

# A Sea Change on Student Learning Assessment: An AAC&U Working Paper

February 2012<sup>1</sup>

## Introduction

The Association of American Colleges and Universities (AAC&U) has been working for a decade to help colleges, universities and community colleges raise the level of student achievement on key capacities—what we call the Essential Learning Outcomes—that are relevant to work and life in the 21<sup>st</sup> century. These learning outcomes include, across and beyond content knowledge: inquiry and analysis; critical and creative thinking; integrative and reflective thinking; written and oral communication; quantitative literacy; information literacy; intercultural understanding; and teamwork and problem solving. Hundreds of institutions and their faculty now are using AAC&U’s quality frameworks to improve student learning.

As part of this effort, AAC&U has become the leader in promoting new approaches to assessment and quality assurance that go far beyond the narrow methods that have become standard both in school and college. AAC&U’s approach respects the complexity of the learning students must accomplish, but also allows for comparisons of relative student success in different colleges and universities so that institutions themselves and the wider public can know what kinds of learning the institutions foster, and whether students are being well prepared for a world of complexity and change.

In 2007, AAC&U began working with faculty at a large number of diverse institutions to develop rubrics for 15 of the Essential Learning Outcomes that can be used in assessing the levels of learning manifested in actual student work. This approach is assessment worthy of the complexity of the learning goals we must have for our college students, and is an attempt to redirect both policy and practice away from the prevailing investment in standardized tests of comparatively narrow forms of knowledge and skill. As Oklahoma State University Provost Robert Sternberg, one of the nation’s foremost experts on these matters, says in his essay *On Alternative Models of Assessing Student Learning*:

An overemphasis on standardized measures ... risks focusing our institutions on a narrow set of analytical and written communication skills that, while important, represent only a small subset of the skills and abilities we need to help our students develop in order to prepare them fully for later life.”<sup>2</sup>

Dr. Sternberg instead advocates evaluating skills that will matter most in a student’s future -- including learning in one’s major; analytical, creative and practical skills; and ethical judgment.

AAC&U calls this broader approach the “VALUE” strategy, with VALUE an acronym for Valid Assessments of Learning in Undergraduate Education.

---

<sup>1</sup> This White Paper is a collaborative product of Dan Sullivan, Carol Schneider, Terrel Rhodes, Lisa O’Shea, and Debra Humphreys of the Association of American Colleges and Universities.

<sup>2</sup> “On Alternative Models of Assessing Student Learning: Is there a Best Model?” in *Assessing College Student Learning: Evaluating Alternative Models, Using Multiple Methods* (AAC&U, 2011).

As we begin 2012, experimentation with this VALUE approach to college student learning assessment is already under way on hundreds of campuses, with assessment focused on samples of students' actual work, generated across the curriculum. Faculty on many different kinds of campuses do indeed see the "value" in forms of cumulative learning assessment that use students' authentic work as a source of evidence. But what is needed now is a strategy for pulling campus assessment data together into a national data warehouse so that the necessary benchmarking across higher education can begin to happen. Colleges and universities need a way to situate their own students' performances in a larger context that allows comparisons among institutional peers. The public and policymakers need the kind of reference points for high quality learning that AAC&U's Essential Learning Outcomes and VALUE rubrics address. We need, in sum, a concerted and sophisticated strategy for "moving the needle" on what counts as evidence of high quality learning for 21<sup>st</sup>-century learners and contexts.

We are in a sea change moment.

### **Where Things Are Now, Nationally**

There is wide recognition—among federal and state legislators, policy-makers, public and private college and university leaders and faculty members, and even the general public—that there is now and without significant corrective action will be an even greater future shortfall in the number of college graduates in America relative to the number needed to fuel our 21<sup>st</sup>-century knowledge economy. Solutions have focused primarily on how to get more students who could benefit from it into college, how to help them afford college, and how to increase the percentage of those attending college who actually earn a degree. With vigorous leadership from policy centers and major philanthropies, educators now are intensely focused on eliminating this present and future shortfall. Completion and productivity initiatives are cascading, and new performance incentives for improved degree production are being unveiled in one state system after another and, just this past month, by President Obama.

Largely missing from proposals and organized actions to address this issue, however, has been the critical matter of what students should and do actually learn in college and how that relates to America's 21<sup>st</sup>-century needs. If more students complete college but still do not have the knowledge and skills necessary to succeed in work and life, we in America will have accomplished a fool's errand together at great expense in time and treasure.

While welcoming the intensified focus on student success and completion, AAC&U has for over a decade helped faculty and campus leaders understand that a national commitment to increased college attainment needs to be matched by an equally intense focus on quality or, more specifically, on the kinds and levels of learning that degree attainment needs to represent. Completion ought reliably to mean that students have demonstrated—cumulatively, over time—their acquisition of the knowledge and skills (the Essential Learning Outcomes) they will need for the complex and fast-changing challenges of work, citizenship, and contemporary life.

## **Employers Understand That Completion is Not Enough**

There is growing evidence that employers truly get this. In a 2010 study conducted by Hart Research Associates for AAC&U—“Raising the Bar: Employers’ Views on College Learning in the Wake of the Economic Downturn”—employers make it clear that they want both knowledge and competence in specific fields and the intellectual and practical skills acquired in liberal education that we enumerated above, because these learning outcomes are the keys to success in any job, including the jobs that are even now being invented in our rapidly changing economy.

Here is what employers responding to the 2010 Hart Research survey<sup>3</sup> said were their top priorities for increased emphasis by colleges in the wake of the economic downturn:

- Effective oral/written communication: 89%
- Critical thinking/analytical reasoning: 81%
- Knowledge/skills applied to real world settings: 79%
- Analyze/solve complex problems: 75%
- Connect choices and actions to ethical decisions: 75%
- Teamwork skills/ability to collaborate: 71%
- Ability to innovate and be creative: 70%
- Concepts/developments in science/technology: 70%
- Locate/organize/evaluate information: 68%
- Understand global context of situations/decisions: 67%
- Global issues’ implications for future: 65%
- Understand and work with numbers/statistics: 63%
- Understand role of U. S. in the world: 57%
- Knowledge of cultural diversity in US/world: 57%
- Civic knowledge, community engagement: 52%

Tellingly, employers put their compensation dollars into the jobs that require these kinds of higher education learning outcomes. Georgetown University Center on Education and the Workforce economist Anthony Carnevale says this:

From a federal database analyzing qualifications for 1,100 different jobs, there is consistent evidence that the highest salaries apply to positions that call for intensive use of liberal education capabilities, including: writing, inductive and deductive reasoning, judgment and decision-making, problem solving, social/interpersonal skills, mathematics, originality.<sup>4</sup>

Indeed, the 220 jobs in the upper quintile, with regard to the extent to which they require these liberal education capabilities, pay on average over double what the 220 jobs in the lowest quintile pay.

---

<sup>3</sup> “Raising the Bar: Employers’ Views on College Learning in the Wake of the Economic Downturn” (Hart Research Associates, 2010).

<sup>4</sup> Anthony Carnevale, Georgetown Center for Education and the Workforce, analysis prepared for the Association of American Colleges and Universities, “The Economic Value of Liberal Education,” June, 2009.

## How Do We Know What Students Have Learned in College?

Taking responsibility for the quality of student learning, not simply degree completion, involves three elements:

- 1) A clearly articulated, collective conception of the qualities of a college-educated person;
- 2) Intentional and collaborative faculty-led efforts across educational programs to cultivate those qualities; and
- 3) Cumulative assessments, across the curriculum and co-curriculum, to determine the extent to which students have achieved the desired learning.

In the absence of pro-active and broad-based leadership on assessment and accountability from the academy, a politically popular demand for accountability has swept statehouses across the country and has attracted the focus of the current U.S. Secretary of Education and many lawmakers of both parties at the federal level. Ironically, this ideology actually threatens to shortchange accountability by holding the academy to standards for students' higher learning that are both too narrow and too low.

While specific accountability proposals from policy leaders vary, they have one feature in common. Like the K-12 federal and state reforms that have been enacted under No Child Left Behind, they regard a particular kind of standardized testing—including multiple-choice, “one-best-answer” tests—as the right way to assess student knowledge and to hold the academy “accountable.” Or policy leaders recommend content-neutral assessments of students' reasoning skills that, by design, tell us nothing about students' ability to apply knowledge learned in their majors to complex problems and contexts. Although we clearly have entered a new global era when it comes to high expectations for students' cumulative learning, policy and public understandings of how we should be accountable for quality are still mired in the assumptions of a by-gone time.

But students' study at the college level, in hundreds of different academic departments and programs, reflect very different communities of inquiry and practice. Assessing what students have learned in colleges and universities requires a sophisticated understanding both of context and of how knowledge and skills are to be used. **Students typically do their best and most advanced work in their major fields of specialization**, and they should be held accountable for knowledge and skills that are deemed essential at an advanced level, whether the field is physics, psychology, or pharmacy.

What is regarded as excellent writing in chemistry, for example, because of its direct, descriptive, and succinct language, is very different from the well-told analytical narrative in history or the evidence-based scan of policy alternatives appropriate to public administration. Analytical skill has one kind of applied meaning for an English major, and a quite different kind of applied meaning for an engineer. A standardized test of communication skills cannot probe students' highest skill level, because advanced skill takes different forms in different fields.

But everyone—educators and employers alike—has a stake in knowing whether students are developing analytical and problem-solving capabilities, the kinds addressed in the Essential Learning Outcomes, in the context of their most advanced studies. And 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.

This is the kind of evidence that AAC&U's VALUE-framed work on assessment has moved to the center. The VALUE approach recognizes that content, context and real-world applications need to become central in assessments of students' most significant learning in college.

We believe the time is right to make this kind of assessment a national priority and to change the prevailing expectations for good practice in assessing and reporting the quality and level of students' accomplishments in college.

### **What Does Authentic Assessment of Student Learning Look Like?**

Accountability for the highest standards of undergraduate learning calls for new forms of critical inquiry and reflective practice—forms that are both appropriate to higher education's mission and feasible in the contemporary academy. Even if better tests continue to be developed, standardized tests *alone* are inadequate to measure individual or institutional progress, or to foster advanced learning and accountability in higher education.

AAC&U affirms that accountability is essential, but that the form it takes must be worthy of higher education's mission. This means 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.

**Authentic assessment places students' effortful work at the very center of the assessment equation.** Projects, research, writing, performances, portfolios<sup>5</sup>—course-based and field-based—are the centerpieces of the kind of assessment AAC&U advocates.

At the same time, it is not enough for an institution to assess its students in ways that are grounded only in its local curriculum. Colleges and universities also must provide useful knowledge to the public about goals, standards, accountability practices, and the quality of student learning. **Common rubrics** are needed to summarize levels of student achievement across different academic fields and institutions, and for particular groups of students.

In response to this need, and with the support of the State Farm Companies Foundation and The U. S. Department of Education's Fund for the Improvement of Postsecondary Education (FIPSE), AAC&U launched an initiative in 2007 called Valid Assessment of Learning in Undergraduate Education (VALUE) to explore the development of assessment rubrics for a broad range of the essential college learning outcomes represented by AAC&U's Essential Learning Outcomes, outcomes that have been endorsed by employers.

---

<sup>5</sup> Portfolios are collections of a student's work from the beginning of college to the end, available for assessment of student progress at any point. Many institutions are experimenting with and adopting e-portfolios which make students' work available to them into the future, including for sharing with potential employers or graduate schools, and available to the institution for future, retrospective assessment of student work. Aggregation of summary scores from these assessments can be used to create an institutional score, which in turn can then be benchmarked against scores from other institutions.

By 2009, assessment rubrics for 15 college learning outcomes had been developed by teams of faculty and academic professionals from over 100 campuses across the country, including Spelman College, St. Lawrence University, UC-Berkeley, UCLA, Stanford University, Carleton College, San Mateo Community College, Portland State University, The U.S. Air Force Academy, The College of St. Rose, and the University of Alabama-Birmingham. Validity studies (an estimate of the extent to which a measure—in this case a rubric—is actually correlated with the underlying trait it seeks to measure) and reliability studies (an estimate of the extent to which multiple raters reach the same conclusion on a rating using a particular rubric) have been under way for over a year with very encouraging results.

Think, for a moment, about the learning benefits such rubrics have, above and beyond their utility for assessment. Knowing they are going to use a rubric to assess student work, faculty members must “reverse engineer” their courses, thinking carefully about how their assignments are structured. Is the assigned work going to stimulate the kind of learning the rubric describes? Sharing the rubric with students ahead of time gives them a much deeper and more explicit understanding of the growth in higher-order learning skills they are being asked to achieve. Students can see what the college believes is the difference between exceptionally fine analysis and less fine analysis—or critical thinking, integrative learning, and so on. In some institutions, students observing a public presentation by another student are also asked to use a rubric to evaluate their co-student’s work, adding another avenue to learning and insight for the student observers. This kind of assessment activity is embedded in the teaching and learning process itself and actually contributes to learning.

### **Interest on Campuses is Strong and Growing**

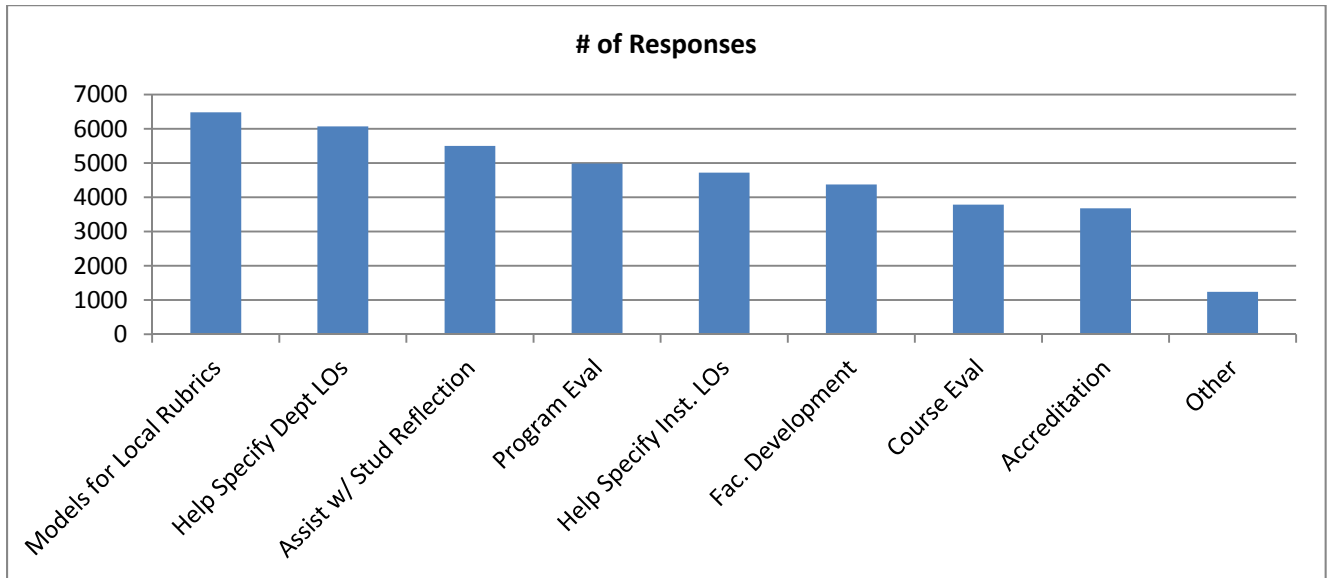
Despite the much more narrow and less ambitious framing of the so-called “completion agenda” (see above) and the pressure faced by many public institutions, state systems, and even private institutions (through accreditation) to adopt that agenda, the response to AAC&U’s VALUE rubrics since their posting on the AAC&U website in spring 2010 has been enormous.

As of December 2011, we have collected information from first-time visitors to the VALUE website. In the time since, over 13,000 first-time visitors from over 3,500 institutions and organizations, international and domestic, have reviewed materials on the site and downloaded some or all of the 15 rubrics. Visitors represent an array of affiliations, primarily higher education institutions (both foreign and domestic) as well as an array of other organizations. People accessing the VALUE rubrics represent all 50 U.S. states and nearly all U.S. territories (the exception being the Virgin Islands).

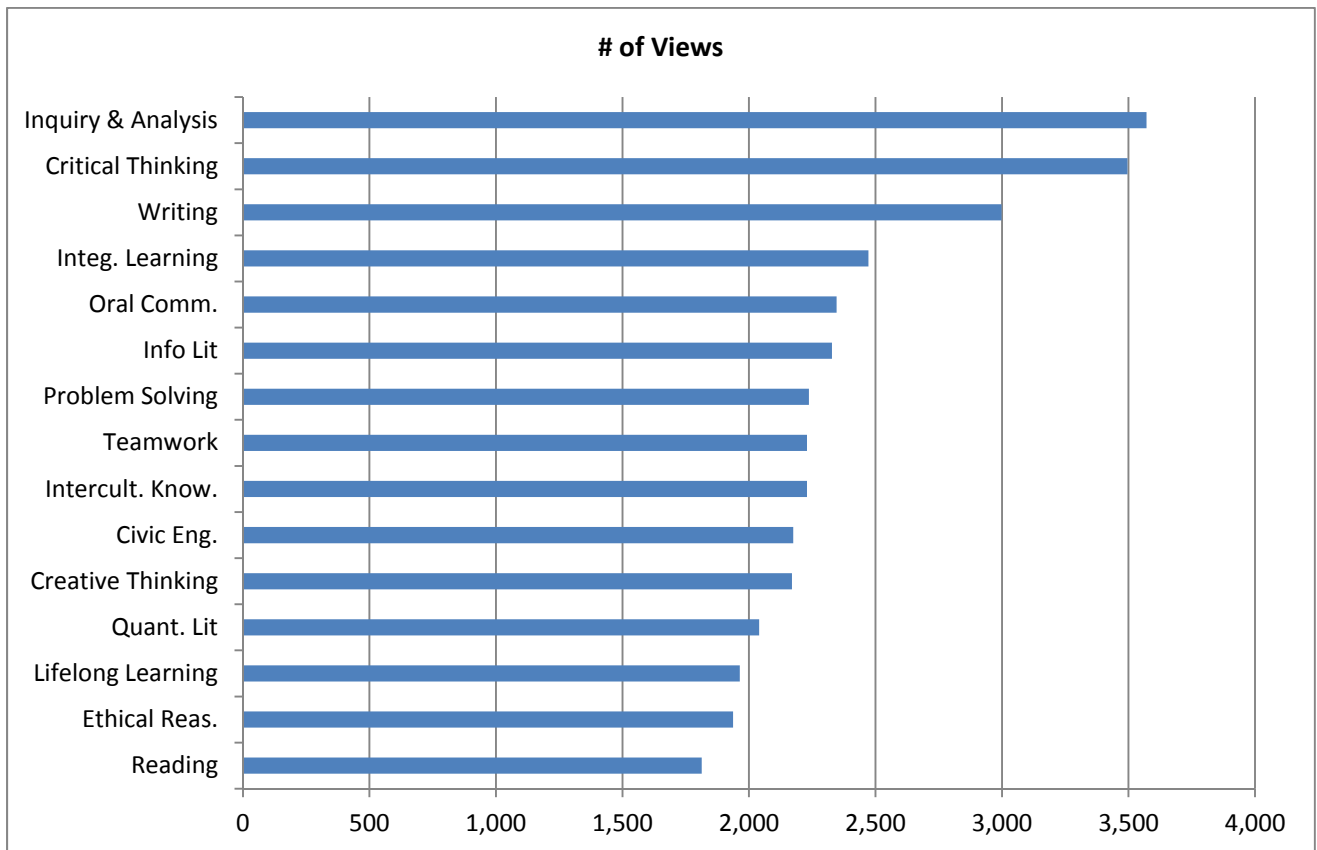
The largest category of users are instructional staff (faculty, adjuncts, instructors, and lecturers), who comprise 43% of the users accessing the rubrics. The next group most frequently represented among users (33%) is mid-level administrators (deans, directors, coordinators, and chairs), followed at 6% by upper level administrators (i.e. provosts, vice presidents, chancellors, and presidents). The remaining roughly 18% of users are primarily librarians, students, graduate assistants, administrative assistants, and student affairs/services staff.

We also asked users to share their reasons for accessing the rubrics. Among a list of possible response categories, users were allowed to select all that applied.

The following chart shows the frequency of selected responses (“LOs” are “learning outcomes”).



According to page views, the most commonly viewed rubric is “Inquiry and Analysis,” which is why we have included it here. The least-viewed rubric is “Reading.” In descending order, the most to the least viewed rubrics are:



These data say to us at AAC&U that substantial numbers of college and university leaders and faculty are ready to pursue an assessment and accountability agenda that is both responsive to the needs of the public and appropriate to the depth and quality of the learning we aspire to have our students attain.

But much like many chemical reactions, colleges and universities individually and in state systems need a catalyst to achieve “take-off” in the area of authentic assessment.

### **The Critical Next Steps**

AAC&U’s 2013-2017 strategic plan will include a strong commitment to developing a recommended model platform for documenting and reporting students’ cumulative progress and proficiency levels on expected learning outcomes. The long-term desired outcome of our efforts will be a sea change in assessment principles and practices and a retirement of the idea that standardized testing – which privileges standardized answers – is the best strategy for a nation whose future depends on citizens’ capacity for innovative, adaptive, and collaborative problem-solving.