

**16. The institution identifies expected outcomes for its educational programs and its administrative and educational support services; assesses whether it achieves these outcomes; and provides evidence of improvement based on analysis of those results.**

- Compliance
- Partial Compliance
- Non-compliance

**Narrative:**

Virginia Commonwealth University is a highly decentralized institution; its effectiveness can best be understood by tracking all of the many and varied educational programs and administrative and educational support services that contribute to the University's mission. In the past, reference to evidence of assessment and subsequent improvement most often appeared in narratives within deans' and vice presidents' annual reports, but such tracking was imperfect at best.

In 2001, however, VCU made a major commitment to change dramatically that picture, developing an innovative online assessment management system, which was released for University use in March 2003. *WEAVEonline™*, as the web-based system is called, is a transformational addition to the University toolbox, allowing VCU to capture and analyze centrally information to support continuing improvement efforts in all its individual programs and services.

As noted in Core Requirement 5, "WEAVE" is an acronym for the assessment cycle in which each VCU academic program and administrative/educational support unit:

- Writes expected outcomes or objectives.
- Establishes criteria for success (measures and target levels).
- Assesses the performance of students (for student learning outcomes) or the unit/program (for other types of outcomes or objectives).
- Views assessment results (findings).
- Effects improvements through actions to increase learning (for students) or other unit performance.

The first version of the database, introduced in 2002, is described in [\*WEAVE: A Quality Enhancement Guide for Academic Programs and Administrative and Educational Support Services\*](#). That first version of WEAVE was essentially linear, while today's *WEAVEonline™* is web-based, dynamic, and relational. From the feedback of users throughout the University, the development team shaped a truly user-friendly system. *WEAVEonline™* has been so well received, in fact, that VCU is discussing its potential as a commercial product.

The data-entry sections of *WEAVEonline™* are mission, objectives/outcomes, measures, findings, actions, and analysis. The database is protected by authentication, but SACS reviewers have access to a demonstration version and special read-only access to the 2002-03 entries for all university units (academic programs and administrative and educational support services) through instructions in an accompanying letter.

Each unit begins in *WEAVEonline™* by entering its mission statement. Its next step is defining outcomes/objectives, relating them to University commitments such as general education curricular elements, Strategic Plan Initiatives, and Presidential Priorities. Planning for the cycle ends with the unit defining its measures and achievement target levels.

The next phase of the cycle, assessing, has the unit conducting assessments and reporting on the results by entering findings for each measure and comparing actual performance against the established target level. The unit also must view those results with an eye to whether action is either required to address performance problems or desired to enhance achievement of outcomes/objectives.

If the unit decides to take action, it initiates a new phase, improving. It designs one or more actions, reflecting on assessment findings and relating each action to desired outcome(s)/objective(s). *WEAVEonline™* includes a traditional action-planning component, where responsible parties, timelines, priorities, and additional resources can be identified for each action. This prioritized resource aspect of *WEAVEonline™* will be integrated into budget planning as the Commonwealth of Virginia's financial resource picture improves.

Here, in italics, are the exact definitions used in *WEAVEonline™*, with a brief status report for each section (all figures given are as of August 1, 2003):

*Mission is the purpose of your program, showing how you connect and contribute to the university's overall work. Use a brief statement for WEAVEonline™.*

- 100% (218 out of 218) of academic programs have entered mission statements.
- 100% (113 out of 113) of administrative/educational support units have taken the same step.

*Objectives/Outcomes – An objective is a statement of intention, describing a task to be accomplished or a goal to be met. A well-formulated objective is SMART – specific, measurable, achievable, realistic, and time-bound. You can enter an objective in WEAVEonline™ for a single year (e.g., establish an online course evaluation survey) or enter one that will be continuing (e.g., deliver*

*reliable and secure university-wide technology resources). Especially for academic programs, also see Outcome and Student Learning Outcome. You make Objectives/Outcomes entries at the start of a quality improvement cycle.*

*An outcome is a specific kind of objective that describes a desired end result related to your mission. An outcome statement defines what you expect to happen as a result of your activities (e.g., through orientation and training sessions, faculty will gain sufficient Blackboard skills to implement Blackboard in their courses).*

*A Student Learning Outcome is a statement regarding knowledge, skills, and abilities students should gain or enhance as a result of their engagement in an academic program or other structured learning experience. Student Learning Outcomes are the most important objectives/outcomes for an academic program. If you are writing a Student Learning Outcome statement, you may find it helpful to start out with “Students [or program graduates] will be able to....”*

- 100% of academic programs and 99% of administrative and educational support units have entered outcomes/objectives.

*A measure identifies evidence and methods you will use to determine whether you are achieving expected results. Measures need not be quantitative, but they do need to show performance compared to outcomes/objectives. Measuring student learning is a special case. The best measures for this are direct indicators in which students demonstrate what they know or can do. In this category are portfolios of work over time, exhibitions, clinical evaluations, performances, carefully designed course-embedded assessments, and products such as papers or oral presentations. Indirect indicators, in which students or others report on student learning, are less powerful, though they do have a place in creating “an understanding of learning as multidimensional, integrated, and revealed in performance over time” (from AAHE’s Nine Principles of Good Practice for Assessing Student Learning).*

- 100% of academic programs and 99% of administrative units have entered measures.

*Findings are the results of your assessments; they give evidence of achievement versus a target level for each measure you use. For Student Learning Outcomes, findings detail how students performed on the measure; for other outcomes or objectives, findings usually describe performance of the program itself on the*

*measure. If you are following a regular assessment and quality improvement cycle, you set Objectives/Outcomes and Measures early on, then enter Findings, Actions, and Analysis later.*

- 99% of academic programs and 97% of administrative units have entered findings.

*An action is an organized activity you undertake to help your program more effectively achieve its intended outcomes/objectives. Whenever your program does not achieve the desired target level for an outcome/objective, you should formulate an action to address that shortcoming. For example, if students did not meet your program's expectations for oral presentations, you might decide to include more instruction and/or more practice to enhance students' development of oral presentation skills. You can also add actions not related to assessment findings, e.g., an action to respond to a new opportunity that has arisen during the course of a year. You make Actions entries at the end of a quality improvement cycle.*

- Since programs/units do not have to formulate actions if target levels for their measures are met, it is not surprising that the entry numbers for this section drop. However, 86% of academic programs and 88% of administrative units have entered actions, often opting to take action despite having met the target level for a measure.

*Analysis is your reflection on your program's findings versus its intended outcomes/objectives, summarizing what you see as patterns of strength and areas in which improvement is needed. You make Analysis entries at the end of a quality improvement cycle.*

- 99% of the 218 academic programs and 96% of 113 administrative units have completed the analysis section.

The *WEAVEonline™* database has been expanded with three fields that ask a unit to enter, for annual reporting, brief summaries of highlights/accomplishments, important challenges, and program improvements in recent years, citing key reasons for change. As the core of the annual reporting process, each unit submits its *WEAVEonline™* summary report, which covers all aspects of analysis.

Analysis responses indicate that most VCU academic and administrative units have made notable improvements, and, generally, that these changes were made because faculty, as well as unit administrators and staff, took assessment information into account in their decision-making. Some specific examples follow

[reviewers can access the *WEAVEonline™* summary report for any individual unit following the directions on the accompanying letter].

VCU's academic programs in health sciences listed a number of improvements. Within the School of Allied Health Professions, the Executive Health Administration master's program introduced part-time enrollment, rolling admissions, and second-semester entry to respond to feedback from enrolled students and potential applicants who are working full time. The Health Services Organization and Research doctoral program moved to strengthen the research skills of students by implementing a new course in econometrics. The Clinical Radiation Sciences' bachelor's program began a revision in the radiography curriculum to develop specialty tracks as a result of graduate feedback and recommendations from the national professional association.

Dentistry linked a curriculum management system to competency-based evaluation of student performance in the D.D.S. program. In the School of Medicine, the Biochemistry doctoral program changed the format of the oral exam to promote students' earning their own grant support. Microbiology and Immunology doctoral students had to write an NIH pre-doctoral grant, with attendant encouragement to submit to the NIH or another extramural funding agency; this change is to foster highly competitive research training. Nursing added a testing program and an educational enhancement program to identify and strengthen weaker undergraduate students.

Similarly, programs housed in the College and schools on the Academic Campus instituted changes as a result of their assessments. In the College of Humanities and Sciences, Biology supported development of a graduate student organization that has successfully acquired funds for students to attend professional meetings and invite seminar speakers to VCU. Chemistry made changes to its bachelor's curriculum to address shortcomings noted in a departmental review. Mathematical Sciences reported the use of more technology in all its courses. Physics changed from a track approach for its Applied Physics master's program to a flexible plan of study program to better respond to the rapidly changing needs of students; the Physics Education option "meets a major societal need but would not have possible under the old system." Psychology added a set of concentrations to help bachelor's students with their course selections and career planning, focused greater attention on leadership training for Counseling doctoral students, and revised the Clinical doctoral curriculum to allow students more time to do research.

English made extensive program changes in lower-division writing to better prepare students to write academically, instituting common syllabi for ENGL 101 and 200 to emphasize more analytical and argumentative writing. In the writing minor, English improved the sequence of creative writing courses, providing for a smoother transition from entry courses to advanced courses with portfolios.

Faculty in Mass Communications' nationally recognized Adcenter, with input from the Adcenter Board and industry leaders, revamped the curriculum "so that it better meets the needs of students to be prepared to enter the field with the most current knowledge and skills needed to secure careers in this competitive industry." Sociology mentioned a new tract "allowing students to use their skills to assist various community organizations with their needs. In addition to the students' classroom work they conduct research for such [an] organization, under the supervision of one of our faculty members. This activity results in strengthening our students' skill and experience and assisting the community." The Urban and Regional Planning master's program noted results of greater attention to key areas: "In recent years, we have focused attention on the quality of planning solutions and on the assessment of alternatives. We need to continue to focus on the latter, but we are nonetheless pleased with the improvements we have seen this year on both areas."

The Creative Writing M.F.A. program reported increased student opportunities: "The establishment and continuation of the Levis Reading Prize. Awarded to 'the best first or second book of poetry published in the previous calendar year,' the Prize, now in its sixth year, receives between 90 and 115 entries per year and brings national recognition to the program (an aid to recruiting) and allows current poetry students to act as first readers in one of the country's most prestigious poetry contests. —The institution and continuation of the First Novelist Festival, recently renamed the First Novelist Award. Now in its second year, the Award has as its partners the MFA Program in Creative Writing, VCU's James Branch Cabell Library, the Richmond Public Library, the Library of Virginia, and the James River Writers Festival, and allows both alumni and current students to act as organizers and judges. —The publication of Blackbird: an online journal of literature and the arts. Among the best online journals available, Blackbird publishes Pulitzer Prize winners, newcomers, and everyone in between in poetry, fiction, nonfiction, and the visual and performing arts, allowing students valuable literary editing internships for class credit while bringing national and international recognition to the department and the program."

Public Administration made an array of changes to its M.P.A. program: "The program has entered into several inter-organizational agreements (MPA/JD, ENVIS/PADM and NP Certificate/School of SW agreement), adopted an annual program theme designed to highlight one faculty member's research while giving focus to the Capstone. We have initiated a new Capstone course that involves team teaching with all of the PA faculty. We have developed Internet courses, conducted service-learning courses and increased our personal interaction with students through mandatory advising, student orientations, and other open, instructional events. All of these have served to increase enrollments and revitalize the program."

In the School of the Arts, Art Education changed the curriculum to allow B.F.A. students to take more credits in studio classes outside the department, looking to provide students with more opportunities in the job market. The Fine Arts M.F.A. program added a seating and reading area to the departmental office to encourage students to read journals and to develop a sense of communal interaction among students, staff, and faculty. Painting added digital/computer technology to increase student access to new media, and Printmaking added digital printmaking to keep up with new directions in the discipline.

Fashion added a CAD system to help students be more competitive in the job market and made B.F.A. curriculum changes to create a more technically structured sophomore level education. Interior Design included more outside readers on M.F.A. thesis projects to provide additional viewpoints and critiques; the department also implemented formal end-of-semester reviews of student studio and graphic work. Photography and Film shifted the order in which some classes were taken, allowing students to learn certain technologies at more appropriate times.

Sculpture made this entry: "We noticed that the first year graduate students were having a difficult time acclimating to our program. They seemed lost, had a lean production, and the work was not as good as that used to apply to our program. We instituted a class for first year grads only, a class having the whole group visit studios of their classmates, examining and critiquing the work. This seems to have solved the problem."

Dance/Choreography included these comments in a much longer analysis: "Historically, one of the strengths of the department has been in its ability to really look at itself and assess what is actually going on and what needs improvement. This year has been no exception. This year, the faculty has looked at the quality of senior project process and the quality of the actual projects. [The chair] brought this up in the fall semester and the faculty went to work problem solving. As a result, the entire faculty now assesses and grades both the final showings and the final project. Because of this process, in the spring semester student/advisor communication improved and the quality of costume design and execution improved."

In the School of Business, the dean included these points in his *WEAVEonline™* analysis: "The MBA curriculum has been revised to meet the changing needs of the business community. Faculty worked with members of our Business Council to improve the content of the program, which now has a technological and entrepreneurial focus. The new e-Business minor was also a response to changes in the way business is conducted and to changes in student demand." Master's students in Business now experience a greater emphasis on team building, a more stable scheduling approach, an increased emphasis on research, and better placement due to better resumes.

Accounting revamped its undergraduate program to better prepare students for the Commonwealth of Virginia's 150-hour CPA requirement. It also put more emphasis in the accountancy master's program on team/group dynamics and data management, responding to the changing environment of the profession, and made available additional research presentations for doctoral students.

The International Management program introduced a new track, basing its development on student and faculty suggestions and a review of similar programs at peer institutions. Marketing placed more emphasis on a market orientation philosophy, with implications for a customer centric culture and consideration of customer value.

Economics instituted two changes that gave bachelor's students increased opportunities for experiential learning; these changes were prompted by perceived weaknesses students identified in a survey. Economics included these comments in a longer analysis about its change in the M.A. degree requirements: "The Department believes that the revised program is a market leader, especially in the Commonwealth of Virginia. The Department gathered information from three data sources when it considered a revision of the M.A. program. The Department reviewed the employment history of alumni. ... The Department also reviewed the preferences expressed by employers. Employers had cited and continued to cite most frequently experience with the application of econometric methods to analysis of both time-series and cross-sectional data as an important skill for masters-level applicants for economic analyst positions. Finally, the Department examined the curricula of other programs."

In the School of Education, Health, Physical Education, and Exercise Science discussed a number of undergraduate program improvements, including the introduction of a track to prepare individuals for careers in exercise/physical activity interventions with apparently healthy populations and the revision of the athletic training program to improve the link between clinical education and academic coursework. The Therapeutic Recreation program in this department noted that the use of Internet discussion groups, portfolio development, and completion and evaluation of appropriate treatment plans has "resulted in better preparation of students to meet the challenges of the [field]."

Two other examples from the same department led to major reorganizations. (1) "The former kinesiotherapy academic program was sharply criticized by program graduates as a result of an inability to find career opportunities in this field. After a two-year review of the former program, a new academic program (Clinical Exercise Science) was developed. This program is more broadly inclusive of exercise and physical activity interventions to treat hypokinetic diseases." (2) "As a result of feedback from students, internship field supervisors and Exercise Science faculty members, the former Community Wellness program was revised and renamed Community Health Education. The current academic program

provides greater emphasis on health behavior theory, program planning, and implementation of community health education programs.”

Not surprisingly, the relatively new School of Engineering responded to external evaluations in undertaking many of its improvements. Here are two examples: (1) “A Blue Ribbon Panel met in January of 2002 and provided excellent advice on integrating Computer Science into the School of Engineering. Members of this panel included computer science academic experts from schools including Stanford, Carnegie Mellon and Michigan. The curriculum was revised. A team project was added to technical classes occurring in the senior year. An Industrial Advisory Board was created and has been meeting on a regular basis” and (2) “Business courses (ECON 205 and Entrepreneurship) for Engineering majors have been created and delivered. This has improved [electrical engineering] students’ knowledge in the overall topic of business. A business minor program and five-year MBA/Engineering degree is offered, in response to industrial advisors’ comments that engineers need more business acumen.” Engineering also commented on its pre-engineering program, which initiated a VCU 101 section that allowed more careful monitoring of students and an invited speakers series that introduced pre-engineers to more specific disciplines in engineering and computer science.

The School of Social Work highlighted student involvement in its improvements. For the M.S.W. program: “As a result of student feedback on course evaluations and other outcome measures such as focus groups that the foundation course content was repetitive of undergraduate research and human behavior courses, a course waiver process was established.” For the Social Work doctoral program: “Very active programming keeps faculty and students invested and involved. A ‘culture of completion’ where movement toward graduation is expected and thus stressed and celebrated.”

VCU’s administrative and educational support units also reported significant improvements. Here are just a few examples, quoted from *WEAVEonline™*, to indicate the range of both activities and continuing quality improvement efforts:

- “Human Resources has eliminated most paper communications in an effort to speed information delivery and to save money. In support of these efforts, the University was one of five institutions whose effective Human Resources practice, titled ‘Virtual HR: Communications and Technology,’ received national recognition for enhancing online customer service access and achieving streamlining efficiencies.”
- “Auxiliary Business Services has implemented technological improvements that have generated increased satisfaction from parking subscribers. Students now utilize the parking e-commerce web site to order parking subscriptions each semester, eliminating the need to come to the parking office to conduct the transaction and sale. Faculty and staff

parking subscribers utilize the online parking web site to easily and quickly renew their annual parking subscriptions, reducing postage and mailing costs as well as staff overtime expenditures. New parking permits were developed that are printed on demand, eliminating pre-printed inventory and associated costs related to streamlining the audit process and automating the process to achieve efficiencies.”

- Facilities Management “has started including ‘commissioning’ as a major aspect of occupying a completed capital facility. Commissioning involves testing building system performance and correcting identified problems to ensure that a new building starts its life cycle at maximum productivity. Commissioning helps to ensure that building systems are installed, tested functionally, and capable of operating and being maintained in conformity with design intent and owner needs.”
- “Students, faculty, staff and other users of business support services have come to expect timely, accurate response to their needs and requests for business information. Substantial reductions in financial support from the State over the past few years have forced a re-examination and reformulation of how business services and information systems are structured. The Finance and Administration Division has provided and will continue to provide leadership in responding to these challenges by developing and implementing improved processes and tools such as a web-based Administrative Toolkit; a student e-services system for registration, billing and financial aid; employee self-service and manager self-service web sites; e-print standard monthly reports to replace hard copy reports; web-based credit card payment; and online sexual harassment awareness and compliance training.”
- Faculty and Instructional Support “offered more Institutes and creatively doubled the number of seats available at each Institute. [It also] began working with the Help Desk to afford users a more timely response to problems with Blackboard.”
- Media and Computing Services’ “AT Help Desk reached out to units such as Hospital Information Systems, Student Affairs and Administrative Information Systems to provide more seamless services to students, faculty and staff. The AT Help Desk is servicing more customers with a greater range of services every year. We upgraded all computers in the technology classrooms to a common platform reducing our support costs and improving reliability.”
- Web and Research Computing: “Recognizing that the growing need for support of computationally-intensive research could never be affordably met with the existing IBM and SGI technologies, we made the bold move to pilot the dramatically less expensive Beowulf technology and soon after

chose to begin migrating to Beowulf and Sun for research computing. This combination has given us the ability to provide resources an order of magnitude larger than otherwise possible.”

- Arts Library: “A customer survey was created to help better serve our patrons, rating customer service, quality of slides as well as the collection, photographic skill in slide making and any other service we provide. The brief survey for rating, gave the following choices: excellent, good, fair and poor. The survey consistently revealed an overall rating of 99% for ‘excellent’ service. A drop box was added to the exterior door for those patrons who live a great distance or have jobs and are unable to return slides during normal business hours.”
- VCU-Qatar: “Beginning in September 2002, the number of administrators at VCUQatar [School of the Arts in Qatar] increased from two to four to address the numerous issues of offering a comparable VCU education in the Middle East ... This year we have been able to offer VCU 101 and VCU 102 to students to help them attain their academic potential and to enhance the success and promote the retention of all students.”
- College of Humanities and Sciences: “Since 2001, several key improvements have been made to the academic advising program: 1. Advisors are better trained and more conversant with advising strategies for assisting undeclared students to establish educational goals compatible with their interests, abilities, and values. 2. Students experiencing academic difficulty are systematically contacted and targeted to attend special advising intervention sessions. Students who attend the advising sessions tend to persist at higher rates and earn higher course grades than their peers who do not. 3. A systematic advisor training program has been developed to keep advisors abreast of changes in the curriculum and to introduce them to strategies for advising various populations. This training program is intended [to] help advisors become more effective overall. 4. Outreach to advisees has resulted in a dramatic overall increase in the number of students served by the office. This has resulted in the establishment of quality on-going advising relationships.”
- Student-Athlete Advising: “The study hall participation increased with 46% since last year. One reason for this tremendous improvement is the coaches stressing the importance of academic discipline and success to the student-athletes. In addition, the office has been able to keep the computer lab and study hall open until 10 p.m. Mon-Thu, and on Sunday evenings. This has allowed the student-athletes to do their work when their schedule permits. Also, last year the office of student-athlete advising developed a web site which makes us more accessible for student-athletes, faculty, tutors and other individuals interested in our program.”

- English Language Program: “Changes in the regulatory status of nonimmigrant aliens desiring to pursue education in the U.S. remain in a state of flux with new and additional requirements that slow down the process and at times, delay or prevent students from obtaining visas. As a result, ELP serves fewer students in B and F status than in the past ... This means that the ELP currently serves more conditionally admitted VCU undergraduates and more students in permanent resident status than in recent years ... [which] has required an immediate response involving a change in the curricular focus and the number and type of ELP class sections offered in a given semester.”
- Records and Registration: “Added the ability to search for open classes via eServices. The key reason for the change was student requests, and the ability to reduce telephone inquiries about open/closed classes.”
- First Year Student Services: “During the past year, several changes have already been put into place to assure goals and objectives are met in a timely and efficient manner. STAR [Student Testing, Advising, and Registration program] now provides an opportunity for students to register through e-services instead of through the traditional method of registration. New student and parent discussion groups are also included in the STAR schedule.”
- Services for Student Commons and Activities: “\*Worked closely with SGA, APB and staff to create new funding mechanisms for Student Activity Fee. \*Re-organized Student Activity area to increase effectiveness in service and advising of student organizations and students. \*Contracted Off-Campus Housing Database to third party vendor to increase student and landlord participation. Usage is up significantly.”
- VCU Libraries: ”Education and outreach: strategic emphasis and managerial commitment to new cultural programs, community health programs, and educational outreach has strengthened both number of offerings and successes. Much improved quantitative assessment of these programs as well as service programs stem from stronger management focus on assessment. ... Focus on information systems development for user community has led to impressive gains in personalization technologies and Web-based services.”
- Alumni Activities: “The associations have continued to increase their level of self sufficiency due to successful membership and affinity partnerships; the enhanced income streams and fund raising resulted in the completion of the alumni house and conference center building projects, and strong scholarship and VCU Medical Center initiative programs; the development

and growth of the life membership program was possible because of a successful annual membership program.”

- Outreach Programs: “Dropping courses that had marginal enrollment (a reflection of customer satisfaction/interest).”
- Governor’s School for Medicine and Life Sciences: “Integrate[d] more research time into program in response to mentor teacher and student complaints that there was not sufficient emphasis placed on their research presentations.”

In the future, with the planned action-tracking feature in *WEAVEonline*<sup>™</sup>, it will be considerably easier to trace the origins and impacts of actions. Even now, there is certainly widespread evidence that VCU meets the expectations of the institutional effectiveness comprehensive standard.