

University of Massachusetts Amherst
Joint Task Force on Accountability
Thoughts on the Use of LEAP ELOs for Summative Performance Assessment
November 1, 2011

We have been asked whether the AAC&U's LEAP "Essential Learning Outcomes" (ELOs) can form the basis for a measurement system of the kind imagined in the Phase II report of the BHE Vision Project Working Group on Student Learning Outcomes Assessment (WGSLOA). In answering that question we have considered both the stated objectives of the Vision Project and our understanding of the LEAP project, with which we have been familiar for several years.

At the outset, it is important to distinguish between the LEAP ELOs' potential as a tool for formative assessment and their relevance to the quite different task of assessing educational performance for summative purposes at a statewide, comparative level. For formative purposes, we have found the ELOs to be a very useful tool. They were developed in dialogue with hundreds of colleges and universities and in collaboration with the business and professional accreditation communities, and represent an important set of insights into educational purposes and learning objectives. At the same time, it is important to acknowledge that they were developed with the goals of a "contemporary liberal education" in mind. Specifically, the LEAP project was directed at balancing what some saw as an over-emphasis on professional education at the undergraduate level. As we understand it, they were not designed nor intended to serve as an analytic framework for all higher educational outcomes even in a formative context.

It is also important to note that the ELOs — singly or as a group — do not provide a common "score card" even for formative evaluation. For example, "critical and creative thinking" is an important domain, but it means different things in different contexts. In a workshop we conducted with faculty from across a range of disciplines as a part of our recent Gen Ed reform efforts, our faculty responded to the question: "What learning behaviors (skills, values, attitudes) do students exhibit that reflect critical thinking?" Their responses clustered into 12 dimensions of student performance (echoing the categories identified in the critical thinking literature). We recently mapped these 12 dimensions of critical thinking against the critical thinking dimensions of the three tests associated with the Voluntary System of Accountability (VSA). Our analysis demonstrated that these standardized tests referenced, at best, half of our 12 campus-based dimensions. The LEAP VALUE rubrics (which we also reviewed) referenced three-quarters of our dimensions. So, while all of us (UMass faculty, the test developers, and the VALUE rubric developers) identified "critical thinking" as an essential learning goal for higher education, each of us emphasized different elements of this multidimensional term.

With all that in mind, the comments that follow focus on the utility of the LEAP ELOs in summative assessment, as envisioned by the Working Group. We see three critical questions:

1. Can the LEAP ELOs carry the weight of summative evaluation in a statewide, comparative context? In our response to the Working Group’s Phase Two report, we identified some of the obstacles to normalizing, aggregating, summarizing, combining, and comparing data to the extent envisioned in the Phase Two report. While we will not repeat all those points here, we believe that in general they would apply to data gathered in terms of the LEAP ELOs. It has been suggested that use of the LEAP ELOs might address one obstacle — the need for a common measurement framework — and it is probably true that using a common framework like the LEAP ELOs would be better than utilizing home-grown constructs on each campus. But given the variability we have found even within the LEAP framework, described above, it does not seem likely that utilization of the LEAP ELOs would be sufficient to support the weight of summative judgments.

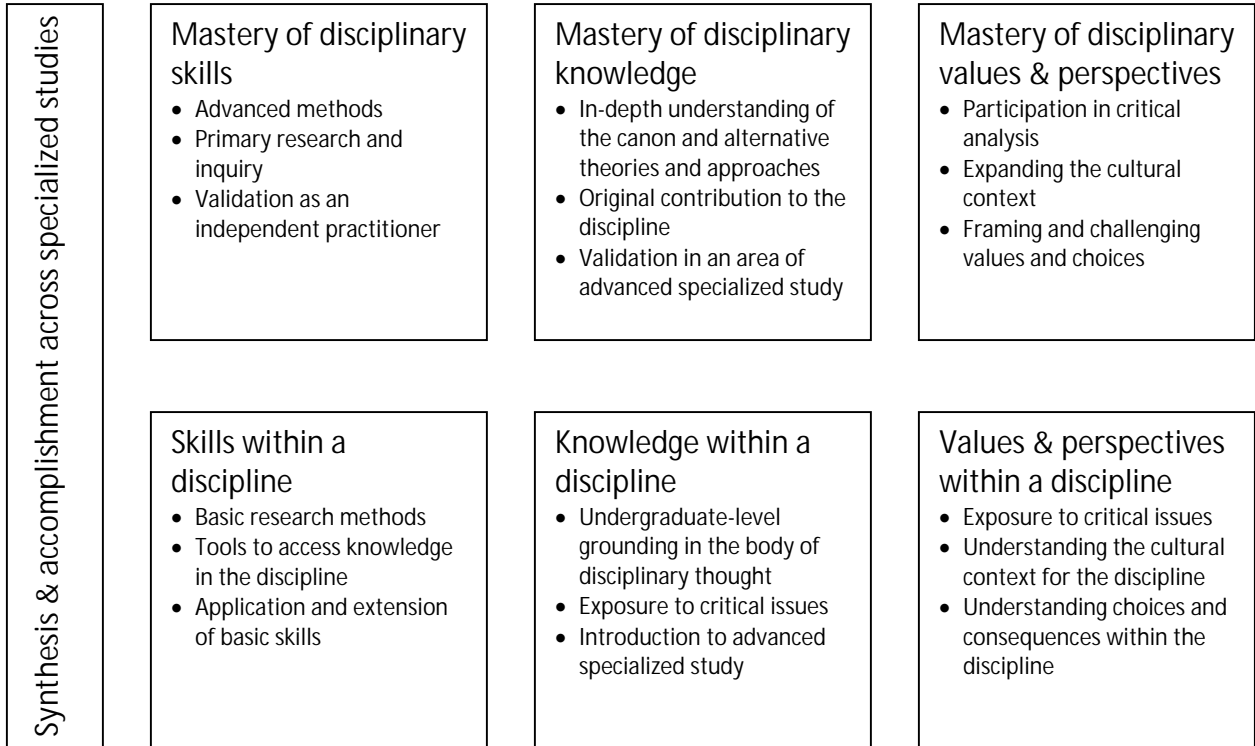
Another important consideration is that different ELOs are expressed across the curriculum in different ways. Some majors, like English and Journalism, place a heavy emphasis on written communication. Others, like Engineering and Physics, emphasize quantitative reasoning. If we find differences in these outcomes at different institutions, can we be confident that we are seeing a true difference in learning outcomes or simply a difference in the distribution of majors? And how are we to account for this when comparing results with other institutions or of aggregations of institutions in other states?

2. What Are We Trying to Measure? As we understand it, the WGSLOA is seeking to develop a measurement system that is responsive to the following Vision Project goal: “We will produce the best-educated citizenry and workforce in the Nation.” To respond, it is therefore necessary to determine what it means to be well-educated; in other words, what will we be trying to measure, and how will we know if we have succeeded or failed?

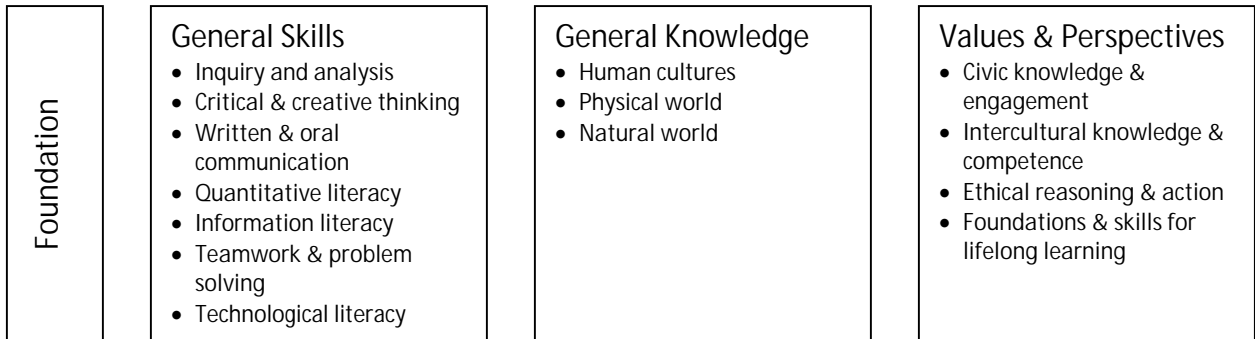
There are obviously many possible answers to that question. The education needs of individual citizens and workers vary widely, and different kinds of educational institutions contribute in different ways. But we can offer an answer from the perspective of our mission as a comprehensive graduate research university. Figure 1 shows one way of thinking about how the University of Massachusetts contributes to a well-educated citizenry and workforce in Massachusetts:

- a. Like most other higher education institutions in the state, we offer a foundational education in the form of general skills, general knowledge, and a set of values and perspectives we feel are important to overall educational effectiveness. We offer much of this through our General Education program, which we have recently revisited and reconfigured in several important ways.

University of Massachusetts
 Contributions to a Well-Educated Citizenry and Workforce



Synthesis & accomplishment across general studies



LEAP ELOs in boldface italic

- b. As part of our Gen Ed reforms, we have focused on the need to ask students to synthesize and apply their foundational learning, rather than treat Gen Ed requirements as a “checklist” with little lasting value. Our new upper-division Integrated Experience requirement is designed to advance that goal.
- c. But much of the value we add to the Commonwealth resides in what is built on that foundation. We expect upper-division undergraduates to learn the basic skills within a discipline, to attain solid grounding in a discipline-based body of knowledge, and to develop values and perspectives from a disciplinary perspective. This general mission is shared by all baccalaureate granting institutions. As a research university, we emphasize the special opportunities for undergraduates to engage directly in the research enterprise, and to take advantage of cutting edge researchers and scholars.
- d. Finally, as a graduate university, our role is to lead students to mastery of a wide range of disciplinary skills, knowledge and perspectives. We do this across a broad spectrum of arts and sciences and professional fields, and at degree levels from the applied Master’s to the research doctorate.

So, our contributions to the education of the state’s citizenry and workforce are extensive and varied. We educate childcare providers and university professors, medical technicians and biomedical researchers, bookkeepers and bank presidents. In evaluating our effectiveness in producing the “best-educated citizenry and workforce in the nation,” we are naturally focused on the totality of our mission. This would seem to be especially important given the state’s increasing reliance on a knowledge-based economy, and the persistent demand for well-educated leaders in the biomedical, higher education, financial services, and other sectors. A measurement system that fails to reflect this full range of contributions to a well-educated citizenry and workforce would therefore clearly fall short in responding to the task outlined in the Phase Two report.

In this sense, the LEAP frame of reference is valid and useful, but clearly incomplete in terms of capturing the educational contributions of graduate research universities. This point is illustrated in Figure 1. The LEAP ELOs are shown in boldface italic. They cover most of the foundational components, and refer to the need for synthesis across both general and specialized study. But they offer no specific guidance in evaluating higher-order skills, knowledge and perspectives within the discipline, and are especially weak in terms of evaluating graduate and professional education.

It must be said that at least some of the LEAP VALUE rubrics could be effective in assessing learning within the major. But, as noted earlier, simply adopting an outcome or a rubric does not produce useful data. To apply the ELOs and their associated rubrics to individual disciplines would involve a massive undertaking far beyond what we believe the Working Group is proposing.

We therefore believe that the LEAP ELOs, with the relatively narrow focus and foundational orientation contemplated by the Working Group, would not provide a sound basis for a measurement system intended to determine educational success or failure for the state as a whole. At best, they might be relevant to formative inquiry at various stages of the educational process, but this is clearly not the stated goal of the Vision Project, which focuses on educational outcomes.

Two related points come to mind:

- a. First, an argument is sometimes made that “core” skills can be used as a sort of proxy for actual educational outcomes. If we get “the basics” right, the argument seems to go, we can infer the quality of what follows. But this does not seem right on the face of it. While “critical thinking,” for example, is relevant to and perhaps crucial for advanced specialized education, assessing some dimension of critical thinking through a sampling of student work embedded somewhere in the undergraduate years can establish little if anything about how good an architect or engineer will later emerge into society and the workforce.
- b. Similarly, the suggestion is sometimes made that some subset of skills, knowledge and perspectives (such as “critical thinking” and “quantitative literacy”) can serve as a proxy for the educational process as a whole. But we think that one need merely look at Figure 1, and the range of what goes into making an “educated” person, to see the weakness of that argument. Indeed, the AAC&U itself is careful to point out that the ELOs in their totality are needed to assess the effectiveness of a liberal education.

3. Conclusion.

As suggested in our response to the Phase Two report of the WGSLOA, we believe that presenting a true picture of educational performance begins by capturing a full picture. As Alexander Astin was quoted in the Phase Two report, assessment should be concerned about “measuring that which is valued.” We believe the Commonwealth values the many aspects of our work that are not captured in the LEAP ELOs, and do not believe that a measurement system based on those ELOs will provide an accurate appraisal of the extent to which Massachusetts has “the best-educated citizenry and workforce in the nation.”