

ATF Position on Assessment

At Carnegie Mellon, we live in an environment where assessment is an integral part of everyday activity. It takes place continually and on many levels – course, program, department and school. It takes many forms – formal and informal, summative and formative, qualitative and quantitative, standardized and customized. Our students are assessed by various constituents – instructors in a course, faculty across the department, peers, and audiences made up of the general public. We are data-driven at our core, and actively seek out authentic and meaningful ways to assess our students and our programs. We approach assessment from a data-centric rather than a tool-centric position, our choice of methods guided by questions such as: “What will this process tell me about my students’ knowledge, skills and growth?” “What will I learn about the strengths and weaknesses of our program?” or “What information will this give me on how to improve my teaching or our program?” These kinds of questions help to ensure that our assessment practices align with our curricular goals, and provide useful and usable feedback.

Complex performances and practices, similar to the intellectual and creative activities that students will be called on to perform in future careers, are at the heart of the Carnegie Mellon student learning experience, and these evolve and adapt to meet the demands of a rapidly changing world. As a result, much of what we do and value is not amenable to large-scale standardized tests, the content of which often lags behind our changing educational goals and practices. This does not mean that we reject standardized testing, but rather view it as one

possible tool with its own set of constraints and limitations. When standardized tests are thoughtfully constructed, clearly aligned with our curricular goals, and analyzed and reported in ways that provide useful data to us, then they have a place in our assessment toolkit. Thus regardless of the type of assessment, we believe that all assessments should provide useful data to those concerned, whether it be a single student, an instructor, a department or the university at large. Furthermore, assessment should be integrated intentionally into the educational decision-making and planning processes of the university, systematically applied, clearly expressed and understood by faculty and students, and well documented.

Based on discussions with faculty that began in 2006 as part of the Middle States self-study and continued through 2008 in the work of the Assessment Task Force, we conclude that our approach is exemplified by the following:

1. **One-size does *not* fit all.** Consistent with our strong disciplinary emphasis, and our history of faculty-driven initiatives, we use different approaches and methods that are appropriate in different contexts for different objectives/goals. Individual instructors, departments and colleges are best suited to determine how best to assess their students and programs. In most cases, especially when the consequences of decisions based on assessments are greater, using more than one type of assessment will be most appropriate, but the tradeoffs vary greatly across the university. For some departments or programs standardized competency exams developed by external agencies or boards may be appropriate for assessing student

competency on widely agreed upon concepts and skills. Others may deem that internally created, highly customized assessments, that may be more frequently revised to reflect a rapidly changing knowledge base and workplace, are more appropriate to assess their students' accomplishments. For example,, it is not unusual for the assessments of theatrical performances, capstone engineering projects or design and art exhibits to continually change to reflect the specific content and skills that may vary from semester to semester. In some engineering and science settings, which demand both knowledge of basic concepts and proficiency of basic skills as well as creative and innovative solutions to ill-structured problems, both kinds of assessment might be appropriate. Clearly, each college and department should regularly review and evaluate their current practices and revise or develop processes, methods and measures that best address their specific needs and priorities, and that make best use of their available resources.

- 2. We assess what we value, not what is easy.** It is a truism that students learn what you assess, and do not learn what you do not assess. Since what we assess drives what students try to achieve, it is critical that we focus assessment on what we value. Broadly speaking, we value Carnegie Mellon graduates who are resourceful and creative in fluid environments, are leaders, and can cooperate in team efforts when that is appropriate. Undergraduate research and creative expression experiences, as well as team projects, are nearly universal features of Carnegie Mellon because this is where we get to see these characteristics. It is critically important that,

when these are the traits we wish students to develop, we use assessments that are valid for these traits, even if at first they are difficult to implement or lack established reliability. The development of clearly articulated performance criteria through repeated reflection and revision, represented in rubrics or other shareable formats, can move us toward more reliable assessment. For example in domains where teamwork is a critical activity, refining rubrics designed for peer and client evaluators can help standardize how teams and individuals are assessed so that our measurements of performance are more reliable, without losing validity for the characteristics of teamwork that we care about.

- 3. Learning outcomes assessment has to be situated within a broader educational context.** Assessment data can be used not only to support, guide, and sometimes evaluate, student learning, but also for instructor and course improvement, and for program evaluation. Faculty continuously collect data on their teaching and their courses – much of it informal as they recognize an assignment that didn't work or explanations that weren't sufficient, as well more formal early course evaluations, focus groups, etc. Departments also collect various kinds of data to help inform their decision-making and guide changes to their programs and practices. However, departments and programs on campus vary in the frequency in which they engage in, talk about, or use the results of, assessment activities – whether for student feedback and evaluation, for internal monitoring and updating of educational programs, or for other purposes. For example, it is not unusual

for departments to identify a problem and implement innovative strategies to address it, without closing the loop to assure that the solutions were effective in addressing the problem.

The creation of the assessment website and the support offered by the Eberly Center begins to build on the principled approach to assessment outlined above and provides a means to help develop and sustain an effective and efficient assessment culture.

In our discussions with faculty across the campus, a majority expressed a deep interest in using assessment to monitor and improve their teaching and programs, but felt they lacked the knowledge and skills to do so effectively and efficiently. To help instructors and departments improve their collection and use of assessment data for such instructor, course and program feedback purposes, we created this website to begin to surface and share successful assessments that have been developed within various academic units on campus. In this way we can contribute to more universal success across campus in answering such questions as: “What will this process tell me about my students’ knowledge, skills and growth?”, “What will I learn about the strengths and weaknesses of our program?” or “What information will this give me on how to improve my teaching or our program?”

More specifically, the web site includes information and guidance on (1) how to design and implement assessment activities, (2) how to analyze and interpret results, and (3) how to apply findings to improve educational practices. Included

are examples of assessments designed by our faculty colleagues, often accompanied by the tools or materials that they developed. Many of these materials focus at the course level, to help instructors monitor and improve student learning as well as inform their teaching practice. But we have also included examples for program assessment and evaluation, to ensure that our programs are preparing our students to meet the demands of an evolving workplace.