0): assigned a zero

Now let's look at the five levels of competence on the Application/Analysis Dimension.

Remember, the Application/Analysis dimension is defined as follows: *Ability to make*

judgments and draw appropriate conclusions based on the quantitative analysis of data, while recognizing the limits of this analysis.

Capstone Level (4): Uses the quantitative analysis of data as the basis for deep and thoughtful judgments, drawing insightful, carefully qualified conclusions from this work.

Milestone Level (3): Uses the quantitative analysis of data as the basis for competent judgments, drawing reasonable and appropriately qualified conclusions from this work.

Milestone Level (2): Uses the quantitative analysis of data as the basis for workmanlike (without inspiration or nuance, ordinary) judgments, drawing plausible conclusions from this work.

Basic Level (1): Uses the quantitative analysis of data as the basis for tentative, basic judgments, although is hesitant or uncertain about drawing conclusions from this work.

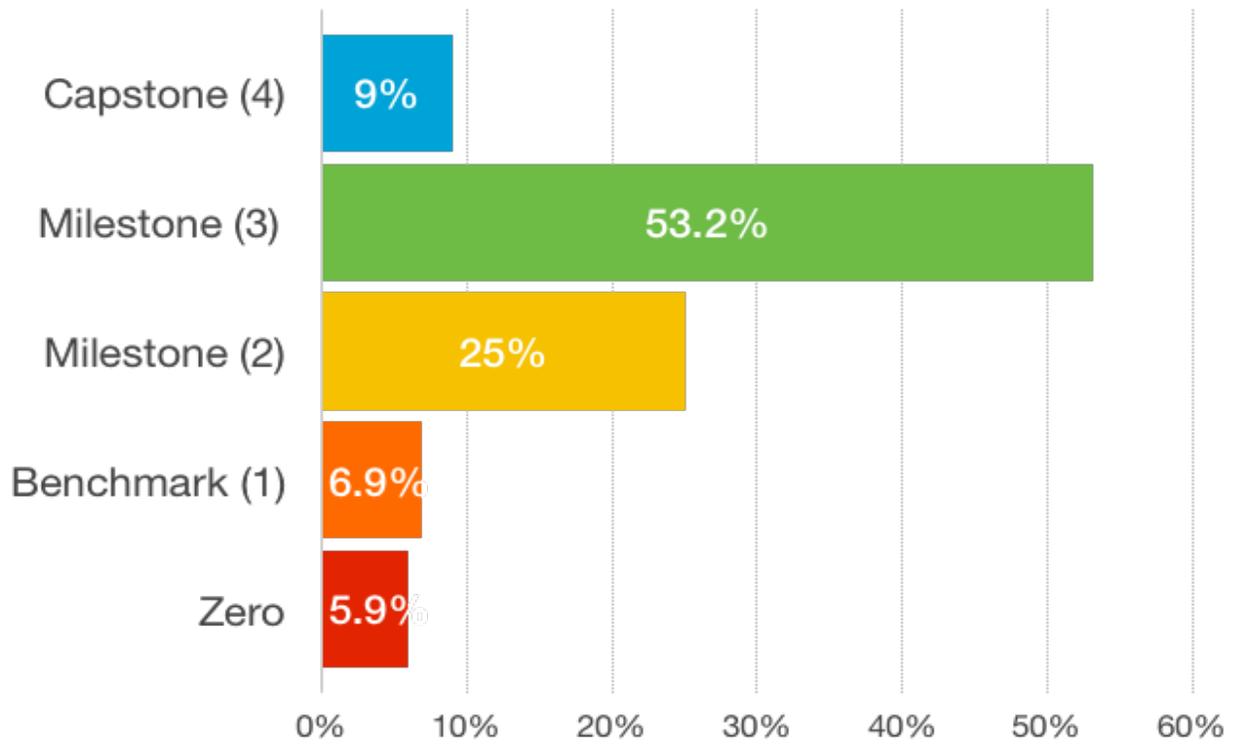
Does not meet Basic Level (0): assigned a zero

In our next slide we see the scoring distribution on the Calculation dimension—62% of students scored either at the Capstone (4) or Milestone (3) levels on this dimension.

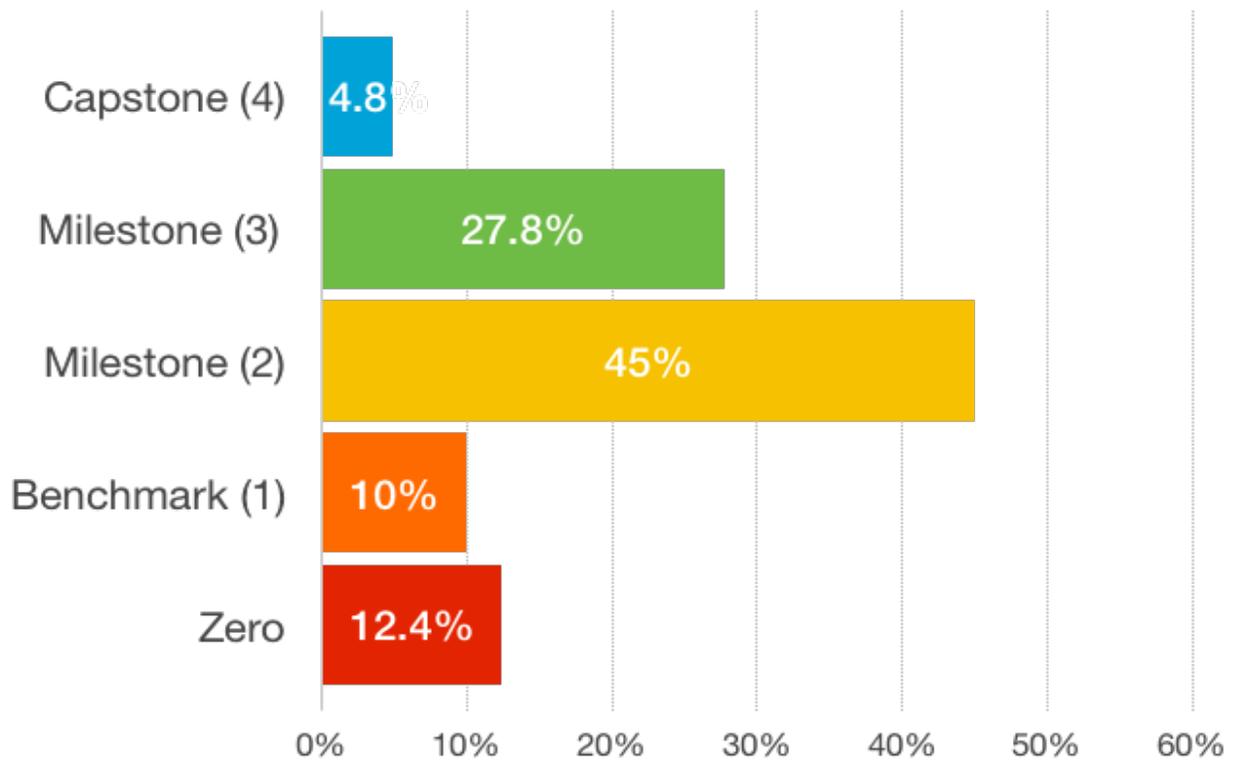
And in the following slide we see the scoring distribution on the Application/Analysis dimension—only 33% of students scored either at the Capstone (4) or Milestone (3) levels on this dimension. When you compare the results for Calculation and Application/Analysis what do you make of them?

Application/Analysis is a higher order form of reasoning than Calculation. The majority of these students were able to demonstrate reasonable competence in calculation while far from a

Calculation



Application/Analysis



majority of students were able to demonstrate reasonable competence in application/analysis. These results, unlike the overall average results for this rubric, give faculty something to work with when it comes to deciding where to allocate teaching time and where new assignments designed to improve competence should be developed. I think you can see how investing in a VALUE-Rubric-based assessment strategy can lead to a continuous quality improvement cycle. Similar results were found in analyses of student work using the Critical Thinking and Written Communication rubrics.

VALUE, by Itself is Not Enough—Faculty Practices Must Change

Where might this continuous quality improvement cycle come from? VALUE, by itself is not enough—faculty practices must change. And what a really important new book—William Condon, et al., *Faculty Development and Student Learning: Assessing the Connections*—makes clear is that **if faculty practices change in the right ways, higher-order learning by students improves dramatically**. This book reports on a Spencer Foundation-funded collaboration between faculty at Washington State University and Carleton College in Minnesota to understand the relationship between faculty development and higher-order learning among undergraduate students. You'll find a comprehensive review of the book in the February 10 issue of *Inside Higher Ed*, and the book itself is quite accessible.

One of the Carleton co-authors—Carol Rutz, who heads the Writing Across the Curriculum Program at Carleton—is an old friend and she introduced me to the book just prior to its January publication. It's one of those pieces of work that, when you see all the connections, makes you just want to say “Duh!”, of course, that makes total sense. I'm going to try to give you the gist of it, focusing primarily on the Washington State results reported in Chapter 6 though the Carleton results are equally interesting and I will mention some of those.

From 1999 to 2003 Condon and his Washington State colleagues began conducting faculty development workshops with great frequency focused on getting faculty attendees to:

Explicitly introduce higher-order learning goals involving writing and critical thinking into their courses—above and beyond disciplinary content learning goals.

Design and introduce assignments meant to help students improve their skills in those higher-order learning areas building on the disciplinary learning they also wanted students to accomplish—start with the learning goals and create an assignment pathway to improve student skills in all of the sub-dimensions of the learning goal, much like you just saw in the Quantitative Literacy VALUE Rubric.

Create a common rubric for each of the higher-order learning goals so that students' actual work could be assessed for achievement of the overall learning goal and the sub-dimensions that made it up.

Then they followed up to see which faculty did these things, collected samples of student work from faculty who attended the workshops more and less frequently and who implemented the recommendations of the workshops more and less frequently, and then had independent scorers score the work samples using the rubrics that were developed. As the authors say, “The unifying theme for both campuses focuses on changing *faculty* practices by engaging faculty in a learning process about best teaching practices.” (94)

The next slide shows just one set of results. The chart shows scorings for the sub-dimensions of the Critical Thinking rubric developed at Washington State and the overall Critical Thinking average score for student work obtained from a fall 1999 upper level

entomology course and the spring 2000 version of the same course taught by the same faculty member. The fall 1999 version of the course did not have critical thinking as an explicit learning goal and assignments designed to improve students' critical thinking skills, while the spring 2000 version did. The results are dramatic—the critical thinking average score was over 1.5 scale points higher in the Spring 2000 version of the course.

Comparison Entom 401 Fall 1999 vs Spring 2000

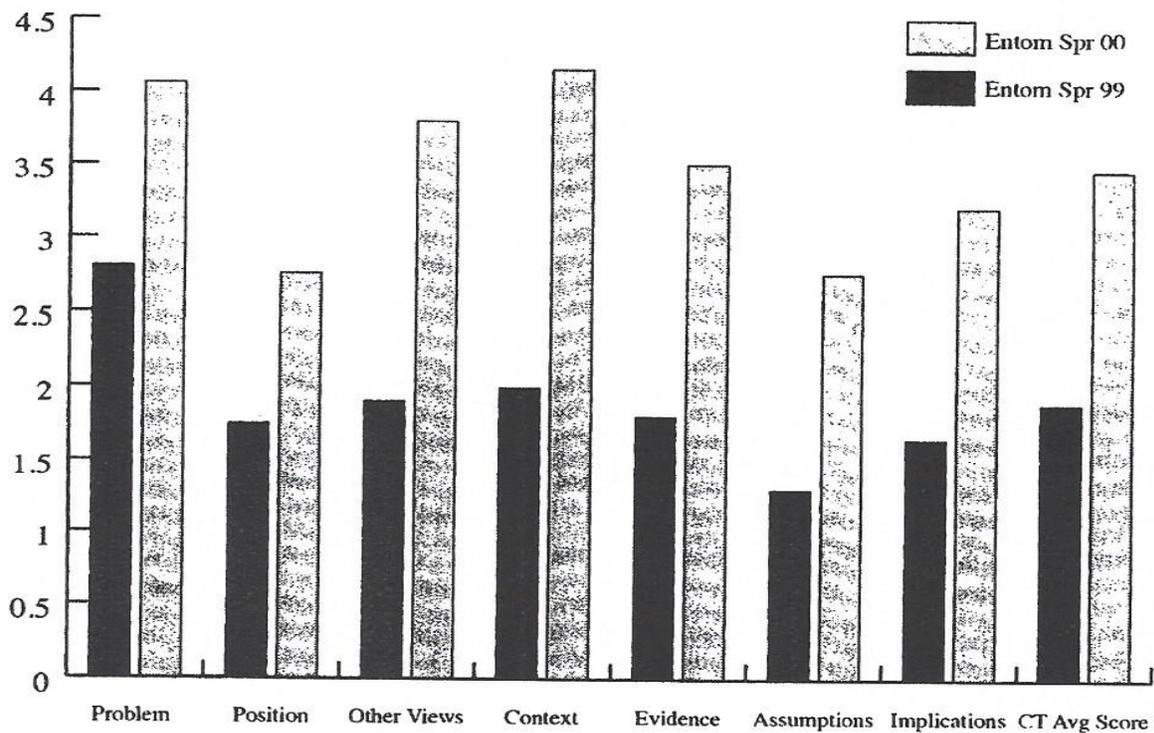


Figure 6.2. Entomology 401 before (Spring 1999) and after (Spring 2000) critical thinking adaptation. Students performed better in the “after” iteration by an average of 1.5 points on a six-point scale.

Note too, as in our examples from the Multi-State Collaborative, that the highest student score in the fall 1999 version were achieved on the “Problem” sub-dimension—stating the

problem—while the “Evidence”, “Assumptions” and “Implications” scores were much lower. In the spring 2000 results scores on those same dimensions were much higher.

There are multiple examples like this in the book, comparing results from courses taught by faculty who did and did not attend the faculty development workshops and, if they did attend the workshops, did or did not implement the recommended best practices. In all cases results were much better when best practices were implemented.

But there is more. They returned in 2009-2010 to collect more student work from courses taught by the faculty who did and did not attend workshops in the 1999-2003 time period and did and did not implement best practices and assessed that work using the critical thinking rubric. Faculty who implemented best practices in the earlier time period continued on their own to experiment and improve their assignments and, lo and behold, their students’ critical thinking scores were even better relative to students from non-implementers than they were in 1999-2003. **There is not just a one-time improvement from this work that continues at the same level, but a continuously increasing impact on the learning of the students of faculty adopters of these best practices.**

And there is even more. Adjunct and temporary faculty members frequented the faculty development workshops the most and non-tenured tenure track faculty participated the least. But it was tenured faculty who most frequently used the “best practice” advice of the workshops to modify their courses.

Most adjunct and temporary faculty practiced what the researchers came to identify as “defensive” faculty development: they felt the need to participate in a very large number of development opportunities (some as many as twenty per year) so that their appointments would be renewed. While that need stimulated

participation, it was paired with an avowedly cautious approach to experimentation in the classroom, lest student course evaluations go down. (101)

“. . . . the tenured faculty were far more willing to experiment with new assignments or techniques, since they did not have to worry about a temporary dip in course evaluations. Thus, for that set of high-participating faculty, higher critical thinking scores result from the extra freedom to experiment. (101)

Of course, all over America we are substituting contingent faculty for full-time tenure-track and tenured faculty. This book tells us clearly where that’s headed—not to a good place for student learning.

And from the Carleton portion of the research for this book we learn these things: [the Carleton researchers] sampled Carleton’s writing portfolios to assess whether students were using quantitative reasoning and found that if an assignment asked explicitly for quantitative reasoning, students responded; but if the assignment did not specifically cue for quantitative reasoning, students rarely used quantitative evidence to support and clarify assertions.” (103)

Students will do what you ask them to do, so ask!

Rutz and Laurer-Glebov (2005) established at Carleton that the likelihood that a student would choose a paper from a given faculty member’s course for the student’s writing portfolio was in direct proportion to the number of faculty development events the faculty member had attended. In effect, students endorse their teachers’ learning by voting with their papers.” (109)

And finally, this overall conclusion: “. . . . the connection between changes faculty make in their assignments and changes in students’ learning outcomes is clear. When faculty improve their teaching methods—or merely improve an assignment—improvement in student learning is detectable.” (112)

My first reaction to reading this book—and especially Chapter 6—was a kind of astonishment that we have not before developed this powerful evidence for what each of us probably suspects must be the case. What could be simpler?

Decide on what you want students to learn and make those learning goals explicit in curricula and syllabi.

Create assignments specifically designed to lead students to learn what you intend them to learn.

Develop means to assess whether students have learned what you want them to learn.

Act on the results of the assessments to improve student learning.

It’s not rocket science. And you know what? It’s scalable in a big way. A whole army of higher education reformers trying to make a buck by replacing labor with capital in higher education are looking for simple innovations that are scalable—too simple, of course, because they really don’t care a whit about the kind of higher-order learning we’re discussing here. What Condon et al. have demonstrated is, in principle, easily scalable.

Academic Freedom and Pedagogy

But we in higher education—as a profession—have to decide we’re going to make the effort to adopt evidence-based best practices broadly. The students of the tenured professors at Washington State who participated in the faculty development program outperformed the

students of other faculty, but only a small portion of Washington State’s tenured faculty were regular participants in it. I worry that the way our interpretation of academic freedom has evolved wrongly conflates the freedom faculty do and must have regarding the teaching of disciplinary content, and regarding the teaching of “controversial” topics in class with the notion that they should be equally free—as individuals—to decide pedagogy even when strong evidence favors some kinds of pedagogy over others. The 1940 AAUP Statement on Academic Freedom says nothing about pedagogy—it’s all about content—though there are related writings more recently² that argue an individual faculty member’s freedom to choose her or her pedagogy without reference to anything like “standard practice” or a “standard of care.”

In medicine, the profession has a concept of “standard practice,” and the American College of Physicians oversees a process whereby physicians themselves create and vet Clinical Practice Guidelines and Guidance Statements which are evidence-based best practices clarifying the treatment every patient has a right to expect—the best available treatment—when indeed there is clear evidence for best practices.³ Physicians are not free to use techniques or therapies known to produce inferior results when there is clear evidence that standard practice is superior, and they are not free to experiment with new techniques or therapies without patients’ consent or outside the accepted ethical protocols for the use of human subjects in research. Of course—and this is absolutely critical—it is the medical profession that oversees the rigorous process and creates consensus on best practices, not politicians, not institutional trustees or others unprepared

² For example, Cary Nelson, “Defining Academic Freedom,” *Inside Higher Ed*, December 21, 2010, argues that “Academic freedom establishes a faculty member’s right to remain true to his or her pedagogical philosophy and intellectual commitments.”

³ Qaseem, et al. “The Development of Clinical Practice Guidelines and Guidance Statements of the American College of Physicians: Summary of Methods,” *Annals of Internal Medicine*, 3 August 2010, Vol. 153, No.3, 194-198.

by education and experience to do so—though in medicine as in politics, and increasingly also in higher education there is “dark money” to contend with. But, as a profession physicians take the responsibility to do it, publish their analyses and their conclusions, and thereby create societal trust that medicine is committed to a cycle of continuous quality improvement.

Maybe it’s because we in higher education have spent so much less time assessing the effectiveness of our practices in teaching and learning that we do not have a consensus on what truly “best practices” look like for facilitating and supporting student learning and so other stakeholders have stepped into the void. But as books like Condon et al. make clear, we are entering a new age. We know more about “what works” in teaching and learning with every passing day. Like the medical profession, when there is clear evidence that some forms of pedagogy work better than others, I believe faculty nationally, in some kind of organized way, need to declare that to be so, on the evidence.

AAC&U is leading the way to a new world in higher education where we can assess even higher-order student learning in ways that respect the complexity of what we do and what we need students to learn. We now have ways never before available to assess the effectiveness of our practices for facilitating student learning. We need to embrace this revolution—what I have called in other writing “The VALUE Breakthrough”—before it’s too late. The crazies are at the door; a large portion of the nation has lost faith in us; the only way out is the hard way. We have to be clear about our learning goals; we have to build them into the design of our curricula and syllabi; we have to create assignments and practice regimens intended to facilitate student learning of the outcomes we have chosen; we have to assess the results in a way worthy of our enterprise; and we have to use assessment results to improve our practices. We can do this!

Thank you.