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Top-Down Versus Bottom-Up Paradigms of Undergraduate Business School Assurance of Learning Techniques

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Abstract

This paper describes two models of assessment of undergraduate business learning in two similar universities located on the East Coast of the United States. Both models stem from seeking continued accreditation by the AACSB and are focused on a group of student skills identified by the faculty as essential to undergraduate business education. The assessment processes within the two schools differ in their approaches to methods of measurement. One school used a top-down model, which was created by administrators and operated outside the normal coursework to assess students in the program. The other school used methods embedded in the courses to only assess programs (i.e., a bottom-up model). Whereas the learning goals, course structures, and faculty composition were similar for the two schools, the bottom-up approach involved more faculty members in the assessment process. The article details the measures and rubrics employed by each school, the merits and shortcomings of each approach, and a recommended assessment model combining the best elements of the two paradigms. Currently, the results of the two assessment processes indicate that both schools must improve the feedback loop for continuous improvement.

Dedicated in memory of Jim Hall, Associate Dean and Director of Graduate Studies, Pace University

Top-Down Versus Bottom-Up Paradigms of Undergraduate Business School Assurance of Learning Techniques

Introduction

In 1993, in reference to higher education, Astin wrote that "practically everybody in the academic community gets assessed these days, and practically everybody assesses somebody else" (p. 1). However, a full 18 years after Astin wrote these words, many business schools are still struggling with designing and implementing assessment programs. In higher education, assessment is defined as systematically collecting, reviewing, and using information about the learning and educational performance of students enrolled in academic programs in order to improve the students' learning (Palomba & Banta, 1999). The process consists of outlining goals and objectives for learning, determining the most appropriate samples and methods to examine, collecting educational data, and using the information to improve programs.

Business schools have been slow to adopt assessment policies and procedures because of the difficulty of determining what, when, how, and whom to assess. Academic culture often hinders assessment because tenured faculty may not be responsive to administrators who attempt to alter course content for the purposes of assessment and continuous improvement. Some faculty members believe that they are already assessing student learning in their classrooms and additional measures are wasteful. However, the accreditation boards have embraced assessment, and schools must show efforts to assess student outcomes for reaccreditation.

Planning and implementing an assessment program in higher education is generally the result of coming up for accreditation or reaccreditation by an external, reputable professional organization. For university-level business programs, the primary accrediting board is the Association to Advance Collegiate Schools of Business (AACSB International), whose mission is to "advance quality management education worldwide through accreditation and thought leadership" (AACSB International, http://www.aacsb.edu/). In order to retain accreditation, a school must demonstrate that it has an assessment process in place and that it uses the data collected to improve its curriculum and student learning. The AACSB requires that schools of business measure student learning based on the school's stated mission and objectives. Therefore, each business school can develop its own assessment process and define its own learning expectations in the form of cross-disciplinary skills that students will receive during their studies. The guidelines require each school to identify its learning assurance measurements for each learning expectation and collect and present the results of these measures during AACSB reviews.

This article contrasts the undergraduate assessments in two similar schools of business. In both schools, the faculty members determined the skills to be assessed, but the formats of the rubrics and data collection procedures employed by the two schools were markedly different. One school, Seton Hall University (SHU), adopted an approach utilizing mostly external resources; the assessment data were collected outside of the normal coursework and mostly by nonfaculty, external assessors. The other school, Pace University (PU), embedded assessment within the coursework and created an internal, organic process led by faculty within the existing framework of the school. Though the learning goals for the two programs were similar, there were major differences in faculty and student involvement with the assessment process at the two schools. Additionally, the top-down approach SHU yielded more consistent data from student to student and from year to year that could be evaluated based on measureable benchmarks. In contrast, the bottom-up approach PU relied on coursework that was available, but not necessarily consistent across faculty members in any given assessment cycle, so benchmarking was difficult. Descriptive profiles of the two schools are presented first, followed by an overview of the two assessment models.

Profiles of the Two Schools

The two schools compete in the same geographical market and offer similar programs. SHU is a private, Catholic institution in a suburban location 14 miles outside of a major city. At the time of the study, it had about 5,300 undergraduate students with most (82%) of them living on campus. The average class size at SHU was 25 students with a 14:1 student-faculty ratio. There were 860 faculty members, 90% of whom held terminal degrees. Tuition and fees were $28,150 at SHU, and 90% of students received financial aid.

PU is a private institution with two campuses. One is located in the center of a major city, while the other is in a suburban area outside of the city, similar to SHU's campus. At the time of the study, the undergraduate enrollment was about 8,300, and 64% of the students commuted to the campuses. The average class size at PU was in the mid-20s. There were 460 full-time faculty members, 88% of whom held terminal degrees. Tuition and fees were $31,357 at PU, and over 80% of students received financial aid.

Assessment in Response to the Accreditation Board

In preparation for AACSB reaccreditation, SHU implemented a new undergraduate curriculum in 1998. In addition to coursework in the traditional disciplines of business (i.e., accounting, economics, finance, information technology, international business, law, management, marketing, and statistics), the stated objective of the new program was to enhance the students' competencies in five areas that were identified as important for one's professional business career. These skills were identified by a committee of faculty from different departments together with some input from alumni and a review of the applicable literature. The following areas were identified and termed "the five competencies": (a) communication, (b) teamwork, (c) critical thinking, (d) change management, and (e) technology. Each of the school's departments was asked to adopt one or two competencies to infuse the skills into the coursework. Initially, the Associate Dean for Undergraduate Studies devised most of the instruments and materials for assessment and supervised the assessment's implementation. Later on, the Dean appointed a Director of Undergraduate Assessment, who reported to the Associate Dean of Undergraduate Studies.

PU also began its assessment effort while facing AACSB reaccreditation, but it implemented the process differently than SHU. In February 2001, in preparation for the AACSB review in 2006, the Dean of PU established a Select Committee for Learning Assessment. The committee's task was to evaluate what PU was doing "to assess its programs and student learning and to recommend a more comprehensive assessment program that will lead to an assessment culture at the school." The Dean established a special committee outside of the standing faculty committees because of the amount of work that the task required. The committee consisted of faculty from each academic department and administrators, including the Associate Dean and Director of Undergraduate Programs and the Associate Dean and Director of Graduate Programs. Meeting twice a month, the committee evaluated the assessment activities already established at the school (such as alumni and employer surveys) and conducted research on the assessment plans of PU's benchmark schools and other schools that were perceived as leaders in the area of assessment.

The Select Committee recommended that the school hire an Associate Dean of Planning, Research, and Assessment to handle all assessment plans and procedures at the business school. The committee also determined that a set of KSAs (knowledge, skills, and abilities), which was previously identified by the faculty, should be the focus of the assessment. This set included 39 KSAs based on input from business leaders, faculty, and alumni and created for a prior reaccreditation cycle. Because 39 KSAs would be difficult to measure, the Select Committee combined similar KSAs to create six general categories. Those categories were (a) communication; (b) critical thinking, problem solving, and decision making; (c) financial and accounting applications; (d) quantitative applications; (e) interpersonal interaction; and (f) active citizenship in a global environment.

Assessment Tools and Measures

Both schools designed tools and measures for assessing student learning. Undergraduate business education is very similar across schools and programs because of accreditation requirements. Therefore, the two schools had similar expectations of students' abilities upon graduation. The foci of the two assessment processes and the corresponding measures and tools are presented in this section.

Competencies versus KSAs. The sets of skills that students should have upon graduation employed by the two schools as the foundations of their assessment processes are described in detail in Table 1. The two sets of skills (termed *Competencies* by SHU and *KSAs* by PU) were similar regarding the communication, teamwork, and critical thinking skills. However, SHU did not address the assessment of quantitative skills explicitly, although the case questions used in the assessment required students to use such skills. On the other hand, because the finance department at PU was an early adopter of assessment activities, it had more influence on the design of the school's assessment model than other departments. Therefore, the KSAs included two separate quantitative skills: financial and accounting applications and quantitative applications. Departmental influences were also evident in SHU's assessment program where two competencies—teamwork and managing change—reflected the more active role of the management department (as compared with the other departments) in the design of the assessment model.

SHU was an early adopter of pedagogical technology and had leased PCs to its students and provided online connections across the campus before many other universities. Technological skills were an important component of the school's curriculum and were included in the assessment model. PU did not include technology in its KSAs because it relied on assessment conducted by its liberal arts program to cover technological skills and also because it did not offer a major in Management Information Systems.

Both schools developed a set of learning goals that were measureable and reflected student skills in the two programs. The major difference in the top-down versus bottom-up approaches was in measurement and implementation of assessment processes as discussed in the following sections.

Assessment materials. In SHU, the primary assessment instruments were team presentations of answers to cases' questions, determined by the Director of Assessment, before panels of nonfaculty business people. Randomly, students were assigned to teams during their sophomore or senior year (i.e., each student participated in the assessment only once, either as a sophomore or senior). The cases selected for the sophomores were less comprehensive than the cases selected for the seniors and focused on law and economics (the areas that sophomore business students had already covered in their coursework), whereas the seniors' cases addressed accounting, finance, management, marketing, and statistics. The teams were scheduled for participation in assessment panels held about six to eight weeks after the start of the fall and spring terms. A few weeks before, the teams received a case and corresponding questions and also attended preparatory workshops held by the Director of Assessment. During the panels, the teams presented the cases to a group of outside assessors. The assessors were alumni and employed or retired business professionals. The assessors (two or three per team) received criteria for evaluating the team's performance on the five competencies, a scale for ranking each team on each competency, and a blank area for comments. The Director of Assessment then determined whether a team had passed or failed the assessment. The assessment panels were held outside the students' normal coursework, on a Friday evening and the following Saturday, so that they did not conflict with the students' attendance of regularly scheduled courses. Initially, faculty were not invited to observe the panels, but were later on (about six years after the first assessment panels were held) encouraged to do so. However, few faculty members have attended the panels.

Table 1
Definitions of Competencies and KSAs

SHU Competencies	PU KSAs (knowledge, skills and abilities)
Communication: The ability to communicate effectively, in writing and orally, with people of diverse business and professional backgrounds, both within and outside the organization.	Communication: Given a realistic business problem, students will write a report and effectively deliver a presentation that explains a situation to a business audience, analyzes its implications, and makes recommendations for action.
Teamwork: The ability to work with others as part of a team. The focus here is on developing an understanding of the principles of teamwork: working toward a common goal, sharing leadership responsibilities and authority, sharing power, sharing information to utilize resources fully, loyalty and collegiality, and building and maintaining personal and professional relationships.	Interpersonal Interaction: Students will demonstrate sensitivity to others in two-person and small-group situations by representing their own interests clearly; listening to and drawing out others; acknowledging conflict and using it functionally as a source of creativity and energy; and accepting mutual accountability for decisions and actions, attempting to exert positive leadership when appropriate, and delivering on their commitments. Students will also show evidence of the application of legal and ethical principles in solving business problems with a concern for the impact of their decisions and actions on society.
Critical Thinking: This competency refers to the ability to identify relevant issues or variables, analyze their interrelationships, and conceptualize solutions for specific problems. Inherent to this competency are proficient thinking in abstract terms, being able to see the "big picture," and understanding how the various parts of an organization or an idea fit and function together.	Critical Thinking, Problem Solving and Decision Making: Given a realistic business situation, graduates will formulate a problem statement or statements, analyze the problematic issues, develop alternative courses of action, gather relevant data, evaluate alternatives, decide on an action, and set a plan for evaluating the consequences of their action.
Change Management: The ability to respond to, and/or initiate change. The management of change competency is focused on the students' skills in four areas: managing change within oneself as one matures and grows, managing change within organizations, understanding and responding to the dynamic domestic and global business environment, and solving creatively business problems generated by a changing environment.	Active Citizenship in a Global Environment: Students will show an awareness of the global interdependency of business activities and an understanding of world markets from financial, political, economic, and social perspectives in their analysis and resolution of business problems. In their interpersonal and business-related interactions, students will demonstrate that they value individual and cultural differences and respect learning outside the focus of their business program (including, but not limited to, the arts and sciences).
Technology: Expertise in utilizing technology to improve productivity. The focus is to develop both computer literacy (that is, how to use computers) and information literacy. Specifically, knowing how to find and gather relevant data from various sources, organize, summarize and analyze them, and create meaningful and effective information for making business decisions.	Not measured
Measured via individual student assignments (see Table 2).	Financial & Accounting Applications: Students understand financial statements, calculate and explain financial ratios, explain changes in interest rates, use time value of money concepts, and relate financial and accounting management techniques to the value of the firm. Additionally, students will understand cost allocation, earnings per share analysis, profit margins, expense evaluation, accounting systems and financial strategies.
Not measured	Quantitative Applications: Students will be able, at an introductory level, to solve quantitative problems and be able to draw inferences from mathematical solutions for business decision making.

In addition to the team presentation, each student, individually, completed two assignments. One assignment involved entering public financial data (available online) into a spreadsheet program (Excel) and was designed to gauge the student's financial accounting and information technology skills. The other task involved writing a short essay and was designed to ensure that the student had basic writing skills. Initially, the Director graded these assignments. Subsequently, grading the first assignment was delegated to the business faculty, and grading the second assignment was delegated to faculty from the English department. The students also responded to questions gauging their

satisfaction with the assessment process and with their teams.

Students had to successfully pass both the team component and the two individual assignments. Students who failed any of the components were given another chance to pass them. The students did not receive credit for the assessment work, but a "completed assessment" notation on one's transcript was required for graduation. In addition, students received extensive feedback regarding the teams' presentations in the form of a summary of the assessors' comments. Students preparing for future assessment panels were provided with portions of insightful assessors' comments from the past.

In PU, the materials used to evaluate students' proficiencies in the six KSAs were cases and a business simulation used in the capstone business course. Faculty who taught this course selected the materials and, with the Assessment Director, determined which portions of these materials should be used in the assessment. The students participated in the assessment passively. They received grades for the capstone course, but no separate feedback regarding their command of the KSAs.

The materials designed by the Director of Assessment in SHU clearly measured the competencies across all students and were consistent in form. In contrast, since PU relied on course materials, not all of the skills could be assessed across the same student population using the same materials. For example, a professor in one section of the capstone management course might assign a different case than another professor in another section leading to inconsistent measurement of the skills. PU was able to benchmark using the simulation game that was required content in all capstone management courses, however, that only covered interpersonal skills and quantitative skills.

Assessment rubrics. Table 2 contains a summary of the materials and the rubrics used by the two schools. SHU relied primarily on ratings of student teams by the assessors who received written criteria to rate students' mastery of that given competency on a 5-point scale; the assessors were also asked to provide written comments explaining their ratings. Some guidelines instructed the assessors to use observations (e.g., for rating the teams on oral communication and teamwork), while others asked them to use provided answers to case questions as benchmarks for evaluating the teams' answers to those questions (e.g., for evaluating the teams on critical thinking and change management). On the other hand, PU used both ratings of individual students' works by faculty as well as more objective measures, such as multiple-choice questions and team performance in a quantitative, computer-based simulation for which normative performance benchmarks existed (in the form of data collected from many schools using the same simulation in their undergraduate capstone business courses).

Advantages and Disadvantages of the Two Assessment Models

The advantages and shortcomings of each assessment model are discussed next.

Qualitative dimensions. As shown in Table 2, the assessors in SHU used primarily a 5-point rating scale and personal observations to evaluate an entire team on the overall mastery of each competency. Two skills—written communication and spreadsheet/accounting skills—were also assessed through individual student assignments. On the other hand, in PU, faculty members served as assessors and were provided with specific dimensions on which to evaluate complex skills such as critical thinking, problem solving, and decision making. PU also used quizzes, where students individually responded to multiple-choice questions gauging their quantitative and accounting skills.

Since the assessors in SHU were nonfaculty personnel from outside the university, who were unfamiliar with the intricacies of abstract skills such as critical thinking and managing change (although the definitions of such skills were provided to them), using closed-ended rating scales was the most practical solution. In addition, personal observations of team presentations were deemed

appropriate for judging skills that can be visually observed such as teamwork, oral communication, and the use of presentation technology. In PU, the faculty assessors received specific dimensions for the faculty assessors to use in their write-ups assessing individual students on, among others, written communication, critical thinking, and problem solving. Providing specific dimensions for the write-ups of the assessments proved to be a somewhat more robust rubric than simply asking

Table 2

Rubrics of Competencies and KSAs

Competency or KSA	SHU	PU
Communication	Observation of team presentations (enthusiasm, ability to maintain interest, confidence, clarity, and timeline). Individually completed one-page written essays. Faculty members from the English Department grade the essays.	Cases embedded in the undergraduate capstone course. Students write a case analysis and give an oral presentation. Select faculty members evaluate the work along the criteria of content, organization, and grammar.
Critical Thinking, Problem Solving & Decision Making	Case questions that require: identifying key issues, the reasons for them, ability to analyze financial data in the context of a given business situation, understanding the firm's operating environment (internal and external) and outlining strategic alternatives (including the merits and potential shortcomings of each).	The course-embedded cases described above also contain situations that require strategy development and implementation; planning; and financial and human control elements. Faculty members evaluate the work along the criteria of identifying the problem(s), analyzing the salient perspectives, utilizing key assumptions, critically examining evidence, and recommending action.
Teamwork / Interpersonal Interaction	Observation of team presentation and subsequent questions to team members. Criteria: selecting a leader, dividing the work, clearly defined tasks, positive group dynamics, motivation of team members, opportunity of each member to contribute, rewards for members who excelled, and consequences for members who did not contribute.	Team exercises and/or cases embedded in the undergraduate capstone course. As part of the *GLO-BUS*[1] Management Simulation, each student completes a self-evaluation and evaluates his/her team members on leadership, independent thinking, teamwork and social skills. The results are compared to national student sample *GLO-BUS* participants.
Change Management / Active Citizenship in a Global Environment	Case questions that require students to understand and respond to dynamic domestic and global changes in the business environment. Students face a scenario calling for creatively solving a problem stemming from the changing environment.	The same content of the cases and exercises used to assess Interpersonal Interaction is used. Students are evaluated along the criteria of identifying and analyzing global factors, having a world-view and understanding the social and ethical considerations. (The cases used include an ethical dimension.)
Quantitative Applications; Financial & Accounting Applications	Individually completes assignments in which students enter public financial data into a spreadsheet and compute several financial ratios. Faculty members from the business school grade the assignments.	As part of the *GLO-BUS* simulation, students make decisions for a fictitious firm in the digital camera market. The decisions are based on quantitative data provided to the students. In addition, students complete quizzes requiring them to make financial decisions. The business disciplines represented include finance, accounting, and operations management.
Technology	Teams are required to use presentation technology. The assessors rate quality of the members' ability to use the software, quality of the visuals, special features that enhance the audience's interest, and the congruency between the visuals and the material presented orally.	Not measured.

[1] ***GLO-BUS*** is a computer-based exercise where class members are divided into teams and assigned to run a company that manufactures a digital camera in head-to-head competition against other companies making the same product run by other class members. It is designed to simulate a real business environment. All teams begin the task in the same financial position. At each interval, they have to make decisions based on the results of their previous decisions and the standing of other companies—data that they periodically receive. Students also complete questionnaires rating themselves and the work of fellow members.

assessors for comments explaining a rating on a scale (the method used in SHU) because the latter approach often resulted in general comments that did not address the complexities of more intricate and less observable skills, such as critical thinking. Furthermore, all of the rubrics used at SHU were developed internally and cannot be compared against external data. On the other hand, some of the rubrics used in PU are used in many other business schools and the results could be judged against benchmarks solidly derived from large samples of students from other institutions.

Faculty involvement. SHU has deployed its assessment model longer than PU, although the faculty of PU had identified the skills that needed to be evaluated even earlier (the result was the 39 original KSAs mentioned earlier). However, in the Fall 2008 semester, 15 faculty members at PU were directly involved with undergraduate assessment activities (by providing data or analyzing data). Eight additional faculty members were directly involved in providing graduate assessment data and were therefore familiar with the processes. The Director of Assessment was a faculty member who continued teaching while supervising the assessment. The Select Committee for Learning Assessment consisted of an additional five faculty members who planned assessment activities. As the PU program grows, more faculty members will be involved in assessment, building familiarity with the assessment process and working to improve student skills. Additionally, the stipends paid to faculty who serve as evaluators help engender more positive feelings about the process.

In SHU, five faculty members coordinated the definition of the five competencies, but once the implementation of the program began, outside assessors evaluated student skills, resulting in less faculty involvement. Initially, faculty members were designated as the directors of the assessment. However, for the last several years, the assessment has been directed by a nonfaculty person bearing the title of Associate Dean for Assessment and Special Projects. In addition, initially, faculty members were neither encouraged to attend the assessment panels nor involved in the selection or grading of the assessment materials. After several years of this practice, about two years ago, faculty members became more involved grading individual assignments and also were encouraged to attend the assessment panels. Nevertheless, the evaluation of the team presentations, which are the core of the assessment, remained the responsibility of the outside assessors and the nonfaculty director.

Continuous improvement. In SHU, when the competencies were originally developed, each department was asked to adopt a competency and, in addition, the critical thinking skill. The objective was to integrate the teaching of these skills into the coursework, but no formal guidelines were put in place. In recognition of the need for a more aggressive approach regarding such integration, the school's Academic Standards Committee was asked to re-examine the five competencies and recommend more robust integration of the results of the assessment into the faculty's teaching.

In order to use the assessment's findings to improve its undergraduate program, PU incorporated this activity into its faculty performance review process, which is conducted annually and determines merit pay. The Associate Dean and Director of Undergraduate Programs created a set of core course guidelines for faculty to follow that included a set of learning goals reflecting the KSAs for each course. Then, in their annual self-reviews, as part of the teaching component, faculty members were asked to demonstrate how they taught the applicable KSAs in their courses. As this process continues, faculty will increasingly incorporate these learning goals into their courses so that students can master the KSAs by the time they graduate.

Financial resources and added value. SHU invested considerably more resources than PU in dedicated personnel and in developing an assessment structure. SHU used its assessment to gain publicity (e.g., exposure in the AACSB's publications and conferences) and also in its promotional efforts (e.g., open houses), where the five competencies and the assessment have been presented as a unique, value-added aspect of the education provided by the school. The

opportunity for students to participate in a business presentation in front of business people—who had not met the students before—and to receive feedback from them was presented as a valuable learning opportunity focused on the pragmatics of business. Mandating students, randomly assigned into teams and outside of the normal coursework, to design a team presentation based on a case also increased the students' engagement in the school's extracurricular activities, such as student clubs, where students could meet peers and receive guidance from those who had already completed the assessment. It must also be noted that some students in SHU resented the assessment because it consisted of an additional assignment outside of their coursework for which they received no credit. On the other hand, in PU, students were unaware of the assessment because the data were generated from their regular coursework and evaluated after the semester ended.

Table 3 includes an overview and summary of the key features of the two assessment models.

Table 3

Key Features of the Two Assessment Models

	Characteristic	Top Down: Seton Hall University	Bottom Up: Pace University
1	Private	Yes	Yes
2	Urban	Yes	Yes
3	Residential students	82%	36%
4	Size	5,300 undergraduates	8,300 undergraduates
5	Financial aid recipients	90%	80%
6	Faculty terminal degrees	90%	88%
7	Assessment leadership	Director, then Associate Dean	Associate Dean
8	Identified competencies/skills	Yes: 5	Yes: 6
9	Assessment goals/materials	Homegrown	Homegrown & externally developed business simulation
10	Assessment location	Outside coursework	Within coursework
11	Test frequency	2nd and 4th year	Capstone class
12	Scoring	Subjective (ratings)	Subjective & objective
13	Raters	Mostly panels of outside judges, faculty grade some assignments	Faculty
14	Feedback provided to students	Yes	No
15	Assessment results integrated into curriculum	Departments adopt selected competencies. Academic Standards Committee is charged with creating an operational framework.	Learning objectives set for specific courses
16	Assessment reflected in faculty performance review	No	Yes
17	Visibility	Yes (used in promotional materials)	No
18	Costs	Director of Undergraduate Assessment ($20,000 per year); Pay to outside assessors $250 per team observation by 2 or 3 assessors per team (per semester $250 x 50 = $12,500); Materials duplication and reprint costs (per semester) $1,000.	Director of Assessment – 2 course releases per semester ($16,000); Faculty Assessors – 8 @ $500 ($4,000); Incentives to faculty to provide materials – 7 @ $300 ($2,100).

Conclusions and Recommendations for Assessment

Two methods of assessment are detailed here, each with its own advantages and shortcomings. We advise schools to employ a hybrid technique combining the most effective aspects of each approach, and this section includes operational suggestions for a hybrid system.

Management and personnel. The development and implementation of the assessment models described in this article stemmed from the AACSB accreditation processes. In each case, the student skills assessed were identified by the faculty. Then, in one school, when implemented, the process used mostly external personnel and was ultimately directed by a nonfaculty Associate Dean. In the other school, faculty participated in collecting the assessment data under the direction of a tenured faculty member. The more effective structure for assessment is one managed by an Assessment Director who is part of the faculty and teaches undergraduate business courses regularly, rather than a nonfaculty administrator. An assessment process managed by a faculty member facilitates both the faculty involvement in selecting the assessment materials as well as the use of the assessment's results in the improvement of the curriculum and faculty pedagogy.

However, engaging nonfaculty, business professionals as assessors provides the students with a unique learning experience because they are evaluated by "real world" business standards and by persons unbiased by the students' work in regular courses. We recommend a model where the assessment data are evaluated by both faculty and nonfaculty business professionals because such a structure is likely to provide fresh and additional insights regarding measuring key business skills.

When using the bottom-up approach to assessment in the effort to involve faculty, it is very important to compensate faculty for assessment activities. Asking faculty to assess student work outside of the normal course structure without compensation would result in negative feelings about the assessment process and its value to the school. Showing faculty that the process is meaningful is important, particularly in the early stages of assessment before the processes have been incorporated into the regular operations of the school.

Materials and rubrics. In one school, an Associate Dean developed the assessment materials (consisting mostly of a cross-disciplinary case) and the corresponding rubrics, and outside personnel were trained in applying these measures. (The difficulties related to this training were discussed earlier.) In the other school, the faculty developed the rubrics and using the capstone business course as an assessment tool, provided an opportunity to compare some assessment data to national benchmarks, indicating which areas needed improvement.

On the other hand, using materials that are customized and not used in regular courses is more valuable in assessing unique skills stemming from a given school's mission statement (e.g., ethics and social responsibility). Such materials also serve to assess all students in a given cycle in the same manner and make it possible to compare data over time. The best approach is combining data from core and upper-level courses with a cross-disciplinary case that can be administered in a capstone course, and the rubrics employed should include measures that enable examining the data collected against national benchmarks. Relying on course materials is problematic in terms of validity since course content differs across sections of the course. Therefore, schools should consider developing cases and other materials and encourage faculty to use them when their sections are chosen for assessment. The results using the same materials in all sections would allow for comparison across sections and even from assessment cycle to assessment cycle.

Student participation. In one school, the assessment process was highly visible and the students actively participated in it and received feedback about their performance. In the other school, the students were unaware that they were being assessed since the assessment was designed to provide data to the administration without student involvement. Advocating the second

approach, one can claim that an unobtrusive measure of the skills senior students presumably have after completing most of their coursework is more credible than an obtrusive measure where students prepare for assessment panels and complete assessment assignments. However, the highly visible assessment at SHU, including the presentations in front of business people, provides the participants with a distinctive and worthy lesson, in addition to involving alumni and seasoned businesspeople in the life of the school. Thus, if a school has adequate resources, creating a highly visible assessment structure designed to provide an additional pedagogical experience to the students is advisable.

Faculty engagement and continuous improvement. At the present time, both schools are actively engaged in assessment activities with an eye toward continuous improvement. One school has started with a model relying strictly on outside assessors, moved towards a paradigm stressing more faculty participation, and is still grappling with methodically integrating the assessment's findings into the courses taught. The model employed by the other school, where the assessment data are collected with the assistance of the faculty and where the faculty's performance review reflects the actual use of the assessment findings, actively engages the faculty sooner so that continuous improvement can be more seamless. Therefore, incorporating the assessment's results as one of the criteria used to evaluate a faculty member's performance (and to determine merit pay where such pay is available) is strongly recommended.

It must be noted that the challenges faced by the two models described here are not unique. In a recent compilation of articles about assessment published by the Association for Institutional Research (AIR), one article addressed faculty claims that assessment contradicts academic freedom (Williams, 2005). Another paper in the volume characterized typical faculty responses to assessment as being one of the following: "I can't," "I've already done that," "I shouldn't have to," and "I won't" (Martell 2005, p. 210). Presumably, such responses reflect faculty reluctance to gather assessment data and also modify the contents of their courses in a way that addresses the inadequacies identified by the assessment. A review of the papers published in AIR's volume reveals that many institutions with sound (and costly) assessment structures have yet to find a smooth way to integrate the results of the process into the contents of the courses taught.

In addition to engaging faculty in the assessment itself (with some financial incentives) and incorporating the use of assessment results into the faculty's performance review, creating an operational framework that guides the faculty in implementing continuous improvement is needed. For example, following the identification of the skills to be assessed and the rubrics measuring students' mastery of these skills, one assessment program created a detailed table matching the skills with stated learning outcomes spread along four years of undergraduate education (Popper 2005, pp. 18–19).

In summary, the following quote from one of the papers in AIR's volume summarizes the state of assessment in many schools: "While we have come a long way in a year, our assessment is neither complete nor perfect—it is a work in progress" (Anderson-Fletcher, 2005, p. 75). As schools come up for AACSB re-accreditation, assessment will become embedded in the professional mindset of business faculty and will also be reflected in their teaching.

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