



# **EDUCATIONAL OUTCOME ASSESSMENT, 2005**

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**A REPORT ON EDUCATIONAL OUTCOME ASSESSMENT ACTIVITIES AT CASE**

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This report summarizes the educational outcome assessment activities undertaken in support of the educational mission of Case Western Reserve University. Highlights of activities are described in the executive summary with full reports by unit, school or department attached.

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# **EXECUTIVE SUMMARY**

## **Overview**

Case Western Reserve University strives to be the most powerful learning environment in the world. Because Case seeks to have transformational impact on all students, we commit to a comprehensive educational outcome assessment program, wherein we measure how our students have changed, what knowledge has been learned, and what competencies have been developed. Our educational outcome assessment programs will not only provide information on how well we are achieving our objectives, but will also identify what types of programs and experiences have the most powerful impacts. Continuous evaluation leads to improvements of programs and the enhancement of the distinctiveness of our University. Educational outcome assessments are based on the core vision and mission of each school and the University as a whole. This report summarizes the extensive and comprehensive assessment activities currently underway at Case.

## **Individual School and Department Outcomes Assessment Activities**

Capsule summaries of the educational outcome assessment activities practiced within each school are presented in this section. Full details are available in the appended reports.

- **College of Arts & Sciences**
  - The primary outcome assessment activity of the College of Arts and Sciences is the ongoing assessment of the SAGES program. Currently in the final year of its three-year pilot phase, SAGES is the subject of a comprehensive, rigorous, and continuous assessment program. The assessment involves a range of methods, including standardized course evaluations, SAGES-developed course evaluations, direct observations of the learning environment, interviews with faculty and students, and use of National Survey of Student Engagement (NSSE) data. In addition to the overall assessment activity represented by SAGES the Executive Committee of the College of Arts and Sciences, in consultation with then Dean John Bassett, determined that outcome assessment in the College required accommodation of the variability among its twenty-one departments. As would be expected, outcome assessment plans differ from department to department. All departments submitted a plan for outcome assessment that was reviewed and approved by the Executive Committee and the Dean. Outcome assessment methods across the departments include the following mechanisms:
    - course evaluations
    - exit interviews with graduating seniors
    - essays by graduating seniors evaluating their experiences
    - admission to top graduate and professional schools
    - admission to special summer programs abroad
    - discipline-specific written questionnaires
    - e-mail or phone interviews
    - portfolios of writing projects
    - evaluations of capstone experiences
    - ongoing evaluations of student progress
    - alumni interviews

- The most promising outcomes assessment activity in the College is the ongoing assessment of the SAGES program. While SAGES was initiated in the College of Arts and Sciences, it has been adopted as the general education requirements for all undergraduates entering in the Fall of 2005. The SAGES program will continue to be refined and evaluated. SAGES has already modified aspects of its program in response to assessment and evaluation. The SAGES evaluation is very strong, comprehensive and rigorous. It is an ongoing enterprise and should be the College's primary effort in outcomes assessment for accreditation. Unlike department-based assessment activities, SAGES is involved with a broad and large enough student sample to produce comprehensive, meaningful results. SAGES also has clearly articulated goals for all students (e.g., writing skills, capstone experiences) that lend themselves to College and University-wide assessment.
- **Mandel School of Applied Social Sciences**
  - The Mandel School of Applied Social Sciences employs an evaluative strategy that informs faculty on issues of curriculum content, curriculum outcomes and student and alumni opinions. The evaluative strategy includes both quantitative and qualitative information gathered through a variety of tools and techniques. The evaluative strategy is one that depends on measures the School has used routinely over a number of years as well as measures that are in the process of development and refinement. Information from the evaluative strategy is fed back to the faculty through committee structures; the curriculum groups, e.g., concentration meetings; individual communication between the associate dean and the faculty member; and periodic reports and memos. Outcome assessment at the Mandel School occurs in the context of our Ability-Based Learning environment (ABLE). Faculty of the Mandel School identified eight abilities they wanted students to develop by the time they graduate from the program. The abilities were based in part on input received from fourteen stakeholder groups. They serve as the learning objectives for each student, and are the standard against which learning outcomes are assessed. These eight areas are: evaluation of field learning, grades, portfolios, licensing examination, course evaluations, alumni survey, social work self-efficacy, and exit focus groups.
  - Major new assessment efforts include an inter-institutional effort to develop a comprehensive measure of social work knowledge/practice competence and the use of standardized patient assessment. Within the next year we will begin using standardized patient assessment in conjunction with the new Simulation Center being developed by the Case School of Medicine. In conjunction with several other leading schools of social work, we expect to develop a multi-site demonstration project to assess the feasibility and validity of using standardized patient assessment in social work education.
- **Physical Education and Athletics**
  - The assessment process of the Department of Physical Education and Athletics is designed to determine the achievement of desired outcomes for students in the three dominant programs sponsored by the department: physical education, intercollegiate athletics, and intramural sport. Outcomes for students participating in the required physical education program are assessed by survey during the spring semester. The department replaced selected sedentary, life-time sports courses with active, fitness enhancing classes such as spinning, yoga, and cardio-fitness as a result of a review of ten years of fitness data from students enrolled in personal fitness classes and from results of the outcome assessment surveys. Physical Education faculty members are encouraged to use course and instructor evaluation forms to improve teaching style, methods, and curricular content to enhance achievement of learning outcomes. The intercollegiate athletic program is assessed every year as required by the Education Amendment Act of 1972. The EADA report documents institutional compliance concerning gender equity principles in intercollegiate athletics with budgetary and human resource allocation. The intercollegiate

athletic program also is required to complete an NCAA self-study every five years. The physical education department also assesses the intercollegiate athletic program via student opinion from a senior survey electronically administered to students completing their final season of athletic eligibility, random selected students presently members from each team each season, and students on the eligibility roster the previous season but not during the present season.

- New efforts include a Division of Student Affairs wide implementation of an assessment project that is to provide benchmarking student perceptions of programs and services (including physical education) compared to other institutions. In addition to this work, Physical Education, along with partner departments in Student affairs, have engaged a consulting firms to develop an instrument that will be used to assess division goals and objectives.

- **School of Dental Medicine**

- The School of Dental Medicine has approached outcomes assessment from a systematic and comprehensive perspective. Organizationally, the process is embedded into the fabric of the vision and mission statements, strategic planning outcomes, goal and objectives definition and finally, the articulation of the outcomes expected. The process is driven by what the faculty has defined as the School's mission through the strategic planning process. The result, strategic directions, defines the specific objectives that the faculty has determined to be important for the success of the School and the academic program. Outcome Assessment is defined around the primary mission statements regarding the Educational Program, Scholarship and Research, Service and Patient Care. The program objectives are outlined for each of the mission categories. The Committee on Outcome Assessment tracks results quarterly using a template of program objectives and expected outcomes for each of the mission categories. The results of the outcome evaluation are shared with the Dean and then the faculty to monitor program progress. Adjustments to the outcome assessment plan are made to both program objectives and to level of expected outcome on a regular basis. Specific outcomes may be tracked for several years, and then when expected outcomes have been consistently achieved new objectives and outcomes may be monitored to evaluate program development and new outcomes Specific objectives related to the Pre-doctoral educational program are defined in the Competencies for Graduates Document. This document defines fifteen domains for content deemed necessary for the student to have mastered by graduation and the educational objectives that define each domain. The document represents the knowledge, skills, and values a graduate is expected to have acquired by graduation. Correlating documents tie our curriculum content areas (courses) to the specific competency statements. An Educational Outcome Plan document lists the ways in which each competency statement is assessed (and by what methods) throughout the curriculum, across the four years. The post-doctoral educational programs at the School of Dental Medicine have the same level of educational competency expectations and outcomes documentation. These are professional requirements for accreditation in both the pre-doctoral and post-doctoral programs.
- New efforts include revision of the Outcome Assessment Results Table, including a new measure relating to the number of grant submissions per year added to the outcomes survey. In addition, results from the current major curricula revision will have a significant impact on the range of service goals assessed.

- **Case School of Engineering**

- **School-wide assessment:** The primary method for assessing academic outcomes for the entire school of engineering is provided by a survey of alumni and employers of alumni. Tabulated data are sent to chairs and presented in a school-wide faculty meeting. **Departmental assessment:** All individual departments conduct their own assessment activities ranging from exit surveys, "town-hall meetings" and senior

surveys. As would be expected results are also processed differently, ranging from presentations to faculty and students and tabulated results distributed to Chairs and students. Following dissemination of results actions are taken to address problems and formulate new educational policy. These processes are annual and inform educational policy throughout the academic year.

- **School of Law**

- **School Level Assessment:** Every seven years, as part of the law school accreditation process, the School of Law conducts a comprehensive self-study. Under the leadership of the Dean, the School of Law formalizes its strategic plan for the future. Beginning in the summer of 2003, the School of Law undertook a formal study of its place in the US News Rankings, generated a report that assessed the school's position, and made numerous recommendations to the faculty, most of which were approved and are in the process of being implemented. During the 2004-05 academic year, the School of Law engaged in a university-wide strategic planning process, which included an assessment of strengths, weaknesses, opportunities, and threats. **Programmatic Assessment:** The School of Law recently implemented a new, three-year, integrated skills training program, *CaseArc*, and because of the experimental nature of the program, its collaborative teaching model, and the expansion of skill sets deemed critical to the contemporary professional (from writing to oral processes, from litigation to transactional skills, business planning, and focused problem solving), we have implemented several new assessment tools, including periodic surveys of students and informal, small group meetings with the Associate Dean. Each year, the directors of our Centers of Excellence (Law-Medicine; International; Law, Technology and the Arts; Business Regulation; and the Clinic) submit reports to the Dean, assessing both accomplishments and issues to be addressed. Some, but not all, of the Centers also utilize their advisory boards for providing assessment and input. For example, the Clinic's advisory board meetings led directly to the formation of a skills task force that designed the *CaseArc* program. In this academic year, the faculty is reviewing our LL.M. masters program for foreign lawyers I U.S. and Global Legal Studies. Additionally, the curriculum committee is currently undertaking a comprehensive, two-year review of the curriculum. **Students:** Traditionally, legal education utilizes summative assessments of students that focus on a final examination. The School of Law still relies heavily on these quantitative, comparative assessments, based on a mandatory grade curve that applies to classes larger than fifteen students. The School of Law, however, has started to depart from that model in several key respects. First, through the *CaseArc* program and our advanced writing seminars, the faculty provides more formative and qualitative feedback. Second, a few large classes are moving to smaller graded assignments during the semester. Third, the emphasis on oral, social processes requires new assessment tools for the skills curriculum.

- **Weatherhead School of Management**

- **MBA Studies Completed and On-Going:** The school completed an up-dated outcome assessment of the MBA program in 2002. It included the baseline data from 1987 through 1989 (for comparison groups), the full-time graduating cadres of 1992, 1993, 1994, 1995, 2000, and 2001 and part-time graduating cadres of 1994, 1995, and 1996. Entering data on all in-coming MBAs continues to be collected each year, but only collecting graduating data on full-time graduates. That data is analyzed about every two years. The main assessment method used for these comparisons (and the entry course) is the ECI-U WSOM Version. It assesses emotional and cognitive intelligence competencies that have been shown in hundreds of studies to predict effectiveness of managers, executives, and leaders in most countries of the world. It is on-line for our registered students. In addition to these studies, there have been a number of doctoral dissertations conducted on this data, as well as follow-ups of graduates. This work has been cited by other authors in the field as exemplary of outcome assessment and maintaining an intellectual integrity to our work with students. Parallel studies began last year at ESADE (a major management school in Barcelona to study the impact of their program.) and will start next year at ALBA (the major private

management school in Athens). **EMBA Outcome Studies:** Two doctoral dissertations were completed on follow-up studies of the EMBA. One followed the graduating class of 1997 four years later. Another followed classes of 1999, 2000, and 2001 in 2002. **Professional Fellows Outcome Studies:** Four cadres of the Professional Fellows Program were followed and studied. They were two classes one year after graduation, one cadre two years later, and one cadre three years later.

- Most recent developments have included compilation of entry and graduating data on FT MBA classes for those graduating in May, 2002 through 2004. Within a few months data for those graduating in May, 2005 will become available. However, current funding only allows for analysis of 2005 data, converting previous files for analysis awaits additional funding.

- **School of Medicine**

- The School of Medicine (SOM) has a broad and extensive program for outcomes assessment. The SOM has embarked on major curriculum reform under the Dean's leadership which will result in new programs to be initiated in 2006 and lead to significant enhancements in many of the aspects of the SOM's outcome assessment program. The multiple opportunities for dialogue among students, faculty and leadership, including new efforts at curricular reform, provide substantial qualitative feedback during the four years in school. Quantitative data for both students' acquired knowledge base and impact on career selection and success is provided through the standardized assessments at a national level where pertinent benchmark data also results. Assessments in which both national organizations and the SOM engage post graduation provide both qualitative and quantitative outcome measures but the response rates due to the voluntary nature of the solicitation are often low. The advent of the USMLE Step 2 CS examination has provided the impetus for the School to develop better internal measures of clinical skills assessment. Over the next several years this method of outcome measurement will be incorporated into a variety of experiences for the School as a whole and for individual clinical departments. The SOM Performance as PGY-1 study was a measure of our graduates' ability to function as trainees and provided valuable feedback to education leadership. The goal will be to analyze the questionnaire tool and potentially repeat the assessment for the class of 2004. The Cleveland Clinic Lerner College of Medicine at Case has accepted the first class which matriculated in July of 2004. The College has embarked on an innovative assessment plan that incorporates self-assessment and creation of individual portfolios for each student. **School wide activities:** During Program: Year 1 Comprehensive Examination: This examination assesses the Core Academic Programs that form the curriculum of the first year and a passing score is one of the requirements necessary to advance to year 2. Performance on this comprehensive examination is then compared to the USMLE Step 1 (below) where this comparison provides a useful assessment of the core programs within the first year as well as it has been shown to predict success on the USMLE Step 1. United States Medical Licensing Examination (USMLE) Step 1: Students take this national examination at the end of year 2. Score for the school's students (with consent) are compiled by National Board of Medical Examiners (NBME) and reported to Case allowing comparison to previous years' performance and the national group of examinees. Other assessment activities include: USMLE Step 2 Clinical Knowledge (CK), SMLE Step 2 Clinical Skills (CS), Objective Structured Clinical Examination (OSCE), SOM student feed-back efforts (routine meetings with the Dean, students a representation on various curricular and medical education committees, weekly meetings with students and faculty to specifically critique curriculum). American Association of Medical Colleges (AAMC) Medical School Graduation Questionnaire, Post Graduation: The specific specialty and center for each of our graduates is reported. The *match program* provides feedback to the school to determine overall success on the initial match process. Students rank their choices as part of the program and the school receives data on the percentage of our students that achieve their highest ranked program. The quality of the programs, as measured by various reports is reviewed for the schools graduates as well. Other post-graduation assessment activities include: USMLE Step 3, School of Medicine Performance as PGY-1s: (In 2001 a questionnaire was

developed and sent to all graduates of the class of 2000.) **Department/programmatic level:** during program: Individual departments including Internal Medicine and Family Medicine have for many years used the OSCE format for learning and assessment activities. Other activities include extensive Curriculum Evaluation efforts and NBME Subject Examinations. Post Graduation: United States Medical Licensing Examination (USMLE) Step 3: NBME reports overall scores to Case with comparison scores at a national level. Individual clinical departments have access to the National Match results for the School's students choosing to pursue careers in the respective specialty.

- **Frances P. Bolton School of Nursing**

- **Assessment activities conducted at the school level:** The FPB Systematic Evaluation Plan is a document that summarizes and directs the various evaluation activities of the entire school. This document outlines the schedule of evaluation (typically 1-5 year cycles) of the school's components, which include mission and governance, faculty, students, curriculum, resources, and integrity. This document was revised in 2003 based on recommendations from the Ohio Board of Nursing. Alumni Surveys are sent to alumni of each program on the one and three year anniversary of their graduation. Since 2002, this data has been generated through the Educational Benchmarking Institute (EBI) to have comparison data with other schools of Nursing across the country. Annually, each faculty member (tenured & non-tenured) completes a self-assessment of their work-related activities during the academic year. This includes an accounting of courses taught, student thesis/dissertation committee involvement, and school and university committee participation, as well as activities related to publication and grant writing. Future goals are set for each faculty member and reviewed by the FPB, appointment/Reappointment/ Promotion/ Tenure Committee Results of third party rankings (Total Federal-Funding Dollar Amounts for Research & Training, US News & World Report Graduate School Rankings) are followed and regularly discussed by the convened faculty as a whole. Proposed interventions to improve FPB's ranking are considered.  
**Assessment activities being performed at the programmatic level:** Student evaluations are conducted at the conclusion of each course. The results are compiled by support staff, reviewed by the appropriate program director, and then sent to the faculty of record for the course. These documents are stored as electronic files in the offices of the Program Directors. Exit interviews are conducted at the time of graduation for those students who are graduated in May or within one year of graduation those students who are graduates after the summer and fall semesters. The exit interviews for the BSN and ND II students are conducted using a standardized commercially available tool for exit interviews (the EBI— Educational Benchmarking Institute). More than 100 schools of nursing nationally used this standardized tool to evaluate their educational program. Results compare FPB to 5 other peer institutions that we select (selection is limited to participating schools), to other similar Carnegie level institutions (30 similar institutions in 2004 that used EBI), and to all participating schools of nursing. MSN graduates use an FPB-developed exit interview tool to evaluate satisfaction with the masters program. PhD exit interviews are conducted by the program director. The program directors, the Associate Dean for Academic Programs, and the Evaluation Committee review the results of the exit surveys. Results are summarized and presented to the general faculty in terms of areas in which educational goals are met to a satisfactory degree and opportunities for improvement. Each academic program faculty group meets separately to develop and implement strategies to address survey areas that indicate an opportunity for improvement. Faculty members complete a course evaluation for each course they have taught during the academic year. These evaluations are reviewed by the appropriate program director for any necessary actions to be undertaken by the FPB Curriculum Committee or the faculty as a whole. Prelicensure students (BSN & ND II) take the commercially available Mosby Assess test near the end of their program, which evaluates their readiness to take their RN-licensing examination. The performance of our students is compared to national norms. FPB also trends the first time pass rate for the RN-licensing examination (NCLEX) for our prelicensure students, as does the Ohio Board of Nursing. The first time pass rate rates in 2004 for our BSN and ND graduates were 93% and 100%, respectively, rates that exceed the state and national averages.

## 2005 Assessment Culture Matrix Results

Part of the OAEC's oversight of campus assessment activities includes tracking each school's progress using the Assessment Culture Matrix method (see attached appendix). The collective results obtained are used as a metric of the culture for outcomes assessment at Case. The table below presents the Assessment Culture Matrix, by school, reported in the spring 2005 semester. In arriving at these results, each school reviewed the clusters of characteristics defined for each attribute and measured its performance against these guidelines.

A number of programs continue to report characteristics that fall into the Maturing Stages of Implementation range (scores of 7, 8, or 9). The professional schools generally lead in this regard. One explanation may be that these schools have, because of the influence of their individual professional accrediting bodies, been practicing and promoting outcome assessment for longer than some of the other schools. Another is that specific faculty in these schools have been doing research on learning and outcomes as part of their intellectual agenda for many years. These individuals have been a great resource, and have been encouraged to expand their work at Case. A substantial increase in ratings has been reported for both the College of Arts and Sciences and Physical Education and Athletics. These are believed to stem from a maturing assessment practice in those units.

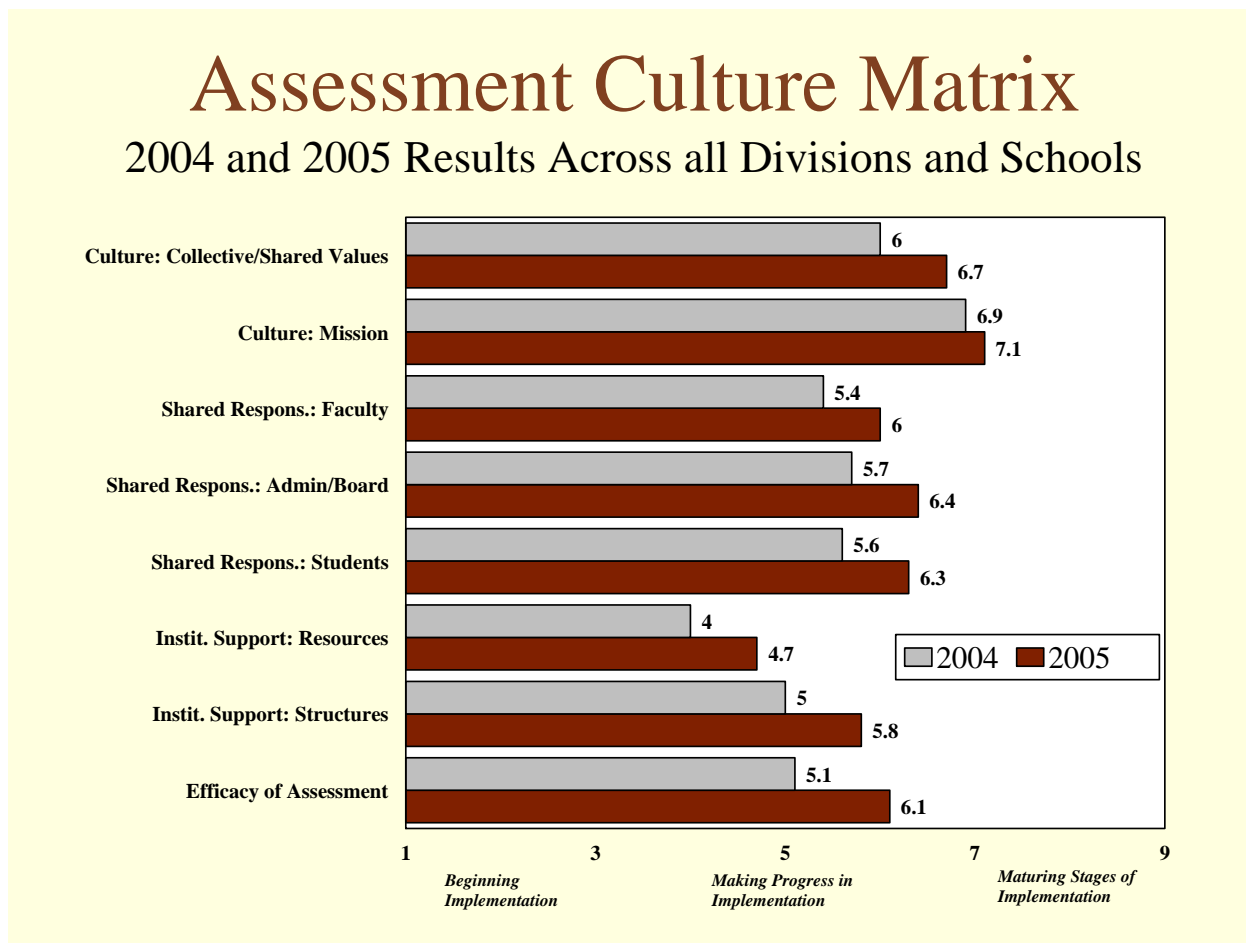
The schools' evaluations of the institutional support for outcome assessment are markedly lower, in general, than the other categories. It is clear that garnering adequate resources and implementing appropriate structures for assessment must remain a high priority in order for Case to achieve its full expectation for outcome assessment.

### Assessment Culture Matrix and the Patterns of Characteristics Analysis - 2005

	Institutional Culture		Shared Responsibility			Institutional Support		Efficacy of Assessment
	Collective and Shared Values	Mission	Faculty	Administration and Board	Students	Resources	Structures	
College of Arts & Sciences	7	8	7	7	6	5	6	7
School of Dental Medicine	8	8	6	7	7	5	6	7
Case School of Engineering	6	4	4	5	5	3	6	5
School of Law	5	6	6	6	7	5	6	6
Mandel School of Applied Social Sciences	7	8	7	8	8	7	7	6
F.P. Bolton School of Nursing	8	8	6	6	7	6	6	7
School of Medicine	6	7	7	6	6	6	5	6
Weatherhead School of Management	7	8	7	6	5	2	5	5
Athletics and Physical Education	6	7	4	7	6	3	5	5

Note: Numerical scores are: 1-3 is "Beginning Implementation"; 4-6 is "Making Progress in Implementation"; and 7-9 is "Maturing Stages of Implementation"

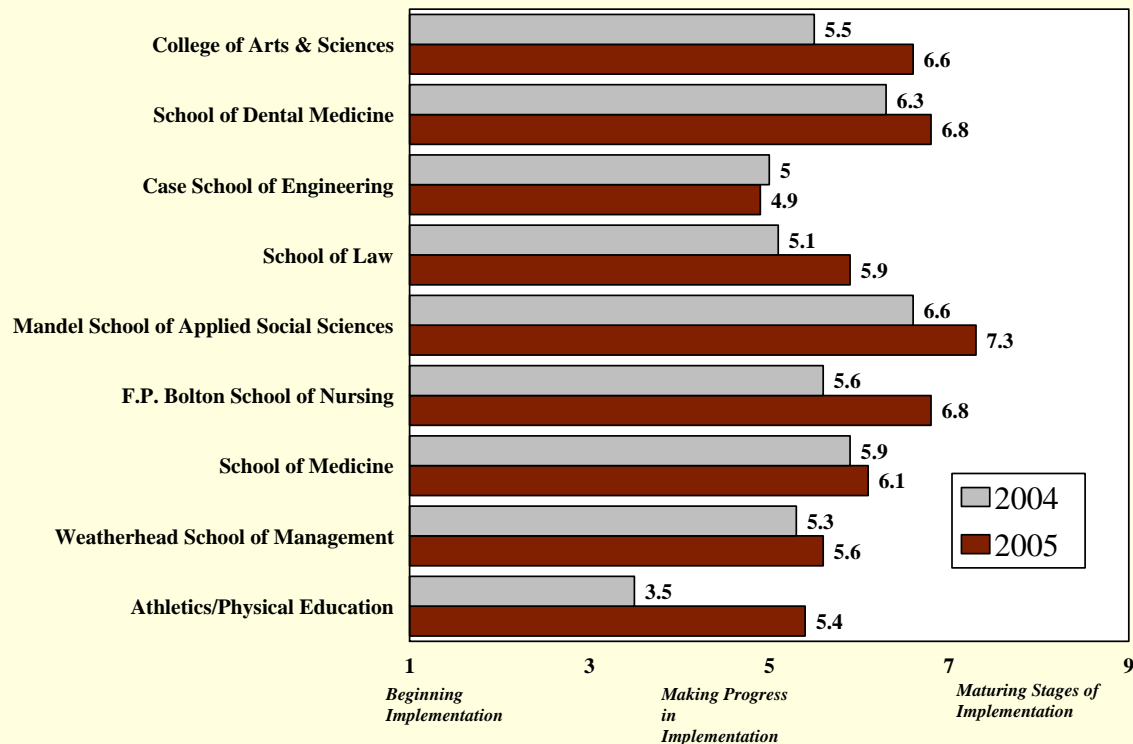
The following chart shows changes in matrix scores from 2004 to 2005 averaged across all schools. Results indicate progress in all categories.



The next chart looks at the same data, summarizing across schools rather than assessment cluster characteristics. With the exception of the School of Engineering, all areas showed improvement over the last year.

# Assessment Culture Matrix

## 2004 and 2005 Results by School



## Recommendations

Meaningful educational outcome assessment activities are currently being practiced within each educational unit of Case Western Reserve University. The results of these assessment efforts are being used both to affirm that the various educational programs are meeting their objectives and to point the way toward improving the effectiveness and quality of our programs. However, there still remain significant challenges (i.e., confusion about the need for assessment and appropriate methods, lack of financial and human resources dedicated to assessment, disinterest of faculty) to be overcome in order to fully realize the benefits of educational outcome assessment. The committee forwards the following recommendations to strengthen Case's assessment effort

- **Case should formally nurture a climate of interest in academic outcome assessment within the various academic units.**

*Rationale:* Consistent with Case's Philosophy Statement on Outcome Assessment, outcome assessment should be a permanent and expected part of academic culture and practices. Additional communication that inform on the value and benefits of outcome assessment should lead to greater overall faculty interest. In manners similar to the way in which UCITE promotes effective teaching at Case (e.g., through the Learning Fellows program), Case should develop programs that attempt to catalyze interest in outcome assessment.

- **Require that each school/college develop and justify a statement of assessment plans and specify the resource needs to accomplish the plan.**

*Rationale:* Individual schools are best positioned understand their own local assessment needs, to establish practices that will ensure that assessment is fresh and relevant to their academic programs, and to see that changes to the programs indicated through analysis of outcome assessment data are pursued. A formal statement of needs of all type will establish, both to the school and central university administration, the need to invest in outcome assessment. These investments may include financial resources (e.g., support for a doctoral student to analyze and interpret outcome assessment data, support for participating in national surveys for graduate/professional students which parallel NSSE and CIRP for undergraduates, etc.) or personnel (e.g. someone from the Center for Institutional Research who could advise on good outcome assessment practices). Long-range outcome assessment for SAGES is another example.

- **Case should embark on a formal program to evaluate its outcome assessment practices at the school/college level. Perform an analysis of obstacles to successful outcome assessment in each school**

*Rationale:* In order that outcome assessment remains current and that best practices are shared across schools, Case should identify a staff member from the Center for Institutional Research that can serve as a campus expert and consultant on outcome assessment. According to a three-year cycle, this consultant will be assigned to assess the assessment practices that are pursued within each unit, and offer suggestions and training for new outcome assessment approaches that may benefit the school/college.

- **Case should develop an operational strategy for outcome assessment at the institutional level. Use this strategy to inform the university's dashboard.**

*Rationale:* To aid understanding of overall institutional effectiveness, develop a composite indicator (e.g., how a student is transformed by his/her experience at Case) that is based on some agreed-upon common set of assessment data. As part of this process, Case should fully understand external rankings methodologies so as to optimize Cases' external reputation.

## Conclusions

Meaningful educational outcome assessment activities are currently being practiced within each educational unit of Case Western Reserve University. The results of these assessment efforts are being used both to affirm that the various educational programs are meeting their objectives and to point the way toward improving the effectiveness and quality of our programs. However, there still remain significant challenges (i.e., confusion about the need for assessment and appropriate methods, lack of financial and human resources dedicated to assessment, disinterest of faculty) to be overcome in order to fully realize the benefits of educational outcome assessment. Continued promotion of assessment and its incorporation as an organic component of the educational process should continue to occur at both the University and school levels.