

Educational and Support Process Management Board End

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Board Core End Report- Educational and Support Process Management

Baldrige Category #6

This category examines the college's management of key learning-centered processes for HCC's educational programs, offerings, and services that create student, stakeholder, and organizational value. It also examines the related support processes.

There are currently two education excellence criteria for this Baldrige category (a national panel examines the criteria after each competition and some moderate additions/deletions can occur).

Criteria 6.1 Learning-Centered Processes (50 points)

How does HCC identify and manage its key processes for creating student and stakeholder value and maximizing student learning and success?

The key learning-centered process begins with the strategic and general education goals of the institution i.e., what do we want our students to know, be able to do, and demonstrate. The learning-centered process consists of design, implementation, and evaluation of key HCC offerings, including transfer and career courses and programs, certificate courses and programs, and non-credit courses and workshops. Areas of focus for new course and program design are identified through community research, participation on regional and local economic development councils, employer requests, faculty/staff involvement in local, regional, national, and international (<http://www.howardcc.edu/international/>) affinity groups, and student inquiries. HCC also has a research and development team that routinely engages in environmental scanning to explore new course and program ideas.

Course and program design begin at the faculty level, extend out to the division level, then move to the curriculum and instruction committee and to the vice president of academic affairs (VPAA). This evolution insures faculty input at each level while allowing for a broad overview of how each course or program fits into the institution's strategic plan and general education goals. The effectiveness of courses and programs is measured via the host division and employs, on a rotating basis, a formal learning outcomes assessment (LOA) process. The LOA is consistent across the institution, and all divisions, programs, and courses are included on alternating three-year cycles. The LOA coordinator, a part of the institutional research team, oversees this process and ensures that each assessment project meets best practice standards for institutional assessment as outlined in the LOA Handbook (see: <http://www.howardcc.edu/loa/>) Results of each project are reviewed by faculty, division chairs, and the VPAA; improvement strategies are developed and implemented; and results from these strategies are evaluated again as part of the standard three-year assessment cycle. Course and program assessment are linked to strategic and general education goals across divisions and across the college.

Education design and delivery for continuing education and workforce development run parallel to credit course and program design, with the same emphasis on identifying focus areas, involving faculty in course development, and linking outcomes to HCC strategic goals. Assessment of learning outcomes in these courses centers on student success and retention rates, the extent to which students are able to utilize course-based skills and knowledge (e.g., personal fulfillment, job training, career growth), and end-of-course evaluation forms. The key performance requirements vary according to the specific course and course and program assessments are designed to accommodate these variations. The delivery process depends on the target audience and can include traditional classroom, distance learning, a combination of distance. There is increased emphasis on linking non-credit and credit courses and programs to facilitate student status change and transfer into degree-based programs. Custom classes illustrate this emphasis.

Online and distance learning is another area of particular focus for evaluation. Recent interventions to maximize student performance and learning in this area include increasing student-instructor interactions, offering periodic, real-time or on-campus sessions to complement the online curriculum, and assessing student success as it relates to their degree of computer literacy. Each intervention is being assessed after implementation to evaluate the item's contribution to increased learning, student success, and student satisfaction.

Professional development seminars are offered each semester to refresh teaching and learning practices and to supply faculty and staff with the most current research in the field on teaching and learning initiatives and student support. Training is offered through the VPAA area, the LOA office, and the Teaching and Learning Institute (TLI). Institutional research and outcomes assessment instruments collect information about student learning styles and preferred curriculum delivery methods. The end of semester course evaluation (IDEA survey) collects similar data and matches student preferences to faculty teaching methods and emphasis. Data from each of these instruments are forwarded to division chairs and faculty and incorporated into the design of faculty teaching improvement projects and LOA projects. Course offerings and delivery methods are routinely redesigned based on the data from these evaluations in order to best accommodate student learning styles and preferred delivery methods.

HCC's expanded emphasis on formalizing linkages and connections among programs and across disciplines has required an increased commitment to assessment and evaluations at all levels in the teaching-learning process. In addition to the yearly cycle of course assessment projects, teaching improvement projects and promotion projects, a five-year assessment matrix is under development that will outline learning outcomes assessment goals for each HCC program and link HCC strategic and general education to these goals. Multiple assessment methods will continue to be employed in these projects and outcomes are assessed at both the summative and the formative levels. Summative assessment data are collected at specific points in a course (end of semester project exams, end of semester evaluations, etc) and formative assessment is collected on an ongoing basis (throughout the course, over time, across varying

sections of a multi-task project) to ensure that outcomes are evaluated at key points in a course and over time as students are learning. External benchmarks and national norms are also used in these assessments to provide a basis for comparison with peer institutions beyond the confines of the campus population. (See External Measures section).

The key education support processes for student success are based on identifying student needs, developing the programs to support the needs and then measuring the effectiveness of the actions taken. Input is gathered from a number of methods including the YESS survey, analysis of recruitment and retention data, comment cards, and direct input from focus groups with key stakeholders (reported as part of Category # 3). Employees are also asked via the QUEST if they have the institutional support they need to provide quality service to HCC students (see Internal Measures section). Efforts are underway this year to expand the college's LOA program to more fully participate in outcomes assessment of the student services area. This initiative involves training for student services staff on developing, measuring, and implementing clearly defined goals, outcomes, and evaluation methods for student services on campus, and a close partnership and support with LOA staff.

The key student services in continuing education (Con Ed) include registration, limited counseling, financial assistance, awarding of Continuing Education Units (CEU's) and certificates, and customized training. College-wide surveys specifically target students enrolled in Con Ed courses and collect annual data to track these students' satisfaction with services they receive. Periodic and formal student services evaluation forms are also completed by faculty in the Con Ed division to evaluate the student services with which they have direct contact and interaction, either on their own or through their students' experiences. An operations unit supports daily operations and individual unit assistants provide greater support for students and faculty. Regular general staff meetings and monthly managers meetings identify issues and provide solutions. Faculty provide input through meetings with the appropriate coordinators or on evaluation forms. Data collection will be expanded and formalized this year through the new emphasis on linking outcomes assessment across programs, divisions, and the institution. Improved systems for cross-unit data sharing will be implemented as part of this plan. These systems will include formal data sharing presentations, web page postings of data, and increased opportunities for informal information sharing.

A number of programs and services are offered to enrolled students that help retain students and give them tools for success. The college's first year experience team is examining the impact of academic and student support services on first year success and retention. The vocational support services team program is designed for students in vocational/career programs who are having academic difficulties or who have disabilities. The learning assistance center (LAC) provides tutoring and academic support services to an average of 700 students a week. The financial aid office offers a number of activities aimed at increasing student awareness of financial aid. Several departments and programs regularly assess student use of these services such as their success in individual courses, particularly at the developmental level.

Partnerships with the Howard County Public School System (HCPSS) have served to support a number of initiatives that are geared to the recruitment and retention of students. For example, the Silas Craft Collegians program is geared to providing a supportive learning community for students identified at the high schools as “at risk” students. The James W. Rouse Scholars program is a selective, challenging honors and leadership program designed for transfer to distinguished four-year colleges and universities at the end of the sophomore year. Project Access is a bridge program for physically and/or emotionally disabled high school students who participate in a summer program aimed at preparing students for a college experience. Concurrent enrollment for senior high school students enables seniors to attend high school and earn college credit. Each spring, the Freshman Focus program prepares graduating high school seniors who are entering HCC in the fall. The entire college registration process, including placement testing, advising, registration, and financial aid, is completed prior to high school graduation. Currently, each of these programs collects and evaluates its own assessment data, but the college’s new strategic emphasis on institution-wide outcomes will incorporate more formalized assessment of these programs.

A number of process improvement teams have examined key support functions over the years to improve services to students based on results of the YESS and QUEST surveys. Changes in technological support may also force a review of departments’ processes. There is now an Enrollment Management cross-functional team, including a retention subcommittee. Departments and committees do periodic review of the impact of changes to processes on improved service for students. Comment cards, which can now be sent electronically, result in immediate review for service improvements. Various stakeholders have a chance to notify departments of problems or give kudos when good performance has occurred. One of the key methods for improvement is based on departmental review of core work. Core work is tied into individual performance review and merit-based pay. Reviews occur at mid-year and at the end of the year. The core work process is a key part of the college’s initiative to formalize evaluations of outcomes at all levels of the institution. Included at the end of this report are (1) examples of the LOA projects started this academic year, (2) results of the 2002-2003 projects and (3) one example of a project that just concluded to demonstrate the external benchmarking that occurs during these projects.

Criteria 6.2 Support Services (35 points)

How does HCC manage its key processes that support its learning-centered processes?

HCC has an extensive community partnership and transfer network and is continuously working to evaluate and improve its impact on students and constituencies. The majority of all academic programs include in their outcomes assessment plans, transfer rates and student success rates post-graduation. This occurs both for those programs specifically designed as transfer programs as well as for those programs in which graduates will be immediately employable in the field. For transfer programs, data are collected through state student data bases on transfer and retention at Maryland state institutions. Departments and programs maintain their own formal or anecdotal data on

the number of their students who go on to four-year programs or professional schools. Career programs track graduate success in the field and survey employers for satisfaction levels and skill satisfaction. Currently, there are a number of outcomes assessment projects that contain as a benchmark or outcome some evaluation of student success after college, whether as a transfer student into a four-year program or as an employee in a career-based business. Evaluation methods include four-year program faculty evaluation of student preparedness, employer satisfaction with student skills and knowledge, success and retention rates, and graduate feedback.

Howard Community College builds partnerships with transfer institutions to ensure that students will have a seamless transition when they leave the college. For example, each year, two transfer fairs attract all of the Maryland four-year institutions and a number of out-of-state universities. Feedback from participants at the fair results in improvements in future fairs. Transfer advisors provide up-to-date admissions information for students so they have the correct courses for transfer and know of financial aid opportunities. The novel partnership between HCC and Prince George's Community College at a site in Laurel, MD with Towson University will allow students to complete their first two years at one of the community colleges and transfer into Towson University's bachelor degree programs. Surveys of the students at the Laurel College Center provide all of the partners with the information needed to change services and offer programs.





The college also builds partnerships with local businesses to develop internships and generate financial aid scholarships for students. Job fairs are held twice a year and over 100 employers and 700 students and community members meet to discuss available jobs in Howard County. Evaluations are collected at the end of the fair and follow-up calls to employers track the number of students actually hired. The college also partners through a grant with the Howard County Public School System to develop vocational education programs for high school students interested in career programs. Evaluation of these efforts is part of the grant requirements. In response to local workforce needs, HCC also partners with various governmental agencies (e.g., Howard County Police and Fire Companies) and medical facilities to design and offer specialized programs such as emergency medical services.

HCC's strategic plan stresses the importance of partnerships and support processes to student success and achievement, and each college unit conducts ongoing assessment and evaluation of services and systems. With the colleges renewed emphasis on institution-wide assessment and evaluation linkages, all HCC units (academic and non-academic) will be asked, on a staggered plan, to identify connections between unit level goals and core work and HCC institutional objectives.

These activities (6.1, 6.2) will ensure that HCC will be able to demonstrate compliance with the recently released student learning assessment guidelines from the Middle States Commission on Higher Education.

External Measures

The college prepared and submitted applications to various Baldrige-based quality awards competitions; the results are indicated below. More details on the scoring system can be found in the document which follows this report.

Maryland State Quality Award		CQIN Pacesetter	
	Range of total applicant scores		HCC's Score - 2002
	2002 - Score interval in which HCC was rated		Specific score are issued
	2003- Score interval in which HCC was rated		

		Scoring Ranges						
		0-9	10-29	30-49	50-69	70-89	90-100	
Baldrige Criteria 1000 points	Overall Score							
		229/1000=22.9%						

			0-9	10-29	30-49	50-69	70-89	90-100	
6:	Educational And Support Process Management (85 points)	NEW: 6.1 (was 6.1,6.2) 50 points	6.1						
			6.2			15/50=30%			
		NEW: 6.2 (was 6.3 and is now) 35 points	6.3			4.5/15=30%			

Action:

The college receives a detailed feedback report delineating strengths and weaknesses in the category. A team reviews those reports, collects information on the process improvements that occur in the intervening months, and submits a new application.

On August 29, 2003, the college submitted another application for the Maryland State Quality Award. These results have just arrived and are included on the chart. Note that section 6.1 was revised to include the original 6.2. The college has formed a new team to develop the application for the Baldrige Award.

Benchmark:

Presently, institutions receiving a total score of 450 and up receive site visits. Therefore, the administration recommends a Category benchmark aligned with that: The college will receive a rating for Category 6 of 45 percent.

Next are two measures **mandated by the Maryland Higher Education Commission (MHEC)**. Note Peer Colleges: College of Southern Maryland, Harford Community College, and Frederick Community College. A national average is available for some of these measures.

Percentage of graduates who on their first try passed licensing and certification examinations in each academic field offered for which such tests are conducted and mandatory for employment in the field.

	FY 2000	FY 2001	FY 2002	FY 2003	Benchmark FY 2005
Licensure exams passing rate					
NCLEX RN	98%	79%	90%	98% (n=48/49)	93%
			Peer AVG:	89%	
			State AVG:	90%	
			Nat'l AVG:	87%	
NCLEX PN	82%	77%	92%	100% (n=16/16)	89%
			Peer AVG:	100%	
			State AVG:	99%	
			Nat'l AVG:	87%	

The measures that follow are so new that benchmarks are still under consideration.

Percentage of graduates who on their first try passed licensing and certification examinations in each academic field offered for which such tests are conducted.

	FY 2003	Benchmark FY 2005
Emergency Medical Technician (EMT-B)		
Written	97% (n=30/31)	
Practical	81% (n=25/31)	
	State AVG:	n/a
Paramedic		
Written	43% (n=3/7)	
Practical	57% (n=4/7)	
	State AVG:	69%

The college has voluntarily begun to track additional licensure exam pass rates for cardiovascular technology and certified nursing assistant completers.

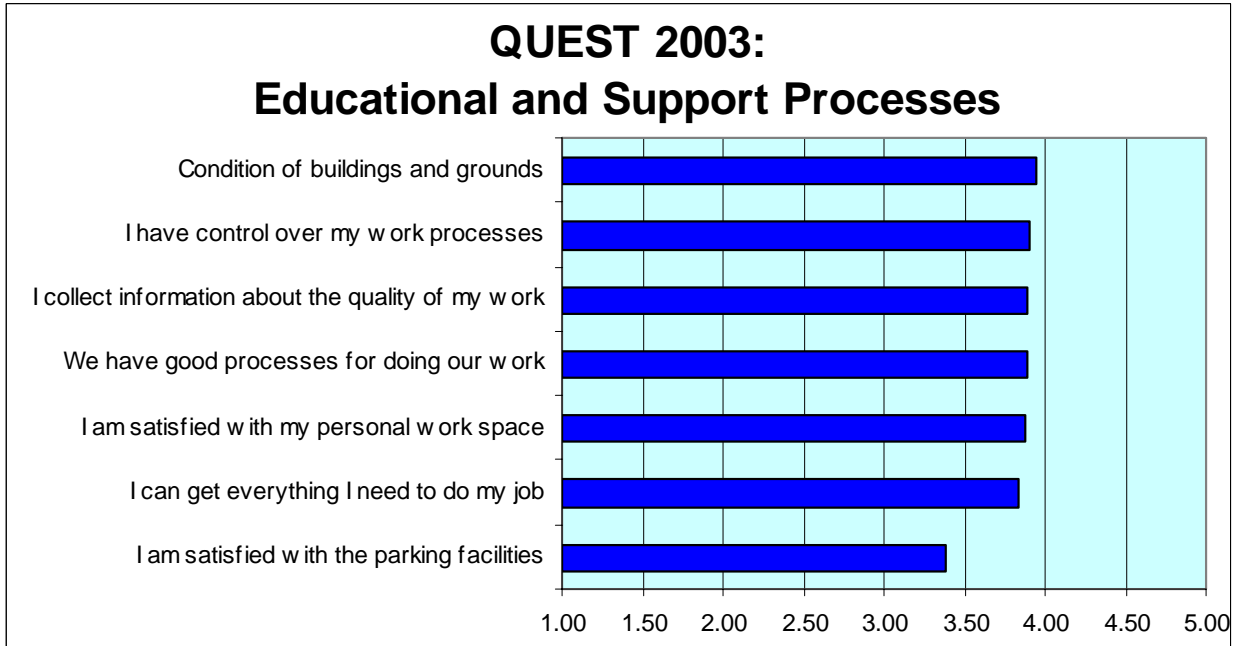
<i>Percentage of graduates who on their first try passed licensing and certification examinations in each academic field offered for which such tests are conducted.</i>		
	FY 2003	Benchmark FY 2005
Cardiovascular Technology (CVT) Not required for employment at this time. Nationwide, only 35% of graduates take the test.	100% (n=2/2) Nat'l AVG: n/a	

<i>Percentage of graduates who on their first try passed licensing and certification examinations in each academic field offered for which such tests are conducted.</i>		
	Oct-Dec 2003	Benchmark FY 2005
Certified Nursing Assistant (CNA)		
Written	100% (n=37/37) Nat'l AVG: 95%	
Skills	55% (n=21/38) Nat'l AVG: 47%	

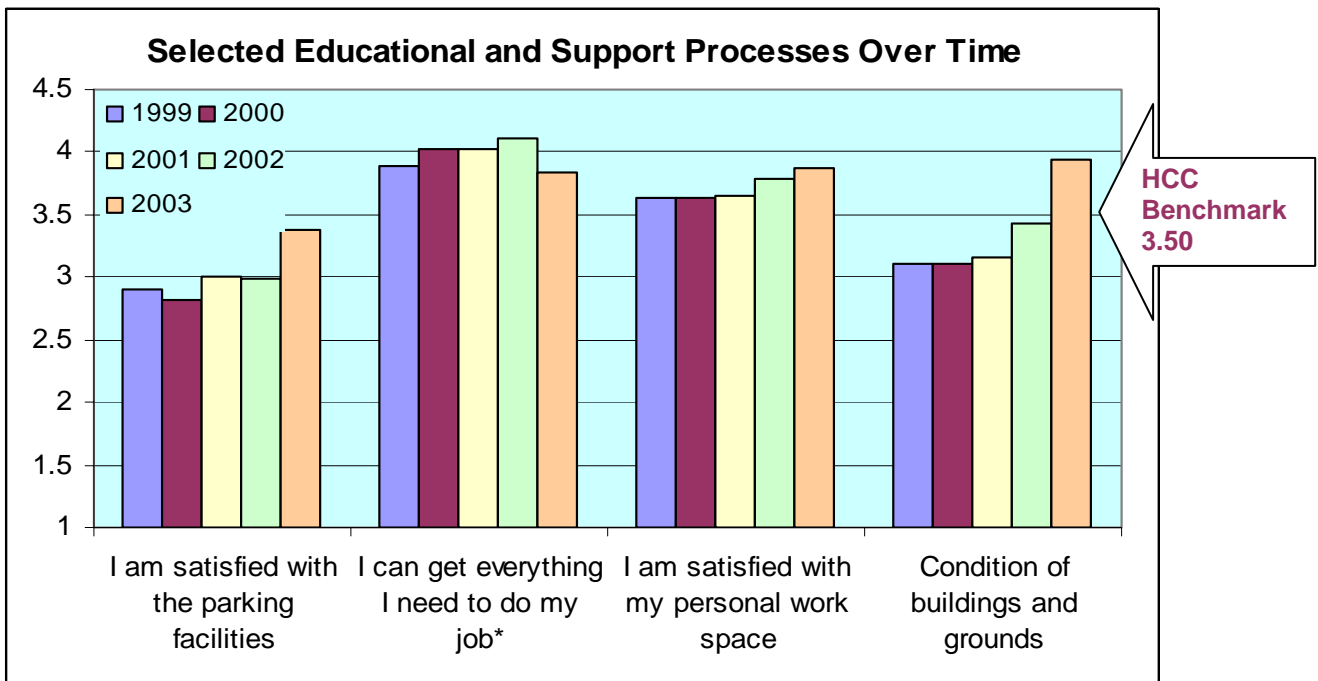
Internal Measures

Educational and Support Processes: QUEST Survey

This year's QUEST Survey was arranged by Baldrige Educational Excellence categories. Ratings shown below for the items in Category 6 are on a five-point agreement scale, with 5 being the highest and 1 the lowest.



All measures except "I am satisfied with the **adequacy of parking facilities**" exceeded the **HCC Benchmark of 3.50**. Note that the rating on parking has improved over time.



*On previous surveys this item was stated as: "Resources available to carry out your job"

Learning Outcomes Assessment Projects 2003-2004

Year	Course/Program	Faculty	Project Summary
1	ACCT 111	Division Faculty	Course success rates for Fall 03 and Spring 04 and comparisons of overall GPA to course performances.
1	Office Technology	Division Faculty	Course success and completion rates for Fall 03 and Spring 04 for courses fulfilling Office Technology major requirements (OFFI 100 and 102, CMSY 127 and 129, BMGT 178)
1	ARTT 109	Jim Adkins	Looks at how well this prerequisite course prepares students for subsequent courses in the major and the extent to which learning objectives for the course are being met.
1	EDUC 111	Kathleen Kenney	Examines the extent to which teaching style matches learning styles of students in the course and what supports would help students to succeed in the course.
1	HEED 121	Lisa Cooper-Lucas	Explores the extent to which students develop the competencies necessary to be effective in an entry level position in this field as well as students' ability to apply teaching/learning principles to health and illness issues.
1	Mexico Study Abroad	Cheryl Berman	Examines the impact of study abroad experience on student learning and personal/professional development and asks whether success and at-risk factors can be identified in potential study abroad participants. Also looks at the issue of post-study abroad alienation.
1	MATH 064 and MATH 067	John Esenwa	Compares student performance and success in computer and teacher-led and teacher directed classes.
1	MATH 131	Gabriel Ayine	Looks at student success in this course based on path into the class (course sequence, placement, etc.)
1	PHYS 106	Sharon Lyon	Asks to what extent this course prepares elementary level teacher candidates for state certification requirements, and looks at student success and improvement in reading comprehension and math skills.
1	Nursing	Georgene Butler and Sharon Pierce	Compares national standardized test performance to student performance in Nursing program courses.
1	PHYS 203 and 204	Patti Turner	Asks whether curriculum and course materials match professional certification exam requirements and looks at student success in subsequent courses and in professional schools, if accepted.
1	Spanish	Robin Bauer	Explores the question of whether service learning motivates students to continue to study and learn Spanish.
1	MUSIC 210, 211	Deborah Kent and Ben Myers	Administers pre- and post-test evaluations to determine student proficiency on entering and completing the course in the context of the music sequence overall.

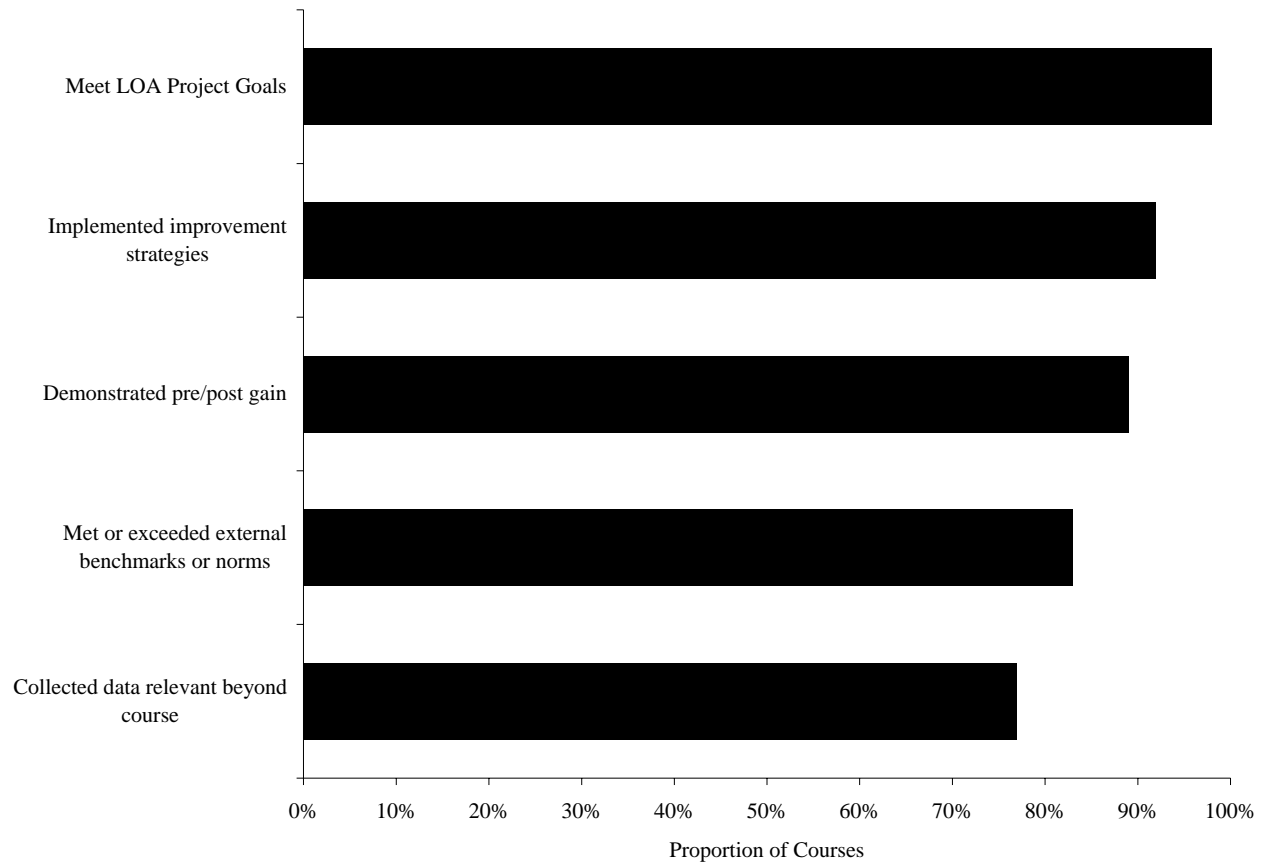
Year	Course/Program	Faculty	Project Summary
1	PSYC 202	Jim Bell	Looks at student success in course in relationship to overall success in program and institution, with an emphasis on critical thinking skills.
2	ASTR 104	Larry Brown	Looks at how well students do in the course based on their entering math skills and background and examines the difference in student achievement in on-line and lecture sections.
2	ELEC 140	Dave Rader	Examines the extent to which students who complete the course are able to pass the industry certification exam and whether the course curriculum adequately prepares students for entry into the field as technicians.
2	ENGL 093	Sue Frankel and Lucy Hunter	Looks at what level students enter the course and at what level they leave, how vocabulary skills improve and the ways in which student background influences success in the course.
2	ENGL 106	Sandy Mallare	Explores the success and retention rates in this course, the factors that impact success and retention in this course, and success rates for students in this course while taking English 096 and/or 097.
2	Fine Arts	Valerie Lash	Looks at the pre and post change in student self perception upon completing fine arts courses, compares this change by creating and survey courses, and matches performance against project target dimensions.
2	ITAL 101	Joseph Falvo	Examines student performance on a nationally-normed oral proficiency exam and attempts to identify the reasons students do not continue on for the second year Italian language sequence.
2	MATH 127	Jenny Penniman	Compares student success in Math 127 with pass rates on PRAXIS exams and asks whether completion of 128 after 127 improves exam pass rates.
2	Music 110,111	Deborah Kent and Ben Myers	Administers pre- and post-test evaluations to determine student proficiency on entering and completing the course and explores the possibility of NSM accreditation.
2	Nursing	Laura Sessions and Jennifer Stanford	Compares student performance on national nursing diagnostic exams and looks to develop interventions to support student learning and achievement.
2	Nursing	Donna Musselman and Pat Sipe	Compares student performance on national nursing diagnostic exams, with particular attention to the psychiatric nursing component, to predict success and identify at-risk students in the Nursing program.
2	PSYC 203	Peggy Armitage	Looks at student change in attitude toward mental illness between the start of the course and the end. Examines which areas in which students achieve more gain and which areas may need more emphasis in class.

Year	Course/Program	Faculty	Project Summary
2	POLI 101	Michael Heffren	Measures student knowledge of American politics at the beginning of the course and upon completion, looks at pre/post knowledge of and interest in current political events, and attempts to achieve consistency in curriculum and evaluation across the sections.
2	Math 070	Guy Bunyard and Brian Gray	Explores the relationship between entry into and success in Math 070 and looks at the relationship between entry mode and success/failure in the course.
2	ACCT 112	Sandy Balcer	Looks at student success in Accounting 112 compared to over success at HCC and examines the relationship between the English classes a student has taken and success in this course.
3	BIOL 101	Sue Bard	Compares student gains in learning from pre- to post-test across key course concepts and themes.
3	CMSY Office Technology	Cathy Sutton	Looks at the use and value of online resources to assist office technology students master course concepts and requirements. Project completed Fall 03.
3	ENGL 087	Christine Sharpe	Explores grammar and writing competencies of students entering and completing this course using pre/post-test evaluations and essays graded by external evaluators.
3	HEED 213	Joe Mason	Examines the ways in which students cope with stress in their lives and the extent to which this course provides them with effective stress management tools.
3	HIST 122	Larry Fischer	Evaluates students' knowledge and understanding of primary and secondary sources and examines the extent to which students are able to apply effectively course concepts and theories to comprehension of primary documents.
3	HMDV 100	Peggy Armitage	Looks at student attitudes and perceptions at the start and at the completion of the course, while examining the issue of consistency in teaching and learning across the sections.
3	MATH 250	Roger Hartman	Uses external evaluator to gauge the extent to which course exams adequately capture course concepts and the value in partial/full credit grading.
3	Medical Transcription	Judy Law	Evaluation of medical transcription program and newly available curriculum materials. Project completed Fall 2003.

**Examples of Learning Improvement Strategies Implemented
as a Result of Outcomes Assessment**

Course	Year	Strategy
Geology	2002-2003	Data analysis showing gaps in content knowledge in broad comprehensive exam resulted in change from comprehensive to unit exams to allow students to deeply learn important segments of material as opposed to memorizing a broad range of items.
Office Management	2002-2003	Need for updating rapidly changing curriculum in the area of office technology applications resulted in creation of real-time access to online resources for office technology students.
Biology	2002-2003	Results from item analysis of major unit tests focused learning interventions on areas where students perform less strongly.
Human Development	2002-2003	Student attitudinal survey results indicating misconceptions about mental illness resulted in the development of curriculum strategies to increase teaching focus in the areas of misconception.
Nursing	2002-2003	Diagnostic tests indicating difficulties in reading comprehension and vocabulary resulted in the development of strategies to improve student reading in the discipline.
Electronics	2002-2003	Feedback from area employers as to the relevance of cable wiring curriculum resulted in modifications to course materials and curriculum to better meet the needs of both students and employers.

Learning Outcomes Assessment Results: 2002-2003 (N=37 Courses)



Learning Outcomes Assessment Project External Benchmarking Example

HCC Statistics (Math 138)

Lead Faculty: Consuelo Stewart

During the **first year** of the Math 138 statistics assessment project at HCC, students participated in the norming of the national DANTES * exam and the departmental final for Math 138, Statistics courseware was rewritten.

In the **second year**, fall students took the DANTES exam as the course final and Spring students took the newly written final. In the end, comparisons regarding the DANTES exam scores, final exam scores and final course grades were made.

Results from analyzing these scores showed statistically significant differences between the national norm and HCC students, with **80% of HCC students enrolled in Math 138 scoring above the national norm on the DANTES**. In addition, course instructors were consistent among sections in assigning grades for the course and there was a strong positive correlation between course grades and DANTES scores.

These data clearly indicate successful and statistically significant student learning across all sections of Math 138.

* DANTES Subject Standardized Test

PRINCIPLES OF STATISTICS

TEST INFORMATION

This test was developed to enable schools to award credit to students for knowledge equivalent to that which is learned by students taking the course. The college may choose to award college credit to the student based on the achievement of a passing score. The passing score for each examination is determined by the school based on recommendations from the American Council on Education (ACE). This minimum credit-awarding score is equal to the mean score of students in the norming sample who received a grade of C in the course. Some schools set their own standards for awarding credit and may require a higher score than the ACE recommendation.

CONTENT

The test will cover all of the material that is usually taught in an introductory statistics course. The mathematical prerequisite for the test is high school algebra. Of particular importance are such topics as the algebraic and geometric aspects of linear equations, interpretations of certain curves and areas bounded by them, and simple inequalities. The questions in the examination will test the students' understanding of the various

topics of statistics, both qualitatively and quantitatively, and the ability to apply statistical methods to solve a variety of problems of a statistical nature.

The following topics commonly taught in courses on this subject are covered by this examination (approximate percent of questions per topic indicated):

1. Descriptive Statistics **20-30%**

Histograms, averages, standard deviation, normal approximation for data, standard units, areas under the normal curve, quartiles, and percentiles

2. Correlation and Regression **15-20%**

Scatter diagrams, correlation coefficient, estimation, and the line of best fit

3. Probability **20-25%**

Basic concepts, dependent and independent events, compatible and incompatible events, binomial formula, combinations, and permutations

4. Chance Models and Sampling **15-20%**

The law of averages, expected values, standard error, normal approximation, confidence intervals, sample size, sample average, and estimating accuracy of sample average

5. Tests of Significance **15-20%**

Null hypothesis, significance levels, comparing two samples, t-test, and χ^2 test.

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