Assessing A Proficiency Based Economics Program: Weathering The Perfect Storm While Thriving In A New Environment

Steven C. Myers,[1] Michael A. Nelson[2] and Richard W. Stratton[3]

Department of Economics
The University of Akron
Akron, OH 44325-1908

JEL Codes: General Economics and Teaching

January 2, 2008

Abstract

Increased pressure from numerous sources for more accountability in higher education has caused many economics departments to develop assessment plans. This paper discusses a set of principles for programmatic assessment gleaned from the professional assessment literature, demonstrates one department's journey to develop an assessment of student learning outcomes based on Hansen's proficiencies, and puts both in context of data from a national survey of department chairs conducted in Fall 2007. Our survey results suggest strong confirmation for the Hansen proficiencies in the discipline and identify some broader learning outcomes as well.

Acknowledgements

This paper has benefited from the comments of Bill Goffe, Lee Hansen and various anonymous reviewers from the CEE selection committee and JEE. It is for presentation to the AEA session on Research on Undergraduate Economics Courses and Majors sponsored by the CEE, ASSA Annual Meeting, New Orleans, January 4 (10:15 am). We owe a debt of gratitude to Lee Hansen for his vision and his advice. Responsibilities within are all ours.

[1] Associate Professor, myers@uakron.edu, (330) 972-7421 voice, (330) 972-5356 FAX.
[2] Professor and Chair, nelson2@uakron.edu
[3] Associate Professor, rws@uakron.edu

Introduction

> *"We are in the infancy in American higher education of being able to describe to our publics – whether they're state legislatures, Congress, parents, philanthropists – what we're doing, and to what effect…. And we all have a responsibility to start to answer that question. And we've barely begun." -- Secretary Margaret Spelling*[4]

Parents, governing boards, state legislatures, regional accrediting agencies, the federal government and the general public are demanding greater accountability from institutions of higher education. Currently most of these efforts focus on institutional accountability and general education assessment, though there is growing pressure for accountability at the department or program level. This paper discusses a set of principles for programmatic assessment, demonstrates one department's journey and puts both in context of data from a national survey of department chairs conducted in Fall 2007. Our experience and the experience of chairs of economic departments provide insight that can assist faculties of economics departments to improve their assessment experience, gain value from the assessment and prepare for the continuing storm of increasing and changing accountability.

Historically, calls for accountability often result in the imposition on departments of a generic, one-size-fits-all assessment processes geared to generating periodic reports. The data gathered in these processes typically encompass information on all aspects of departmental activity, including the teaching, research, and service missions of the unit. This generally includes analyzing data on enrollment trends, average class size, GPAs, number of majors and program graduates, course syllabi, descriptions of teaching innovations used by the faculty, and in some cases, testimonials by program alumni.[5] Reviews that focus on inputs to the learning process or have such short deadlines inhibit the critical self-reflection and program improvement intended.

Developments in learning theory that focus attention on student learning outcomes provide insights on how to measure program improvement. "The new science of learning does not deny that facts are important for thinking and problem solving….However, the research also shows clearly that 'usable knowledge' is not the same as a

---

[4] Recent evidence of these pressures at the national level include the 2006 report to Secretary of Education Margaret Spelling "A Test of Leadership: Charting the Future of U.S. Higher Education" and The Voluntary System of Accountability, a joint product of National Association of Statue University and Land Grant Colleges (NASULGC) and the American Association of State Colleges and Universities (AASCU). See http://voluntarysystem.org/. This quote is from Basken (2007).

[5] For further discussion on how economics departments have been reviewed over that past two decades in both public and private universities see (Kasper 2005).

mere list of disconnected facts." (Bransford 2000, 8) These theories have focused attention on the classroom use of more student-centered practices, more active learning exercises, and a more "authentic" assessment of student experiences.[6] While early articles did little to address assessment of the effectiveness of these practices on student learning, more recent articles are creating an extensive literature on classroom assessment and measurement of student learning outcomes (e.g., (Walstad 2001); (Hansen 2005)). Yet, in spite of this, there is little in the discipline literature on how these ideas can be used to gauge the effectiveness of the curricula or program.

The perfect storm consists of increased demands for accountability of others with their imposition of outside requirements. It includes the demand for value in higher education as costs of education continually rise. It comes from the stress of developments in learning theory that press on faculties to change their methods and finally from the sense that increasing educational value is everyone's ongoing responsibility as assessment moves from episodic to continuous. Thriving in this administrative environment is a challenge and those that form good solid discipline-specific assessment strategies will have the best storm-shield.

We begin with an introduction to the national survey of assessment practices and a short description of the American Association of Higher Education (AAHE) principles for an effective program assessment. Following this, we explore what constitutes effective program assessment. We then discuss some practical implementation issues, highlighted by results from the national survey, and lessons learned in the case study of an undergraduate economics major.

A National Survey of Assessment Practice

This paper discusses guidelines for program assessment and highlights our experience, but we wondered what the rest of the departments were facing as the assessments storms blow their way. We undertook a national survey of department chairs asking whether they have formal assessment plans and what they thought about various issues. Using a faculty directory compiled by Hasselback (2006) we created a listserv of all the department chairs of economic departments in the United States. We then merged this data with data from the Carnegie foundation (Carnegie (2007)) so we would have standard institutional data on each school. Two rounds of email blasts were

[6] For an index of articles in the instruction section of the Journal of Economic Education see Watts (2005)

sent in October/November 2007 and a third round is planned for late December.

Table 1 shows a 25 percent response rate as 172 unique responses were received with 516 not responding and 166 addresses either absent from the directory or bounced as incorrect.[7] We address the representativeness of the sample by comparing the three groups across many Carnegie dimensions. The responses are significantly less weighted towards the Masters classified schools and more towards the Doctoral and Bachelors classified schools. Responses are insignificantly more likely to be from land grant schools and schools that are larger in FTE at both the undergraduate level and for the overall institution. From data not shown, the responses are slightly more likely to be from New England or the Far West and slightly less likely to be from the Southwest. The responses are more likely to be from mid-sized cities and less likely from the urban fringe or rural areas. All are covered by a regional accrediting agency and are slightly more likely to be covered by New England and less likely to be covered by the North Central and Southern accreditation agencies.

Table 2 shows that 21 percent of the chairs responding are in departments that offer a doctorate in economics as their highest degree, 15 percent offer the masters as their highest degree and 61 percent have the bachelors as their highest degree. Of the chairs that responded, 77 percent are in institutions with a business school on campus and on those campuses departments of economics are in the business school 56 percent of the time. Over 45 percent of the chairs report being in departments covered by a discipline-specific accreditation body, and the vast majority of these are AACSB. A total of 13 chairs reported their departments are subject to discipline-specific accreditation of an 'other' category. A casual read of their responses suggest this may not be the case as a few are definitely not discipline-specific. In all, just under half of all departments are covered by a discipline-specific accreditation body, although none are specifically accrediting economics.

[7] The 166 departments are the target of our late December round.

Guidelines For Effective Program Assessment[8]

> *"The overriding purpose of [program] assessment is to understand how educational programs are working and to determine whether they are contributing to student growth and development…. At its most useful, [program] assessment provides information about students as a group – information that can be aggregated across sections of a single course and is meaningful across courses (Palomba and Banta 1999, 5)."*

Effective program assessment leads one to answer such questions as: Does the curriculum make sense? Is it integrated, coordinated, and complete? Do students, as a result of their experiences in the curriculum, have the knowledge, skills, and values that graduates should possess? The focus of these questions is on the effectiveness of the curriculum to foster student learning.

Nine principles of effective assessment practices, established by Astin (1996) and strongly influenced by Chickering and Gamson's Seven Principles of Good Practice in Undergraduate Education (Chickering and Gamson 1999; Chickering, A.W. and Gamson, Z. March 1987), are stated in Table 3. These principles provide the foundation of many practical guides to program assessment (see Banta (1996), Palomba and Banta (1999), Jones et al. (2002), and Walvoord (2004)). Banta (1996) discusses these principles in detail, providing explanations, context, and examples of how they are put in practice. A tenth principle is also suggested: "Assessment is most effective when undertaken in an environment that is receptive, supportive, and enabling (Banta 1996, 387)." To frame our discussion of the assessment of an undergraduate economics major we use a five step process based Palomba and Banta (1999)[9] as shown in Table 4.

---

[8] The term "program assessment" is used in this paper to refer to a process or procedure designed to allow faculty to monitor and guide the continuous improvement of an economics curriculum to meet desired goals. "The developments in assessment theory and practice during the last decade have been accompanied by inconsistency in the application of terms. Confusion abounds and this has been compounded by the importation of business terms, in particular those related to quality and its management in industry ((Heywood 2000, 13))."

[9] Walvoord (2004) and Hatfield (2001) discuss other models of program or departmental assessment. According to Hatfield (2001, 23) "While university wide efforts might be useful …, student learning must be assessed at the department or program level."

Developing An Assessment Process

Step 1. Agree On Goals And Objectives For Learning

The first step is to identify and clearly articulate the intended educational outcomes. The outcomes and goals chosen for the assessment plan should reflect the unique situation of the department. Questions which should be addressed in the discussions on goal selection are: Does the program have clear, explicitly stated goals and are they measurable? (AAHE principle 3) Do these goals reflect the core educational values of the stakeholders? (AAHE principle 1) Do these goals focus on measuring what is important and has the temptation to measure just what is easy been resisted? (AAHE principle 6) Do these goals focus on what stakeholders really care about? (AAHE principle 7) Do these goals capture at least some of the complexity of the educational experience? (AAHE principles 2 and 4)

One only has to read various mission statements and other institutional documents to see that educational values and what stakeholders "really care about" differ from one campus to another. Thus the institutional setting and the faculty's role in furthering the college and institutional missions must be considered when developing program assessment processes. For example, economics departments located within business schools may need to be knowledgeable of the accreditation requirements of the Association to Advance Collegiate Schools of Business (AACSB).[10] Even if not covered directly, the pressure of accreditation within schools of business from discipline-specific agencies may simply add to the pressures from the institution's regional accrediting agency.

Economists may find agreeing on goals or learning outcomes especially challenging, since unlike many other disciplines economics has neither licensing nor accreditation bodies to forge a consensus on appropriate student learning outcomes for the discipline. The professional economics literature demonstrates a variety of possible goals. For example, some have suggested that the goal should be to prepare students to achieve mastery of the National Voluntary Content Standards (Siegfried and Meszaros, 1997) so that they can apply them later in their own personal and professional lives (e.g.,(Hansen, Salemi, and Siegfried 2002)). Becker (2006) argues there are

[10] AACSB requirements may be accessed at www.aacsb.edu. In their Jan 2007 report they say "Degree programs may be excluded from the review if they are not business programs regardless of where the institution places them in the administrative structure. Examples … include …economics…. (AACSB, 2007, 5).

no standards in the discipline of economics and that the goal should be to prepare students to explore the controversies of the day and to evaluate critically how the science of economics can bring resolution to the controversies.

The literature has challenged the profession in their instructional design to avoid "chalk and talk," to use experimentation and games, to teach the great ideas of the Economic Science Nobel Laureates, to set a goal of achieving economic literacy, and to teach economics through great works in history, literature and film. Examples of other issues that may make the selection of goals challenging include tensions between teacher-directed versus student-oriented learning, direct versus indirect evidence of mastery, stylized versus real-life problems, and performance tasks versus responses on in-class exams. Such issues complicate the task of parsing out program goals from the means or pedagogical strategies used to achieve these goals.

Sixty-three percent of the chairs in our national survey report that their department has a formal assessment plan and some made those plans available to us. We asked chairs, whether they were aware of five articles in the literature we found helpful in preparing our own assessment strategy. In our own department we have adopted the Hansen proficiencies (see Table 5). We were particularly interested in whether the chairs were aware of Hansen's (2001) article and to what extent their assessment strategies had been informed by that article. The results in Table 6 show that among those departments with a formal assessment plan, nearly half of the chairs were aware of Hansen's article and of those, 64 percent thought it important and only 17 percent thought it very important. Of the chairs that reported no formal assessment plan, only a third were aware of Hansen's article and only 18 percent of them thought it very important. None of the five articles were considered as very important by more than 26 percent of the chairs. The three economic articles Hansen (2001), Walstad (2000) and Siegfried (2001) were rated less important than Bloom (1956), but more important than Chickering and Gamson (1987).[11]

Chairs were asked to rate the importance of 27 educational and learning outcomes grouped in eight distinct categories as shown in Table 7. The wording of the survey question was slightly different based on whether the

[11] The Walstad article we cited in the survey was actually an earlier version of the published Walstad (2001) article with a very similar title. While we should have cited the later one, since the chairs were being shown author and title, familiarity with the 2001 version would have invoked a familiarity with this version. To the extent it did not, we may have the awareness figures for Walstad slightly underestimated.

department reported that a formal assessment plan existed. Chairs with formal assessment plans were asked to report on whether each outcome was represented in their department's plan. Chairs where no formal assessment plan were asked "If your department were to create an student outcomes based assessment plan, from *your perspective* please rate the importance for … program assessment …"

Table 7 shows the degree to which chairs reported various learning outcomes as either "not important," "somewhat important" or "very important". We rank the top 10 outcomes by the percentage of chairs rating the outcome as very important. By broad categories four of the eight categories are rated highly and the other four do not include any outcomes in the top ten. Departments with formal assessment plans and chairs without plans believe that analysis and research, communication skills, data analysis, and economic knowledge and concepts are important for their graduates. Not as important are the categories of computer proficiencies for economic analysis, ethics and professionalism, certain suggested individual characteristics and team related skills. Most important to chairs, both with and without a formal assessment plan, is the "ability to use critical thinking skills within the discipline of economics." We can hardly see how anyone could disagree too strongly with that position, but measurement of critical thinking is problematic. Nevertheless, critical thinking is most often cited in works by those suggesting the purposes or reform of undergraduate education. An example is Bok (2006) which lists critical thinking as one of the purposes of undergraduate education. He also lists the ability to communicate, moral reasoning, preparing citizens, living with diversity, living in a more global society, and preparing to work. Some of our categories and goals can be matched up with his list, but only critical thinking, communication, and preparing for work clearly stand out as important based on questions we asked. We did not ask questions in each of these areas as a focus on overall general educational goals was not our purpose. Rather we focus on a more narrow definition of the economic major.

Embedded within the 27 goals were the seven Hansen Proficiencies (including his seventh suggested since Hansen(2001) appeared). Hansen has suggested these goals as the learning outcomes most desirable for student economists to achieve. Each course can address these goals as can a department comprehensively. To see how department chairs value the outcomes (knowing already that only about a fifth of chairs rate the article as highly important) we isolate the top 10 outcomes from Table 7 and report them for better readability in Table 8. In that table we also include all of the Hansen proficiencies. Of the seven Hansen proficiencies, six appear in the top 10 and are rated as very important by between 50 percent and 84 percent of departments as very important. Those

six proficiencies are rated as important by chairs between 93 percent and 100 percent of all departments. Setting aside proficiency 6 (ability to create new knowledge / independent research) for the moment, we believe this offers confirmation of our decision to base our curriculum and program assessment on the Hansen proficiencies. Further it suggests that even though less than a fifth of chairs rated the Hansen (2001) article as "very important," the individual proficiencies are considered as very important by most chairs and in particular are embedded within the formal assessment plans of many departments of economics.

The top ten educational outcomes for departments with formal plans also include critical thinking, communication skills, and further confirmation on the importance of finding and using data. Chairs in departments without plans also name the identification and comparison of economic theories and individual student initiative in their top ten. Still curious and in need of further discussion is the apparent low ranking of Hansen's sixth proficiency. While almost half of chairs in departments without formal plans thought this very important it did not make their top ten. At the same time less than a third of departments with plans rate it as very important. We recognize that undergraduate research is a growing trend based on our own experience and on the papers appearing at conferences and in the literature. We will have more to say on this below.

Our Experience

For us, the current effort in program revision and assessment began in early 2000 when the faculty decided the undergraduate economics program needed revamping.[12] The undergraduate committee worked diligently over the summer to articulate the issues and recommended the department get outside help. So in the fall of 2000 two respected economists from other institutions were asked to help the department evaluate its strengths, weaknesses, opportunities, and threats.

The report from the outside consultants, a survey of the relevant economics literature (e.g., Siegfried (1991), Salemi and Siegfried (1999), Carlson, Cohn, and Ramsey (2002)) and a review of the current literature on learning theory and assessment provided the foundation for a year-long discussion by the undergraduate curriculum committee on how the program should be revised and how it could be determined if the changes worked.

[12] This was brought about in part because of a change in the composition of the faculty by field specialty due to faculty retirements and reassignment to administrative positions elsewhere in the university. Additionally, the program had not been revised in ten years.

Our deliberations were wide ranging as one might expect from a diverse faculty and included an extended discussion on how to best sort out program goals from the teaching strategies used to achieve these goals. By the end of the year, faculty reached consensus on the general principles that would help guide our curriculum revisions and the formulation of an assessment plan. Specifically, we determined we wanted students to have a deep learning experience and an understanding of the field that would allow them to effectively retain and use their knowledge. We revised the curriculum (as detailed later) to provide more authentic experiences in the application of economics; applications to relevant issues that students could face in the work force and in their personal lives. Additionally, we were adamant that each faculty member needed to maintain their academic freedom.

To assess our efforts, we embraced Salemi's challenge to "revise [our] curricula so that majors attain the Hansen proficiencies (Salemi and Siegfried 1999, 358)." Thus the "Hansen proficiencies" (Hansen 1986; Hansen 2001) are the foundation of our cognitive learning outcomes that form the basis of the assessment plan for our undergraduate major.

One reason that faculty were able to reach a consensus on these learning outcomes is that the Hansen proficiencies provide the framework by which we can measure what students should achieve; they do not dictate content or specific delivery technologies. They address both goals of what students should know and be able to do. Since competency in each of the Hansen proficiencies can be demonstrated in multiple ways individual faculty members are afforded considerable flexibility to craft assignments that are consistent with the departmental and instructor's goals and objectives. Individual faculty members are not expected to address all proficiencies within each of their courses. However, we expect students will have multiple opportunities to achieve competency in the first five proficiencies as they proceed through the curriculum.

The department faculty approved the plan in the spring of 2001; it gained university approval in the spring of 2002 and it was implemented for students entering the program beginning fall of 2002.[13]

[13] Not all department faculty members endorsed these curricular changes and the assessment with equal enthusiasm, even after this lengthy process.

Most of our faculty entered the process to define student learning outcomes convinced that they knew the characteristics of a successful student. Nevertheless we found the process of identifying and articulating a relatively short list of student learning outcomes very difficult and time-consuming. There was no apparent consensus in the profession, not even a list of potential outcomes that had wide-spread professional acceptance, to which we could turn for guidance.

So our faculty had to openly and candidly evaluate competing visions of our discipline. We struggled to articulate specific, measurable standards for what students should be able to do upon completion of the program. We debated the criteria by which we would know if the program was accomplishing the desired outcomes. Our task was made more difficult because most faculty members' training did not include education theory. So to benefit from the experience of other professions, we had to discover and learn recent advancements in that field.

The experience convinces us that this is an organic process in which the goals evolve as new information is learned and adapt as the needs of the students, faculty, department, and institution change. This journey has been fraught with obstacles, but our experience may provide insights that can help to avoid or mitigate their impact. This is a journey of self-reflection and growth; it is transforming students, faculty, and the department.

Step 2. Design and Implement a Thoughtful Approach to Assessment Planning That Involves All Stakeholders

Step 1 clearly is the most daunting. Once the learning outcomes are identified a working process must be created to measure progress toward the intended outcomes, identify the criteria for success, and develop the means of assessment.[14] Thoughtful planning can often reduce frustration later in the process and it is more likely to yield useful information that can guide future curricular development.

To craft the process specifically to the intended learning outcomes, the design should attend to both the outcomes and the experiences that lead to those outcomes (AAHE principle 4) and should be ongoing, not episodic (AAHE

[14] Goals should be SMART, that is specific, measurable, attainable, relevant and timely. This is one reason that we spoke of critical thinking as a leaning objective to be problematic. Both in what one means specifically when using the phrase critical thinking and how one measures it makes it difficult as a SMART goal.

principle 5).[15] The former (AAHE principle 4) implies that the assessment design must be able to capture information and data on multiple dimensions, on the relationship between courses, and on student performance over time. While high stakes "exit" or "proficiency" tests, such as TUCE, GRE and comprehensive exam scores, may play a role in the assessment process; by themselves they cannot provide the diversity of information required by an effective program assessment process. Such exams may not, for example, be very valuable in identifying "problem areas" within program curriculum. However, they may be used effectively to measure student attainment and even students' learning gains if administered at multiple points in students' career.

The faculty must also determine the extent to which the program assessment is embedded in the curriculum, or is external to the curriculum. Each choice has its unique challenges and advantages. One major advantage of embedding the assessment process in the curriculum, at least in part, is cost effectiveness. Faculty regularly assess student learning in individual courses and a substantial literature within the profession has emerged in recent years on how instructors can do this better. Aggregation of this information at the programmatic level may represent a low-cost way to gather key data on the effectiveness of the overall curriculum. This approach also has the added advantage of providing students with an incentive to do their best and ensure that the assessment results accurately reflect student learning. However, with this design it may be difficult to separate the assessment of the program from the evaluation of faculty members teaching performance and this may increase resistance to adoption.

The choice of an external assessment process reduces the tendency to confuse program assessment and faculty performance. However, there are serious challenges to provide appropriate student incentives and the cost of the process in both time (student and faculty) and resources may impede adoption.

Another issue is the extent to which the assessment process should be "traditional" or "authentic" in nature.[16] The traditional approach to assessment tends to focus on "what a student knows" or the transfer of knowledge. In contrast, authentic assessment tends to focus on "what a student does". Focusing on the latter tends to be more

---

[15] This is essential if the goals reflect an understanding of learning as multidimensional, integrated, and revealed in performance over time (AAHE principle 2),

[16] For a discussion of authentic assessment see Wiggins (1990) and Wiggins (1998). A useful website to learn about authentic assessment is cited as Mueller (2006).

experiential. Learning takes place during the process of solving problems; thus the process is primary, the solution found is secondary. Traditional assessment tends to be focused on the end result, the answer, and is less concerned with the process. The challenge is to find a compromise between traditional and authentic assessment approaches and to design an assessment process that incorporates a mix of measurements that is consistent with the program (departmental) goals.

Finally, AAHE principle 6 argues that an assessment process that involves representatives from across the broadly defined educational community is more likely to yield outcomes that will foster program improvement. At times the assessment process may be imposed onto the department and provide little faculty involvement. At other times faculty may develop processes independently of other stakeholders. While tension exist between the interests of different groups of stakeholders, to be effective this tension must be addressed. Principle 6 suggests a marriage of the traditional role of the faculty as guardians of professional standards with a legitimate role for employers, alumni, and other stakeholders in the assessment process. The contributions of the latter stakeholders can not only be useful in identifying program goals and objectives (step 1) but also provide valuable indirect evidence of learning outcomes (e.g., alumni satisfaction of how well the curriculum served them in the workplace). Such broad participation in the design and implementation stage promotes both quality assurance and accountability.

Grant (2005) is one of the only articles in the economics literature that address or describe the process by which an economics department assessed their undergraduate major. They have adopted some of the Hansen proficiencies and the only other published example is Carlson, et al. (2002). While our national survey was not designed to have respondents describe their processes, we did ask for the tools used by departments to collect assessment data.

Table 9 shows the program measurement methods by departments that have a formal assessment plan. Course embedded assessments and senior exit surveys lead the list across departments. Those without graduate programs are more likely to use capstone courses or senior projects than departments with graduate programs. Departments that offer only the undergraduate degree are more likely to use TUCE or similar standardized tests and departments with graduate programs are more likely to use graduate/professional admissions tests or home grown comprehensive exams. Employers' surveys and small focus groups are used the least.

Table 10 concentrates on the final experience of students and how the chairs of departments with formal assessment plans rate the importance of Hansen's proficiency number 6 which suggests the importance of students creating new knowledge and doing independent research. What we find most curious is how Hansen's 6th proficiency on independent research and creating new knowledge is rated so low (16th out of 27 in Table 7) with 27 percent of chairs with formal assessment plans saying student independent research is not important to their assessment plans. This is at variance with our experience where we can easily argue that this proficiency is the most important. Our survey shows that 62 percent of departments have either a capstone course or a senior project as a final step in the education of an undergraduate and most of these likely involve some independent research. It is a puzzle why the rating of the importance of independent research and the creation of new knowledge is rated so low with only 29 percent thinking it very important.

Our Experience

The department chose to implement a combination of course embedded and stand alone processes and to use both direct and indirect measures to provide a more comprehensive picture of student experiences and learning. Department faculty embraced an "authentic" approach to program assessment whereby the Hansen proficiencies play a central role in our set of learning outcomes. The Hansen proficiencies have the advantage of being consistent with Bloom's (1956) taxonomy of the cognitive domain, thus allowing comparison with a large research literature on student learning. Another advantage is its focus on doing progressively complex authentic economic tasks which allows documentation of student written and oral performance.

Initially each faculty member was provided with a description of the six proficiencies and asked if their courses provided students with opportunities to demonstrate competency in one or more of the six proficiencies. Such opportunities might take many forms, including homework assignments, exams, and other writing assignments. From this it appeared that for all but the highest level proficiency ("create new knowledge") students were afforded several opportunities to demonstrate competency in the curricula. More recently some additional challenges arose when trying to identify which artifacts demonstrate mastery of which specific proficiency

Students populate electronic portfolios with items, referred to as "artifacts," to document their performance for each proficiency. These items are evaluated using the grade earned in the course. Students write a "reflective statement" that describes how each artifact demonstrates the proficiency, what they learned from the exercise, and how their

work might be improved. The statement provides each student with the opportunity to evaluate their learning experience and develop their mega cognitive skills. Portfolios are reviewed by the department's undergraduate program director to insure completeness and the overall quality of each portfolio is assessed using a faculty approved rubric.[17]

The sixth Hansen proficiency ("create new knowledge") builds upon the first five proficiencies and addresses the highest levels of Bloom's (1956) cognitive domain. It is accomplished through a senior capstone course or senior project that is independently evaluated by two faculty members using a faculty approved standardized grading rubric. The senior project is well described by Siegfried. "Such a project should require students to formulate a question, structure an analytical approach to the question, collect and assemble evidence bearing on the question, conduct analysis, interpret the results, and communicate the findings to others in both oral and written form (Siegfried et al. 1991, 169)."[18] Again, we find compelling the arguments of Salemi and Seigfried (1999) that "departments should revise their curricula so that majors attain the Hansen Proficiencies," and that "departments should require a capstone experience of economic majors" so students may be confident that "they can do economics after graduation, when the stakes are likely to be higher. (p. 358)" Seigfried (2001) offers the principles for a honors program which is a lot like the program we have built for all of our students. Central is the doing of economics in a final research paper and subsequent presentation. While he says it is not for everyone, we have found our approach works for all our majors.

Sound program assessment includes measures of the affective domain (i.e., attitudes towards the discipline) as well as the cognitive domain emphasized in the electronic portfolio collection of artifacts. Toward that end, the department has conducted an exit survey of graduates for the past several years. Graduating seniors are asked to identify which courses and sequences have been most helpful and most problematic to them; to assess their satisfaction with the quality of advising; to rate how well the program has prepared them for the job market; and to indicate how strongly they would recommend the major to potential students. With the formal movement of the curriculum to a proficiency-based program, questions have subsequently been added to the survey asking students

[17] This rubric, along with other assessment documents discussed in this paper can be found at the economics department website at the University of Akron. See http://www.uakron.edu/colleges/artsci/depts/econ/.
[18] McGoldrick and Greenlaw (2008) are scheduled to report survey results about the extent of undergraduate research being conducted.

to assess the extent to which the program develops the skills necessary to demonstrate competency in each of the six Hansen proficiencies.

Alumni, another important stakeholder in departmental programs, can provide important feedback on how well the program has met their needs, both in their professional and personal life. In addition to this important external validation of the curriculum, the alumni provide information about of the skills demanded in the workplace and how this skill set is evolving. Successful alumni are quite willing to share their experiences and observations on how they achieved success and what graduating seniors should know to prepare themselves for the challenges of an ever-changing work environment.[19]

Reaching agreement on department goals and learning outcomes and designing an assessment plan that respects the academic freedom of individual faculty members to teach courses in a manner they deem appropriate is inherently difficult to accomplish. Our experience confirms the argument of Walverood (2004) and others that this is best accomplished by integrating in-course assessment practices that faculty members already use in their courses into an overall programmatic assessment plan. However, even doing this we were not able to motivate all faculty members to participate actively in the process of formulating our plan. In the end this may be impossible to accomplish. Yet our experience has been that even faculty members who were skeptical of the merits of the plan did not actively attempted to circumvent the process as long as their academic freedom was not perceived to be in jeopardy.

At the time we developed our plan we could have done a better job of bringing in external stakeholders such as alumni and employers into the process. For example, we did not have a departmental advisory board in place at the time we formulated the plan. We are currently in the process of establishing this board and we plan to use this body to provide input and feedback as to how our assessment plan can be improved and programmatic goals can be better defined in the future to meet the changing needs of society and the marketplace.

[19] The exit survey can be found. See http://www.uakron.edu/colleges/artsci/depts/econ/. A summary of the questions that we asked in our alumni survey can be found using the "Alumni Survey Results" link.

Step 3. Design and Implement Data Collection Approaches

Data collection depends on the intended outcomes, goals, and assessment design. The process must consider the legal, technical, and practical issues involved. Legal issues may include student privacy rights and the use of human subjects in research; often campus specific policies should be considered.[20] Technical issues may include the collection process, storage, sorting, collation and choices of technology. Practical problems can arise from lack of faculty cooperation, the wide variety of course sequences available to students to meet program requirements, switching of programs by students, and small student cohorts.[21]

Our Experience

Our assessment plan as described in the preceding section requires data on (1) student outcomes as stored in their electronic portfolios, (2) student responses to the exit surveys completed by program graduates, and (3) responses to the alumni survey. Below we discuss several challenges faced in collecting data in each of these areas.

Student electronic portfolios: In general there are two broad approaches to setting up an electronic portfolio system. One approach uses a standardized template or platform available commercially.[22] This option has the advantage of requiring fewer programming skills on the part of students and faculty. A standardized template may also facilitate creation of an overall picture of student performance using comparisons of uniform student portfolios. The cost to acquire these systems varies considerably as does the amount of university support required to maintain the system.

The second approach, which we have adopted, allows students to construct their own portfolio, within broad parameters. The advantages of this approach are that it permits students to acquire some basic HTML programming skills and to tailor their portfolio to their career interests and personal needs. Students acquire the requisite programming skills and construct their individualized portfolio templates as part of a required course in computer skills for economic analysis. During or after subsequent courses they post artifacts and reflective

---

[20] For guidance on what can and cannot be shared see Tribbensee and McDonald (2007).
[21] Banta provides numerous case studies which demonstrate the diversity of assessment practices (Banta 1996). Erwin chapter 6 discusses the collection and maintenance of information (Erwin 1991).
[22] See the AAHE's electronic portfolio clearinghouse (AAHE and University of Denver Center for Teaching and Learning (no date))

statements as they proceed through the major. A schematic of the process that we have followed is displayed in Figure 1. A cost of this approach is that some students forget the process required to post new artifacts to their portfolio and as a result tend not to update their portfolio in a timely fashion.

A problem common to both portfolio approaches is providing effective incentives for students to update their portfolios and post new artifacts as they proceed through the curriculum. In our early experience, many students wait until a few weeks prior to graduation to update their portfolio. Other common issues in electronic portfolio design include securing access to the portfolios, storing on departmental or university servers or other media, cataloging portfolios for each cohort and designing effective data recovery procedures.

Exit survey: The exit surveys have historically been paper questionnaires administered by the departmental chair. The survey has been converted to an electronic survey to facilitate the data collection, storage and analysis. Security, storage and a proper incentive structure are also issues faced here.

Alumni survey: An on-line electronic survey was created to solicit the views our alumni because it could be implemented at low cost. Both the administration costs to the department and the time and effort required by the alumni to respond were deemed lower than alternative methods. Additionally, it facilitates the storage and analysis of the data.

Two challenges arose in conducting the alumni survey. The first challenge was to obtain valid email addresses for the alumni. Many of the alumni addresses in the university computer records were either outdated or nonexistent. University records on U.S. postal addresses tended to be more accurate so we supplemented our electronic efforts to contact alumni with a follow-up letter to all alumni. With the letter they were given the Internet address of the survey and were asked to provide their current email address for our records.

The second challenge is low response rate typically associated with surveys and the individuals who responded are not representative of all departmental alumni. We were able to obtain valid responses for about 9 percent of our alumni who had valid addresses. Recent graduates of our program were overrepresented.

Convincing students of the value of the portfolio has been perhaps the most challenging aspect of our efforts to collect data. Just as faculty often fail to see the benefits of assessment and view it as an additional task imposed on them, students often fail to see the value of a portfolio and view it as another hurdle to graduation imposed on them. We continue to struggle to find an effective way to change these perceptions. Things that may hold promise include the testimonials of alumni who have effectively used the portfolio contents to impress potential employers and finding ways to lower the cost of maintaining their portfolio

By policy we restrict access of student portfolios to departmental faculty. Students may choose to make the content available on the World Wide Web. This has met with student acceptance.

Step 4. Close the Loop by Examining, Sharing, and Acting on Assessment Findings

To be successful, the assessment efforts must lead to a better understanding of the program and recognition of how the program can be improved. This requires the data collected to be examined, analyzed, and used to develop program improvements.

The assessment plan, desired outcomes, and the type of data collected will determine the appropriate analysis. One part of the analysis should compare the results to some "idealized" measurable goal identified in the earlier steps. While the appropriate techniques may be as varied as the intended outcomes, the analysis must be carefully performed and appropriate for the intended outcome. Banta provides numerous case studies of assessment in a major (Banta 1996).[23]

The analyses may identify weaknesses or gaps in the program, course sequences that are more successful, needed curriculum revisions, and an agenda for further investigation. If the program assessment is to lead to continuous quality improvement, it is imperative the results be shared with all appropriate stakeholders. As a critical stakeholder, the department faculty should consider the results of the analysis and construct recommendations to modify the program to address areas of concern or program strengths.

[23] While none of the cases report assessment in economics and many of the cases describe narrowly focused assessments of specific issues, they illustrate the variety of methods available for examining the data.

Assessment is most likely to lead to improvement when it is part of a larger set of conditions that promote change (AAHE principle 8). Indicators of such conditions might include supportive leadership (chair and dean), active faculty development programs, centers for teaching and learning, or a history of changing policies to increase the emphasis on student learning in promotion and tenure decisions. The lack of incentives as an impediment to successful program assessment is noted in Salemi's call for "…incentives that will lead departments and individual faculty members to undertake serious reform…(Salemi and Siegfried 1999, 359)."

Results of assessment strategies are often reported to other administrative units or made public, either to the entire unit, institution, or community. Accreditation agencies such as the AACSB, often require reports of program assessment. Making the results and recommendations public creates additional incentives to improve the weakness revealed. In this way educators meet their responsibilities to students and to the public (AAHE principle 9).

Our survey, as reported in Table 11, shows that the assessment plans have resulted in major or minor changes to the curriculum in almost half of the departments. While over 70 percent of departments are acting on or discussing their results, fewer than 30 percent report that they have not used the results in any meaningful way to date. This gives hope that the benefits of discovery of assessment information on ones program really does lead to continuous quality improvement in a real sense and that our graduates of such programs will improve over time.

Our Experience

The department's undergraduate curriculum committee directs the analysis and reviews the whole body of evidence (capstone projects, portfolios, exit surveys and alumni surveys) on an annual basis. In addition to the review of each year's individual results, the process includes evaluation of how the results change over time. Our focus is on such questions as: 1) Does the assessment provide evidence of maintained or improved program quality? 2) Have past initiatives worked as intended? 3) Are departmental goals being met? and 4) Where do further improvements need to be made? The undergraduate curriculum committee makes recommendations for curricular change to the departmental faculty.

The near-term outcome goal for our program is that 100 percent of all graduating seniors have complete and satisfactory portfolios. Such a portfolio contains one or more artifacts and reflective statements that are judged to

be satisfactory or excellent for each of the six proficiency areas. A longer-term goal is to demonstrate progress through the improvement in the quality of portfolios over time. In part this can be measured by the proportion of all portfolios of a given cohort earning the highest rating in each of the six proficiencies.

Another long-term goal is to document external recognition of program quality. External validation of program accomplishments is frequently demanded by higher level administration within the university and by state boards of higher education. While this is more difficult to demonstrate within the discipline of economics because of the absence of professional licensure requirements, it can be accomplished in several other ways. First, we encourage students with exceptional senior capstone projects to submit their papers for presentation at professional meetings, competitions and for publication in appropriate journals.[24] We hope to be able to point to an increasing body of work of program undergraduates that have been recognized in one or more of these venues.

A second source of external data for program quality will come from our alumni survey (discussed above). Survey responses provide data on the relevance and usefulness of our curriculum in the professional and personal lives of program alumni. Third, several department faculty members have an interest in the scholarship of teaching. Program accomplishments can be documented by papers presented at professional meetings and by the articles appearing in peer-reviewed journals. Finally, an additional opportunity for the external recognition of program quality will come through centrally-mandated periodic (five year) program reviews that require external reviewers to evaluate departmental programs.

The assessment data gathered during the 2005-2006 academic year for our economics program constitutes a baseline upon which the success of the recent programmatic changes to our undergraduate degree options can be gauged. For example, those of our alumni who graduated before the program revisions suggest that more emphasis needs to be placed on quantitative skills and proficiency in the use of statistical packages and other computer software.[25] Whether recent curricular changes along these lines will achieve their intended goals remain for future program assessments to determine.

---

[24] For up-to-date information on opportunities for undergraduate research see the website maintained by the American Economic Association (American Economic Association 2006).

[25] This stands in stark contrast to department plans where none of the software proficiencies were ranked highly in the survey. It further pokes at the tension between traditional and authentic assessment practices.

The communications plan for the results of the assessment of the undergraduate program calls for dissemination to all stakeholders, including faculty, students, alumni, and the administration. As noted above we have posted summary results of the alumni survey on the departmental website. Other assessment results, such as the results of the student portfolios are summarized in departmental annual reports which are also posted on the departmental website. This provides students and alumni with feedback on our progress and opportunities for further input.

Our institutional reporting processes are not uncommon. The department makes an annual report to the college dean. Assessment results are reported to the administration through these annual reports and other regular communications. Each academic program undergoes a detailed review on a rotating basis; for us the cycle is about every four years. The university also faces a periodic regional accreditation review by the North Central Association's Higher Learning Commission. Our assessment plan should provide much of the documentation of the department's efforts and outcomes required and play a central role in telling our story.

Selection of the Hansen proficiencies as the learning outcomes for our program has received strong validation by our alumni survey. Our alumni indicate each of the six proficiencies has been important in their careers and personal lives with between 70 percent and 89 percent approval rating on each one.[26] By similar percentages, graduating seniors in the exit surveys we have conducted since program implementation has been very satisfied that the curriculum has adequately prepared them to achieve competency in these areas.

The outcomes of the senior research projects to date have exceeded the expectations of most faculty members. Each graduating cohort has presented their findings in a poster session organized by the department and open to the broader university community. This has raised the stature of the department within the university, especially since undergraduate research has become an institutional priority. In increasing numbers, seniors are also presenting their work at external venues and are successfully competing in undergraduate paper competitions.[27]

---

[26] The results are from our first alumni survey and include 35 respondents.

[27] The most noteworthy of these to date, is one of our students, Jeff Wilson, won the 2006 undergraduate research competition sponsored by the International Atlantic Society and has been published in the *Atlantic Economic Journal.*

We believe the best students in any program can produce first-rate undergraduate research. While we were unsure that students with more modest academic abilities could also produce a credible research project, our experience demonstrates that all can with effort. For students of all abilities better outcomes are obtained when the senior project is organized in a formal course setting rather than as "independent study." The course setting better provides the needed scaffolding and structure (deadlines, etc.) and offers more opportunities for peer-to-peer learning.

Step 5. Regularly Reexamine The Assessment Process

Assessment works best when it is ongoing, not episodic (AAHE principle 5). Even the best designed plans can be improved and become less effective if not regularly reviewed. In addition, situations change and the assessment process must adapt to the change. Designing a regular review process into the assessment plan up front, helps to ensure the plan does not stagnate, but continues to evolve and improve.

Our Experience

The departmental process requires regular review of the portfolios, administration of the exit surveys each term, evaluation of the senior projects as they occur and periodic dissemination and analysis of the alumni surveys. As issues have arisen the undergraduate committee has actively engaged the faculty with discussions of how to improve the process. While there is no formal systematic review of our procedures required in writing, these are questioned and reviewed.

Concluding Remarks

In the face of increased demand for greater accountability many departments are or soon will be modifying the process of assessing their programs. They may wait to be forced into compliance or be proactive to chart their own direction based on sound assessment principles. The externally imposed pressure points are part of the make up of the perfect storm. One way to weather the storm is to be proactive and determine your own direction before external pressures require stopgap and temporary measures. We provide a set of principles for programmatic and ongoing assessment gleaned from the professional assessment literature. We illustrate the guidelines for constructing an effective assessment process by highlighting our experience drawn from an undergraduate economics program based on the Hansen proficiencies. These proficiencies can be used to develop assessment

processes for a broad range of programs with varied goals.

We encourage others to join us on this journey to design effective program assessment processes that reflect our values, our goals, and our discipline. Perhaps by using the guide developed in this paper we can mitigate the obstacles encountered and effectively respond to the forces creating this "perfect storm".

Table 1: Representativeness of a national survey of economics department chairs

(percentages are of column totals)

	Survey responses		Non-response to Survey	Missing or invalid email addresses
By Carnegie Classification				
Doctoral	38%	*	28%	22%
Masters	37%	*	48%	57%
Bachelors	25%		23%	19%
Other	0%	*	1%	3%
By Institutional Characteristic				
Public control	53%		50%	52%
Land Grant College	12%		9%	9%
Urban	9%		8%	11%
FTE undergraduates	8,155		6,498	5,262
FTE all students	10,194		8,040	6,398
Total observations	172		516	166

source: National Survey of Department Chairs, 2007

Test of significance difference in survey and non-survey means.

*** p<.001

** p<.01

* p<.05

Table 2: Some characteristics of the sample

	number of departments	relative frequency
Highest Degree offered in department		
Doctoral	36	21%
Masters	25	15%
Bachelors	105	61%
Other	1	1%
No degree offered	5	3%
Is the department in a business school		
Yes	74	43%
No - in a different college	59	34%
No - no business school on campus	39	23%
Are you covered by discipline specific accreditation		
Yes - AACSB	58	34%
Yes - ACBSP	8	5%
Yes - Other	13	8%
No	93	54%
Approximate number of majors		
under 25	36	21%
26-50	35	20%
51-75	19	11%
76-100	19	11%
101-125	13	8%
126-150	6	3%
151-175	1	1%
176-200	10	6%
over 200	33	19%
Total sample responses	172	100%

source: National Survey of Department Chairs, 2007

Table 3: AAHE nine assessment principles

Principle no.	Principle
1	The assessment of student learning begins with educational values.
2	Assessment is most effective when it reflects an understanding of learning as multidimensional, integrated, and revealed in performance over time.
3	Assessment works best when the programs it seeks to improve have clear, explicitly stated purposes.
4	Assessment requires attention to outcomes but also and equally to the experiences that lead to those outcomes.
5	Assessment works best when it is ongoing not episodic.
6	Assessment fosters wider improvement when representatives from across the educational community are involved.
7	Assessment makes a difference when it begins with issues of use and illuminates questions that people really care about.
8	Assessment is most likely to lead to improvement when it is part of a larger set of conditions that promote change.
9	Through assessment, educators meet responsibilities to students and to the public.

Source: Astin (1996)

Table 4: Five-step process for assessment of an economics major

Steps	Explanation
Step 1	Agree on goals and objectives for learning
Step 2	Design and implement a thoughtful approach to assessment planning that involves all stakeholders
Step 3	Design and implement data collection approaches
Step 4	Close the loop by examining, sharing, and acting on assessment findings
Step 5	Regularly reexamine the assessment process

Source: Palomba and Banta (1996)

Table 5: Hansen proficiencies

Proficiency number	Short title	Explanation
1	*Graduates can access existing economic knowledge*	Retrieve information on particular topics and issues in economics. Locate published research in economics and related fields. Track down economic data and data sources. Find information about the generation, construction, and meaning of economic data.
2	*Graduate demonstrate a command of existing economic knowledge*	Explain key economic concepts and describe how these concepts can be used. Write a précis [concise summary] of a published journal article. Summarize in two-minute monologue or a 500-work written statement what is known about current condition of the economy and its outlook. Summarize the principal ideas of an eminent economist. Elaborate a recent controversy in the economics literature. State the dimensions of a current economic policy issue.
3	*Graduates are able to interpret existing economic knowledge*	Explain and evaluate what economic concepts and principles are used in economic analyses published in daily newspapers and weekly magazines. Describe how these concepts aid in the understanding these analyses. Do the same for nontechnical analyses written by economists for general purpose publications e.g., Challenge, Brookings Review, The Public Interest).
4	*Graduates are able to interpret and manipulate economic data*	Explain how to understand and interpret numerical data found in published tables such as those in the annual Economic Report of the president. Be able to identify patterns and trends in published data such as the Statistical Abstracts of the US. Construct tables from already available data to illustrate an economic issue. Describe the relationship among three different variables (e.g., unemployment, prices, and GDP). Explain how to perform and interpret a regression analysis that uses economic data.
5	*Graduates can apply existing economic knowledge*	Prepare an organized, clearly written five-page analysis of a current economic problem. Assess in a four-page paper the costs and benefits of an economic policy issue. Prepare a two-page memorandum that recommends action on an economic policy issue.
6	*Graduates are able to create new knowledge*	Conduct a senior project that includes: a detailed proposal for research, a polished 20-page paper of the results, and an oral presentation.

source Hansen (2001)

Table 6: Awareness of assessment articles by whether the department has a formal assessment plan

	Has a formal assessment plan (N=108)			Does not have a formal assessment plan (N=64)		
		Of those who are aware			Of those who are aware	
	% Aware	% rating article as important	% rating article as very important	% Aware	% rating article as important	% rating article as very important
Bloom's (1956): "Taxonomy of Educational Objectives: The Classification of Educational Goals"	54%	62%	26%	42%	63%	19%
Hansen's Proficiencies (2001): "Expected Proficiencies for Undergraduate Economics Majors"	48%	64%	17%	34%	55%	18%
Walstad's Article (2000): "Improving the Assessment of Student Learning in College Economics"	37%	65%	15%	33%	67%	19%
Siegfried (2001): "Principles for a Successful Undergraduate Economic Honors Program"	36%	51%	8%	28%	33%	11%
Chickering and Gamson's (1987): "Seven Principles for Good Practice in Undergraduate Education"	27%	52%	3%	27%	47%	12%

Of the 172 useable responses, 108 or 62.8% reported having a formal assessment plan.

"Important' is the sum of ratings of 'somewhat important' and 'very important'. The resudual categories were 'not important' and 'not familiar' (or not aware).

source: National Survey of Department Chairs, 2007

Table 7: How chairs rate the importance of education/learning outcomes in assessing the undergraduate economics major (highlighting the Hansen proficiencies)

(Outcomes are in the order asked in the survey with the exact wording. The exception is those surveyed were not told which of the measurable outcomes were from Hansen. The labels for Hansen are added in this table to improve readability.)

	Departments with a Formal Assessment Plan (n=108)			Departments without a Formal Assessment Plan (n=64)		
	Not Important	Very Important	Rank	Not Important	Very Important	Rank
Analysis and Research						
Hansen 5: Ability to apply existing knowledge	2%	84%	2	0%	84%	3
Hansen 7: Ability to ask relevant questions	6%	53%	7	0%	78%	6
Hansen 6: Ability to create new knowledge/independent research (e.g. honors paper, senior project or other capstone exercise)	27%	29%		11%	47%	
Ability to use critical thinking skills within the discipline of economics	1%	86%	1	0%	97%	1
Demonstrate an understanding of the historical and institutional material appropriate to a topic	20%	24%		8%	30%	
Communication Skills						
Oral communication skills	15%	43%	10	3%	47%	
Persuasive professional communications	29%	20%		9%	27%	
Written communications skills	3%	72%	3	0%	83%	4
Computer Proficiencies for Economic Analysis						
Econometric software (e.g., SAS, SPSS, Stata, Minitab)	23%	29%		11%	48%	
Presentation software	37%	10%		28%	20%	
Spreadsheets	17%	21%		19%	31%	
Structured electronic searches	31%	17%		22%	33%	
Web publishing	82%	0%		69%	6%	
Word processing	25%	27%		32%	35%	
Data Analysis						
Ability to find economic data and use it in appropriate ways	5%	59%	5	0%	86%	2
Hansen 4: Interpret and manipulate economic data using appropriate statistical and econometric techniques	6%	53%	7	3%	69%	8
Economic Knowledge and Concepts						
Hansen 1: Access existing knowledge (e.g. retrieve information on particular topics and issues in economics)	7%	50%	9	0%	69%	8

Table 7: How chairs rate the importance of education/learning outcomes in assessing the undergraduate economics major (highlighting the Hansen proficiencies)

(Outcomes are in the order asked in the survey with the exact wording. The exception is those surveyed were not told which of the measurable outcomes were from Hansen. The labels for Hansen are added in this table to improve readability.)

	Departments with a Formal Assessment Plan (n=108)			Departments without a Formal Assessment Plan (n=64)		
	Not Important	Very Important	Rank	Not Important	Very Important	Rank
Hansen 2: Display command of existing knowledge (e.g. summarize and explain the use of key economic concepts, a recent controversy, or the views of an eminent economist found in professional economic writings and/or journals)	4%	59%	5	0%	80%	5
Identify and compare the range of economic theories and concepts	12%	40%		2%	50%	10
Hansen 3: Interpret existing knowledge (e.g. explain and evaluate what economic concepts and principles are used in economic analysis intended for a general audience)	2%	61%	4	0%	77%	7
Ethics and Professionalism						
Analyze ethical and social justice dimensions to market and policy outcomes	22%	19%		16%	45%	
Demonstrate sound ethical behavior in all professional activities	26%	22%		14%	47%	
Present themselves and interact with others in a professional manner	28%	30%		17%	41%	
Individual Characteristics						
Demonstrate appropriate internal motivation in completing assigned tasks	37%	24%		24%	37%	
Demonstrate initiative in completing assigned tasks	30%	30%		19%	50%	10
Team Related Skills						
Ability to work with others from different cultural/ethnic/gender backgrounds	41%	19%		21%	32%	
Ability to work in teams effectively to solve problems	40%	15%		23%	29%	

Rank is based on percent saying very important across the 27 Proposed measurable outcomes.

source: National Survey of Department Chairs, 2007

Table 8: The top ten education/learning outcomes for assessing the undergraduate economics major (highlighting the Hansen proficiencies)

(Ratings by chairs of departments with and without formal assessment plans.)

	Departments with a Formal Assessment Plan (n=108)			Departments without a Formal Assessment Plan (n=64)		
	Not Important	Very Important	Rank	Not Important	Very Important	Rank
The Hansen Proficiencies						
Hansen 1: Access existing knowledge	7%	50%	9	0%	69%	8
Hansen 2: Display command of existing knowledge	4%	59%	6	0%	80%	5
Hansen 3: Interpret existing knowledge	6%	61%	4	0%	77%	7
Hansen 4: Interpret and manipulate economic data using appropriate statistical and econometric techniques	6%	53%	7	3%	69%	8
Hansen 5: Ability to apply existing knowledge	2%	84%	2	0%	84%	3
Hansen 6: Ability to create new knowledge/independent research	27%	29%		11%	47%	
Hansen 7: Ability to ask relevant questions	6%	53%	7	0%	78%	6
Other education/learning outcomes						
Ability to use critical thinking skills within the discipline of economics	1%	86%	1	0%	97%	1
Oral communication skills	15%	43%	10	3%	47%	
Written communications skills	3%	72%	3	0%	83%	4
Ability to find economic data and use it in appropriate ways	5%	59%	5	0%	86%	2
Identify and compare the range of economic theories and concepts	12%	40%		2%	50%	10
Demonstrate initiative in completing assigned tasks	30%	30%		19%	50%	10

source: National Survey of Department Chairs, 2007

Table 9: Program measurement methods by departments with formal assessment plans by highest degree offered

(multiple responses allowed)

Measurement method	Highest Degree Offered by Department			
	Total	Bachelors	Masters	Doctoral
Course embedded assessments	74%	73%	74%	79%
Senior (exit) survey	60%	60%	63%	58%
Capstone course	44%	49%	47%	26%
Alumni (graduate) survey	38%	40%	37%	32%
Common course embedded assessments (common exams, questions, or rubrics)	39%	40%	26%	47%
Senior project (e.g. research paper or project)	36%	40%	32%	26%
Standardized exam (e.g. Test for Understanding College Economics (TUCE), ETS Major Field Test, etc.)	36%	40%	32%	26%
Home grown comprehensive exam	22%	19%	21%	37%
Graduate/Professional admissions tests (e.g. Graduate Record Exam (GRE), Law School Admissions Test (LSAT), Graduate Management Admission Test (GMAT), etc.)	12%	10%	5%	26%
Employer survey	12%	10%	16%	16%
Structured small group interactions (e.g. focus groups, town hall meetings, etc.)	8%	11%	0%	5%
other responses	14%	17%	11%	5%
Total departments with formal assessment plans	108	70	19	19

source: National Survey of Department Chairs, 2007

Table 10; Presence of capstone or senior project experience depending on the importance of Hansen's sixth proficiency in departments with formal assessment plans.

	Rating of Hansen's Sixth Proficiency			
	Very important	Somewhat important	Not important	total
Has either a capstone or a senior project	94%	46%	45%	62%
Has a capstone course	61%	35%	41%	44%
Has a senior project	74%	25%	14%	36%
Has both a capstone course and a senior project	42%	15%	10%	19%
N	31	48	29	108

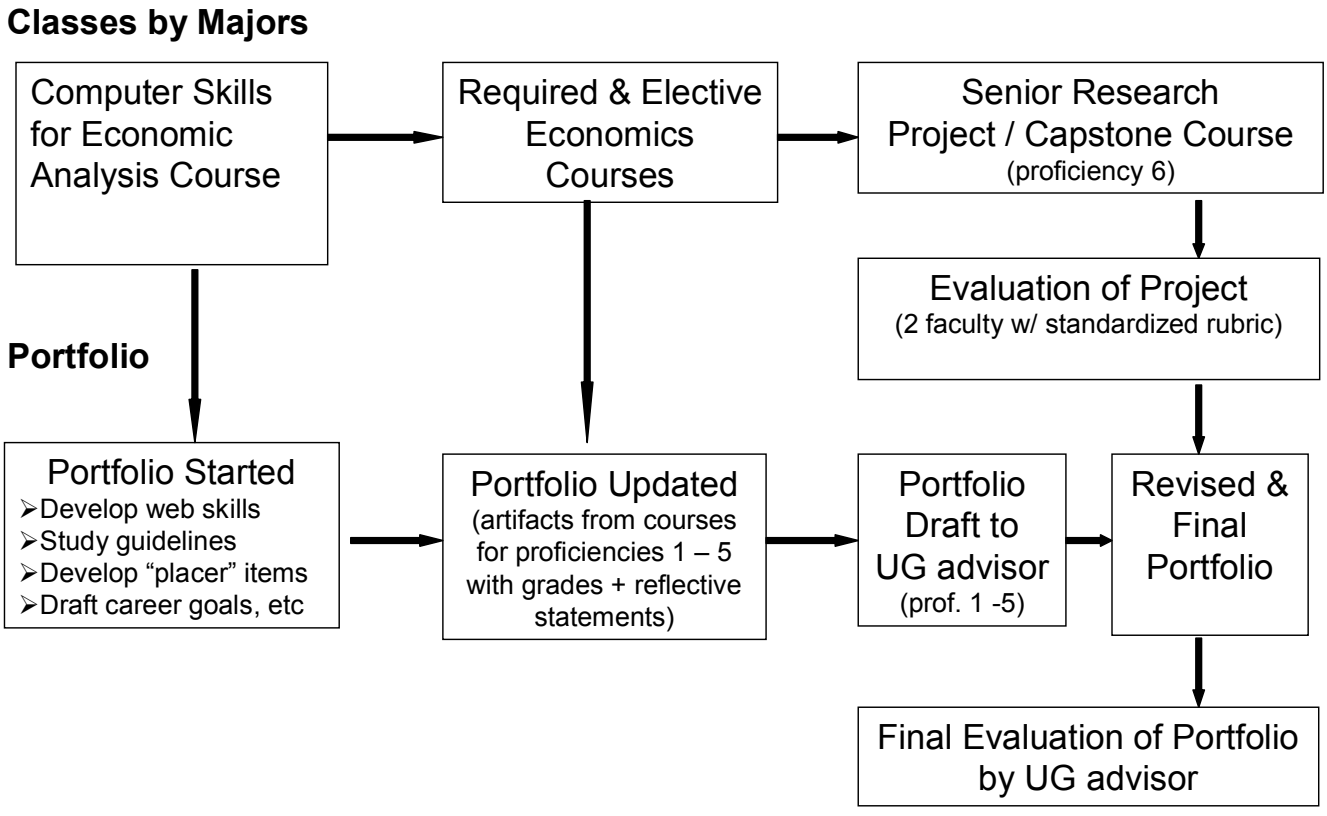
source: National Survey of Department Chairs, 2007

Table 11: How departments have used the results of their formal assessment plan
(percentages are of column total)

The results have been used to inform major changes in the program and/or curriculum	10%
The results have been used to inform minor changes in the program and/or curriculum	39%
The results have been discussed at department faculty meetings	20%
To date, the results have not been used in any meaningful way	29%
Other	3%
N	105

source: National Survey of Department Chairs, 2007

Figure 1
TIMELINE FOR PORTFOLIO



References

AACSB. 2007. "Eligibility Proceedures and Standards for Business Accreditation" revised Jan 31, 2007 and available from http://www.aacsb.edu/accreditation/standards.asp [cited Dec 15, 2007]

AAHE, and University of Denver Center for Teaching and Learning. Electronic Portfolio Clearinghouse. (no date) [cited March 15 2006]. Available from http://ctl.du.edu/portfolioclearinghouse.

American Economic Association. Undergraduate Economics: Summer Study, Research and Presentation Opportunities. 2006 [cited September 28 2006]. Available from http://www.vanderbilt.edu/AEA/students/Opportunities.htm.

Astin, Alexander W. 1996. 9 Principles of Good Practice for Assessing Student Learning.AAHE Assessment Forum.

Banta, Trudy W. 1996. Assessment in Practice: Putting Principles to Work on College Campuses. San Francisco: Jossey-Bass.

Basken, Paul. 2007. A Year Later, Spelling Report Still Makes Ripples. *The Chronicle of Higher Education*, September 28, 2007 [accessed 12/24/2007 at http://chronicle.com/weekly/v54/i05/05a00101.htm]

Becker, William E. 2006. Quit Lying and Address the Controversies: There Are No Dogmata, Laws, Rules or Standards in the Science of Economics, 2005-2006 Presidential Address, Midwest Economic Association, Chicago, March 25, 2006.

Bloom, Benjamin S. 1956. Taxonomy of Educational Objectives: The Classification of Educational Goals. Handbook 1: Cognitive Domain. New York: McKay.

Bok, Derek. 2006. Our Underchieving Colleges: A Candid Look at How Much Students Learn and Why They Should Be Learning More. Princeton: Princeton University Press.

Bransford, John. 2000. *How People Learn: Brain, Mind, Experience, and School.* Washington, D.C.: National Academy Press.

Carlson, J. L., Raymond L. Cohn, and David D. Ramsey. 2002. Implementing Hansen's Proficiencies. *Journal of Economic Education* 33, no. 2:180-191.

Carnegie Foundation for the Advancement of Teaching, Carnegie Classifications Data File, May 29, 2007. (accessed at http://www.carnegiefoundation.org/classifications/index.asp?key=809)

Chickering, A.W. and Gamson, Z. March 1987. Seven Principles for Good Practice in Undergraduate Education. *AAHE Bulletin* 39, no. 7:3-7.

Chickering, Arthur W., and Zelda F. Gamson. 1999. Development and Adaptations of the Seven Principles for Good Practice in Undergraduate Education. *New Directions for Teaching and Learning* 1999, no. 80:75-81.

Erwin, T. D. 1991. Assessing student learning and development: a guide to the principles, goals, and methods of determining college outcomes. San Francisco: Jossey-Bass.

Grant, R. R. 2005. A Small College's Adventure with Accreditation and Assessment. *Perspectives On Economic Education Research* 1, no. 1:60-75.

Hansen, W. L. 2005. Creating a Student Course/Instructor Evaluation Instrument For A Proficiencies-Oriented Economics Course, presented at Midwest Economics Association Annual Meetings.Chicago ed.

Hansen, W. L., M. K. Salemi, and J. J. Siegfried. 2002. Use It or Lose It: Teaching Literacy in the Economics Principles Course. *The American Economic Review* 92, no. 2:463-472.

Hansen, W. L. 2001. Expected Proficiencies for Undergraduate Economics Majors. *Journal of Economic Education* 32, no. 3:231-242.

Hansen, W. L. 1986. What Knowledge Is Most Worth Knowing-For Economics Majors? *American Economic Review* 76, no. 2:149-152.

Hasselback, James R., 2006. *Economics Faculty Directory 2006-2007*. Upper Saddle River, NJ: Prentice Hall.

Hatfield, Susan R. 2001. The Student Learning Self-Study: Choices and Opportunities. *New Directions for Higher Education* 2001, no. 113:23-33.

Heywood, John. 2000. Assessment in Higher Education: Student Learning, Teaching, Programmes and Institutions. Philadelphia: Jessica Kingsley Publishers.

Jones, Elizabeth A., et al. 2002. Defining and Assessing Learning: Exploring Competency-Based Initiatives: Report of the National Postsecondary Education Cooperative Working Group on Competency-Based Initiatives in Postsecondary Education. Washington, DC: National Center for Education Statistics, Office of Educational Research and Improvement, U.S. Dept. of Education.

Kasper, H. 2005. Peer to Peer: Right and Wrong Lessons for Department Reviews. *Journal of Economic Education* 36, no. 2:185-197.

McGoldrick, K. and Greenlaw S. “Practicing What We Preach: Undergraduate Research Experiences in Economics,” to be presented at ASSA meetings, Jan. 2008

Mueller, Jon. Authentic Assessment Toolbox. Naperville, IL, 2006 [cited March 17 2006]. Available from http://jonathan.mueller.faculty.noctrl.edu/toolbox/index.htm.

Palomba, Catherine A., and Banta, Trudy W. 1999. Assessment Essentials: Planning, Implementing, and Improving Assessment in Higher Education. San Francisco: Jossey-Bass Publishers.

Salemi, Michael K., and John J. Siegfried. 1999. The State of Economic Education. *American Economic Review* 89, no. 2:355-361.

Siegfried, J. J., and B. T. Meszaros. 1997. National Voluntary Content Standards for Pre-College Economics Education. *The American Economic Review* 87, no. 2:247-253.

Siegfried (2001): "Principles for a Successful Undergraduate Economic Honors Program" – JEE Spring 2001 Vol 32 No 2 pp 169-177.

Siegfried, John J. 1991. The Status and Prospects of the Economics Major. *Journal of Economic Education* 22, no. 3:197-224.

Nancy E. Tribbensee, Nancy E..and Steven J. McDonald. 2007. FERPA and Campus Safety. *NACUANOTES* National Association of College and University Attorneys, August 6, 2007, Vol. 5, No. 4. [accessed at http://www.nacua.org/documents/ferpa1.pdf on 12/27/2007]

Walstad, William B. 2000. Improving The Assessment of Student Learning in College Economics. Presented at Research Projects' Conference, Committee on Economics Education, AEA, San Antonio, TX May 19-21.

Walstad, William B. 2001. Improving Assessment in University Economics. *Journal of Economic Education* 32, no. 3:281-294.

Walvoord, Barbara E. F. 2004. Assessment clear and simple :a practical guide for institutions, departments, and general education.1st ed. San Francisco: Jossey-Bass.

Michael Watts. 2005. "Articles Published in Journal of Economic Education Instruction Section, Vol. 19(1), Winter 1988 - Vol. 37(1), Winter 2006, By General Topic/Method" (presented at the 2005 Midwest Conference on Student Learning in Economics, Akron) and available online at http://www.krannert.purdue.edu/faculty/watts/teachinginterests.asp (cited August 9, 2006).

Wiggins, Grant. 1990. *The Case for Authentic Assessment.* Vol. 2. http://pareonline.net/getvn.asp?v=2&n=2 : Practical Assessment, Research and Evaluation (a peer-reviewed electronic journal).

Wiggins, Grant P. 1998. Educative Assessment: Designing Assessments To Inform and Improve Student Performance. San Francisco, Calif: Jossey-Bass.