

Assessment
and Review of
Graduate Programs



Council of Graduate Schools

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by

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CGS Managing Editor

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FOREWORD

This document is the second significant revision of *Assessment and Review of Graduate Programs: A Policy Statement*, which was written by Marilyn J. Baker and originally published by the Council of Graduate Schools (CGS) in 1990. Based on the findings and recommendations of the CGS Task Force on Academic Review of Graduate Programs, the original version has become the definitive guide on the purposes and processes of graduate program review in the United States and Canada. Thanks to the broad dissemination of that document and to presentations on graduate program review at CGS annual meetings and summer workshops, the practices outlined in the original document have been widely adopted among graduate schools of North America.

Since 1990, however, there has been growing recognition that formal graduate program reviews every five to ten years must be complemented by assessment of student learning outcomes, especially as this type of assessment has been required by regional and professional accrediting agencies. This new edition of *Assessment and Review of Graduate Programs* extends the focus on outcomes assessment in the previous one by providing more detail on articulating outcomes, creating assessment plans, implementing assessment plans, and reporting the results of the assessment.

Moreover, there is a growing trend in which graduate schools take the lead in managing the analysis of institutional data in order to inform strategic decisions at the university level for improving graduate education. This edition includes a brief chapter on this form of review of graduate programs.

CGS is grateful to Michael P. Carter and Duane K. Larick of the Graduate School at NC State University for their significant contributions to this third edition of *Assessment and Review of Graduate Programs*.

Debra W. Stewart
CGS President

1. FORMAL GRADUATE PROGRAM REVIEW

OVERVIEW

The formal graduate program review typically consists of a process in which a program generates a self-study, there is a visit by reviewers external to the program (from the other departments and/or from other institutions), and the reviewers submit a report with recommendations for improving the program. While graduate education is replete with evaluations—of faculty, students, courses, facilities, and funding—program review provides the only comprehensive evaluation of an entire graduate program, integrating all the elements that contribute to success. Although reviews conducted by professional licensing or accrediting associations are also comprehensive in scope, they have special goals that may or may not coincide with those of a university or graduate school. Accreditation reviews are often narrowly focused on certain minimum standards required for licensure or accreditation. They do not necessarily embody the broad academic judgments and recommendations that should come out of a graduate program review.

Although most graduate programs are carefully scrutinized when they are created, this initial evaluation is not enough. Periodic program review is needed because graduate programs are dynamic; they change constantly as faculty come and go, the student application pool increases or declines, degree requirements are eased or tightened, and academic disciplines evolve. Periodic reviews help ensure the continuing quality of graduate programs. They help program faculty and university administrators determine whether programs are continuing to meet their original goals—or whether these goals and the nature of the programs themselves need to change, in light of changes in the discipline or in market demands for graduates. Periodic formal reviews identify areas in a program that need strengthening and suggest strategies for doing so.

PURPOSES OF GRADUATE PROGRAM REVIEW

The primary purpose of all program reviews is the improvement of graduate programs. In the face of the many external pressures on institutions to review programs (from government, system offices, public interest groups, and accrediting organizations) and the many internal pressures (e.g., budget adjustments, space needs, and organizational restructuring), it is imperative that this primary purpose be kept in mind. By creating a structured, scheduled opportunity for a program to be examined, program review provides a strategy for improvement that is well-reasoned, far-seeing, and as apolitical as possible. Changes in graduate programs that are made in the heat of the moment or in response to a particular event (e.g., annual budget decisions or turnover in faculty or administrators) are seldom based on the solid information, broad collegial involvement, and careful thought that are necessary for lasting program improvement.

Within the individual university, program review helps in long-range planning and in setting both institutional and departmental priorities. It gives administrators and academic leaders critical information about the size and stability of a program, its future faculty resources and student market, its equipment and space needs, its strengths and weaknesses, and its contribution to the mission of the institution. It helps set goals and directions for the future and ensures that overall academic planning and budget decisions are based on real information and agreed-upon priorities, not vague impressions or theoretical schemes.

From an external perspective, graduate program review has two important purposes. First, it provides a mechanism whereby universities are accountable to society for the quality of their programs. State and provincial governments, funding agencies, private donors, taxpayers, and tuition-paying students can be reassured through the program review process that the institutions receiving their support have graduate programs of high quality that are regularly reviewed, responsive to the needs of society, and consistent with the mission of the universities involved. For

these reasons, some states and provinces have initiated periodic program review as part of a legislative mandate or a requirement of a governing board or commission.

Second, graduate program review assists universities in their efforts to garner financial, philosophical, and political support from state or provincial legislatures, funding and regulatory agencies, coordinating boards, and other constituencies. The information gathered in the review process, particularly the assessment of program strengths and needs, provides compelling evidence of the quality of graduate programs and the foundation on which future improvements should be built. This information can and should support both internal and external decisions about resource allocation, enrollments, special initiatives, research grants, and even private gifts. The stronger and more careful the program review process, the more persuasive the results.

When done properly, formal graduate program review is an elaborate and often costly process, but it is necessary to assure the continuing quality of graduate programs and identify ways to improve them. There is no adequate substitute.

KEY FEATURES OF GRADUATE PROGRAM REVIEW

Formal graduate program reviews take varied forms. In the United States, the review process is usually initiated internally and administered by the universities themselves. Reviews may be conducted at the statewide or system-wide level. Usually, however, state or regional agencies mandate program review but leave the actual review to the institutions. In Canada, where the provinces are constitutionally responsible for education at all levels, there is considerable variation. However, regardless of the administrative structure, graduate program reviews share certain key characteristics:

1. Program review is evaluative, not just descriptive. More than merely the compilation of data on a particular graduate program, it requires academic judgments about the quality of the program,

the experience of its students, and the adequacy of its resources. It goes beyond an assessment of minimum standards to subjective evaluations of quality by peers and recognized experts in the field.

2. Review of graduate programs is forward-looking; it is directed toward improvement of the program, not simply assessment of its current status. It makes specific recommendations for future changes, as a part of the long-range plans of the institution, the department, and (in the case of interdisciplinary programs) other coordinating units.
3. Programs being reviewed are scrutinized on the bases of academic strengths and weaknesses, not on their ability to produce funds for the institution or generate development for the state or province. Finances and organizational issues are certainly relevant in the review, but only as they affect the quality of the academic program (e.g., ability to recruit outstanding students through financial aid, faculty salaries, adequacy of laboratory equipment, and turnover in department chairs).
4. To the extent possible, program review is an objective, fair, and transparent process. It asks graduate programs to engage in self-studies that assess, as objectively as possible, their own programs. It brings in faculty members from other departments and often from other institutions to review the self-studies and to make their own evaluations. It is part of an established public process by which all graduate programs are similarly reviewed.
5. Graduate program review is an independent process, distinct from any other review. Data collection and parts of the departmental self-study may often serve a number of review purposes, and there is much to be saved in time and effort by coordinating a graduate program review with other internal or external reviews. However, to be effective, graduate program review must be a unique, identifiable process that stands on its own, draws its own set of conclusions, and directs its recommendations to the only individuals with the power to

improve graduate programs: the faculty and administrators of the institution.

6. Most important, program review results in action. Based on the reviewers' comments and recommendations, as well as the program faculty's response to the review report, the institution develops and agrees on a plan to implement the desired changes according to a specific timetable. This plan is linked to the institution's budget and planning process in order to ensure that recommended changes are actually made, the necessary resources are allocated, and the program's goals fit into the institution's overall academic plans. If no action results from the review, departments and faculty soon lose interest in the process, its quality deteriorates rapidly, and large amounts of time and effort are wasted. In addition, other less objective and collegial ways of making decisions arise, and the advantages of systematic, objective program review are lost.

Incorporating the characteristics listed above, successful graduate program review addresses the following questions:

- How well is the program advancing the state of the discipline or profession?
- How effective is its teaching and training of students?
- To what extent does the program meet the institution's goals?
- How well does it respond to the profession's needs?
- How is it assessed by experts in the field?
- How well does it assess student outcomes and take action to improve based on the assessment data?

Clearly, the questions on this list can be supplemented by others, and the emphasis given to any particular issue addressed by each depends on the mission of the institution and the individual graduate program. But these questions exemplify the issues that program review should address.

ISSUES TO BE RESOLVED BEFORE BEGINNING PROGRAM REVIEWS

There are multiple approaches for conducting an effective program review. Maximizing the effectiveness of any approach requires establishing a clearly defined set of parameters before initiating the review. Among the most important parameters are the scope of the review, the timing, who will conduct it, and coordination of the review with other review activities. Below is a summary of several approaches and the strengths and limitations.

GRADUATE VERSUS COMPREHENSIVE REVIEWS

Institutions differ significantly as to whether they choose to review graduate programs alone or as part of an overall departmental review including undergraduate programs. There are clear advantages to either choice.

A critical strength of reviewing graduate programs alone is the opportunity for a thorough, focused, in-depth review. With the narrower focus on graduate programs only, both the department in its self-study and the review committee in its report can give more attention to quality indicators unique to graduate education: content of graduate seminars, quality of the research experience, productivity and professional involvement of graduate students, faculty members' advising load, and professional contributions of graduates. Reviewers can be chosen who have special expertise and experience at the graduate level, and they can reasonably be asked to spend more time ferreting out answers to subjective questions about program quality, found only through personal interviews with faculty and graduate students.

A limitation of conducting graduate program reviews in concert with undergraduate programs is the risk of being overwhelmed by the sheer number of undergraduate students, faculty teaching hours, and space and equipment needs. And if focused primarily on undergraduate issues, the questions asked either have little relevance

to, or paint an inaccurate picture of, the issues facing the graduate program. By reviewing graduate programs separately, institutions are forced to devote time and in-depth attention to them, designing evaluation criteria that are uniquely suited to the graduate level. A separate process therefore ensures that graduate programs will not be viewed simply as costly extensions of baccalaureate programs.

Strengths associated with reviewing graduate programs in concert with undergraduate are pragmatic. A comprehensive review can produce significant savings in time and money, creating immense good will by not subjecting departments to multiple separate examinations. A combined process may also be more efficient, since in most cases the same faculty will prepare the self-study, and the same reviewers can be asked to examine all aspects of the department or program in question, or a subset of the comprehensive review team can be asked to focus explicitly on the graduate program. Also, graduate and undergraduate programs are clearly interdependent. Matters like faculty teaching loads, program and departmental budgets, facilities, and the quality of the teaching assistant experience cannot be properly assessed without information on both the undergraduate and graduate programs.

Whether graduate programs are reviewed separately or in conjunction with broader reviews, two basic principles apply. First, graduate programs must be assessed with a separate set of standards and criteria by persons who understand the unique demands of graduate education. Defining the relationship between the two programs and focusing on those features of the undergraduate program that affect the quality of the graduate program will maintain the balance needed for a successful graduate review. For example, expectations may be set in both the undergraduate and graduate programs to ensure that enrollment growth is aligned with additional investments to preserve the quality instruction needs of both programs. Although programs at the two levels differ, they are part of the same academic unit, and both draw their strength from the same faculty.

LOCUS OF RESPONSIBILITY

Who conducts the program review depends largely on whether the review is internally or externally controlled. When the review is internally controlled and involves graduate and/or undergraduate programs in an entire department or school, it is usually coordinated by the office of either the college/school dean or the chief academic officer. A university- or college-wide faculty panel is often appointed to establish criteria and procedures for the review and to receive final recommendations from the review committee. This panel may conduct the review itself or appoint a subcommittee, depending on the size and complexity of the school/institution, the number of reviews scheduled, and the expertise needed. Clearly, in this model, panel and subcommittee members must be competent to judge both graduate and undergraduate programs.

When graduate programs are reviewed internally but separately from undergraduate programs, such reviews are often initiated and coordinated by the graduate dean. He or she may use the graduate council for this process or, like the chief academic officer or college dean, appoint special review committees. After the review is completed, recommendations then come back to the graduate dean and/or the graduate council, for transmittal to and discussion with the college or faculty dean and the chief academic officer.

If the review process is undertaken by an organization external to the institution, its scope is usually restricted to the graduate level. In this case, external reviews are based on a common set of data provided by each program, and the review is conducted by a committee representing the group of universities involved. This committee may seek the advice of expert consultants, if required. The graduate dean may act as the crucial point of contact between the external appraisal committee and the university.

Regardless of who coordinates the reviews, the following principles apply:

- Whether the review is of the graduate program only or of an entire academic department, all reviews should involve the college or faculty dean in some way that is appropriate to the institution.
- The graduate dean should play a major leadership role in all graduate reviews, as either an initiator or key participant.
- The essential participants in any graduate program review are the chief academic officer, the college or faculty dean, the graduate dean, the department chair, the graduate program administrator, graduate program faculty, the review committee(s), and graduate students in the program.

Without involvement of all the above stakeholders, the review is less likely to succeed.

COUNTING—AND PAYING—THE COSTS

Before instituting formal program review, it is important that a realistic estimate of the costs be made and an agreement be reached as to who will pay them. Typical expenses may include the salaries of central staff to coordinate and support the review process, accommodations and travel expenses for external reviewers, honoraria for reviewers, meals for the review team during the site visit, and, in some cases, funds for duplicating and disseminating materials associated with the review (self-studies, review reports, etc.).

There are several models for funding this enterprise. Sometimes the chief academic officer provides the funding. At other times, the graduate school has a line item in its budget to cover the costs. In still other instances, the costs are shared between the graduate school and the department, college, or coordinating entity of the program being reviewed. Whatever the model, it is critical that all stakeholders accept it before formal reviews are initiated.

INTEGRATION WITH OUTCOMES ASSESSMENT

Outcomes assessment, which will be discussed later in this document, is often mandated by regional accrediting bodies and, in some cases, by legislative bodies. Integrating outcomes assessment with the formal review process maximizes the value of both and reflects best practice. For example, a list of program outcomes might be incorporated into the self-study. Then the review committee can discuss the outcomes in its report in terms of both how effectively the program is achieving its outcomes and how it could revise the outcomes to reflect national and international trends in similar graduate programs. Also, the reviewers could consider and comment on the assessment process itself, including the appropriateness of the data collected to the outcomes and how decisions for improving the program are made. Whatever the specific methods of integration, it is important that formal review and outcomes assessment be seen as parts of the same whole, with a common goal of improving the quality of graduate education.

MASTER'S VERSUS DOCTORAL PROGRAMS

In those institutions with research-oriented master's and doctoral programs in the same department (e.g., English, economics, and physics), programs at both levels should be reviewed simultaneously. The overlap in curriculum, faculty, research facilities, and often student body would make separate reviews illogical and costly.

Whether it leads to a doctoral program or not, a master's degree should have its own academic integrity. It should be seen neither as simply a step toward the doctoral program nor a continuation of undergraduate work. A master's program may have a different student clientele and different degree requirements, may place graduates in different kinds of positions, and may even involve different faculty than the doctoral program in the same department. The institution should examine the unique characteristics of each master's program and develop criteria of evaluation appropriate for that program, even though master's and doctoral programs are assessed in the same review.

RESEARCH-BASED VERSUS PROFESSIONAL GRADUATE PROGRAM REVIEWS

Some graduate degrees prepare students for research careers, others for work as professionals outside the academy. Despite their differences, when research-based and professional degrees are within the same academic program, they should be reviewed together. Like graduate and undergraduate programs, they are separate but interdependent; budget, facilities, and faculty appointment issues that affect one almost always affect the other. Because their missions and standards of excellence are different, however, it is appropriate that they be reviewed using different criteria. To judge both by the same criteria is to do each a disservice.

Given the differences between research-based and practitioner programs, it is tempting to use professional accreditation review of the latter in place of internal review. However, a professional program that meets national accreditation standards does not necessarily meet the institution's criteria for excellence nor conform to its mission. A program could be superior by national standards but either completely inappropriate for the local community or an excessive drain on resources. Conversely, it might not meet minimum accreditation standards on such matters as faculty-student ratio but might strongly support the overall mission of the university and satisfy that institution's quality standards. In either case, institutions need to review professional programs in the same fashion as they review other graduate programs and not cede that responsibility to an outside agency or organization.

COORDINATION WITH ACCREDITATION REVIEWS

Although graduate program reviews should be separate processes from accreditation reviews, much is to be gained by conducting them in tandem, sequentially, or at least within the same academic year. Many elements of the departmental self-study and the data collected are the same for both reviews, as are such items as the faculty curricula vitae; thus, combining these parts of the reviews

can usually save significant time, paper, and effort. Also, a campus-based graduate program review committee may find the report of an accreditation or comprehensive review team extremely valuable as it prepares its own recommendations.

When both types of reviews are conducted either simultaneously or at about the same time, caution should be exercised in asking members of the professional accreditation review team to do “double duty” as members of the graduate program review team. First, it is important that any reviewers asked to accept this dual role have the same qualifications as any other graduate program reviewer (i.e., the appropriate graduate degree, disciplinary background, and experience with and knowledge of graduate programs). Accreditation reviewers have been trained to conduct a review based on accreditation standards and may not have the expertise and appropriate training to conduct a graduate program review. Second, it is important that these reviewers understand the ways in which the graduate program review differs from accreditation review, both in purpose and in evaluation criteria. The two processes are distinct and should be conducted by reviewers who are appropriately trained and prepared for the different areas of focus.

SCHEDULING THE REVIEWS

The careful scheduling of formal program reviews is critical; more well-meaning plans for graduate program reviews have foundered on an unworkable timetable than on any other obstacle. The frequency of reviews will, of course, vary significantly with the size and complexity of the institution and the resources available to support the review. However, it is recommended that every graduate degree program be reviewed regularly every five to ten years. To do so more often may create an unmanageable process and risk over-evaluation; to do so less often is to lose track of the content and quality of one’s graduate programs. Whatever the frequency, it is essential that the reviews be cyclical and that they be conducted according to a published timetable that continues indefinitely into the future. They should also be incremental, with each review building on the

report from the previous cycle. Finally, faculty in the programs need sufficient lead time (preferably 9 months to a year) to prepare the self-study so that there can be broad and thoughtful faculty input into its preparation.

Twelve to 18 months is a reasonable period in which to complete each review. It generally takes at least a year to complete the self-study, committee review, preparation of a final report, and development of an action plan, with the process sometimes extending into the next academic year. Each institution, however, must establish a timetable that is reasonable and realistic, given its circumstances.

Any number of unexpected obstacles may delay the review process; e.g., the department chair changes, institutional data are incorrect, or the review committee has difficulty reaching consensus. Since the purpose of the review is to improve the graduate program and not just to go through the process, delays in the schedule may be necessary and appropriate. A report that is submitted on time but is not used is of little value.

At the same time, it is important that the program review process not become too protracted. When it does, the information will become outdated and the faculty may become indifferent to the result. A process that cannot produce timely results will lose its credibility and therefore its effectiveness. Protracted reviews also slow down the ability to undertake the reviews for the next cohort of programs. To achieve transparency, faculty leaders of graduate programs should know when they are scheduled to be reviewed, and the schedule should be kept if at all possible.

The order in which programs are reviewed is also important. When the review cycle is being established, the temptation to first review all poor-quality programs should be resisted, lest program review be seen as a veiled method for eliminating or punishing programs in trouble. Conversely, all the high-quality programs should not be reviewed first either, to avoid the impression that program review

is merely an attempt to highlight excellence. For the process to be taken seriously as fair and equitable, strong and weak programs should be interspersed in the review cycle.

There are other factors to be considered in determining the order of programs for review. These include the length of time since the last program review, compelling financial problems or resource needs, major proposals for curricular changes, upcoming accreditation or other external reviews, and the desire of the faculty or administration to have a particular program reviewed.

At smaller institutions, it may be possible to review programs by administrative or budgetary unit, e.g., all departments in the humanities or engineering. This has the clear advantage of allowing review of similar programs simultaneously and can help relate the recommendations more directly to that unit's resource allocation process. However, at many institutions, such a plan would be unwieldy.

MULTIDISCIPLINARY AND INTERDISCIPLINARY PROGRAMS

Graduate programs that draw on multiple disciplines or are truly interdisciplinary pose special challenges for review. Given the organization of most universities, the faculty who teach in such programs and the students who study in them are often arranged into academic departments, units that control faculty hiring, student admission, budget, course offerings, and all the other elements of a graduate degree. However, multi- and interdisciplinary programs must be reviewed independently. Data and other information should be gathered from all relevant departments and organized into a single, coherent self-study that reflects the unique goals of the program.

Where possible, much can be gained by reviewing one or more department-based programs affiliated with an interdisciplinary program during the same cycle, since they are clearly interdependent. For example, an interdisciplinary program in film and literature might well be reviewed during the same year as

cinema and English. Similarly, programs in related departments that have a strong intellectual affiliation, even if not strictly interdisciplinary, can benefit from simultaneous or closely sequenced reviews, e.g., molecular biology, genetics, and biochemistry.

KEY ELEMENTS OF A SUCCESSFUL PROGRAM REVIEW

Although the precise nature of graduate program reviews will vary from one institution to another, a number of key elements should be present in all reviews. They are discussed below in roughly chronological order.

CLEAR, CONSISTENT GUIDELINES

Before any reviews are conducted, the institution, system, or other entity conducting them should develop and disseminate clear guidelines for managing the review process. These guidelines should describe the purpose of graduate program review, the process to be followed, materials to be included in each phase of the review, and the use to which the results will be put. They should also include a generic agenda or timetable for reviews and a list of departments or programs that will be reviewed each year. A clear plan, which is developed jointly by all constituencies and disseminated broadly in advance of the first review, will help ensure a fair process, with as few surprises as possible. If space permits, the guidelines should be posted on the graduate school or academic affairs Web page.

Regardless of the specific details, all reviews should be based upon these principles:

- The review should be designed and conducted by the faculty.
- The graduate dean should play a major leadership role in the review process.
- The process should be as open as possible, consistent with the requirement that the rights of individuals be protected.
- The administration should be actively and positively involved in each review.

ADMINISTRATIVE SUPPORT

Adequate staffing and general administrative support are vital to the success of any program review. Program review is not free. Faculty and administrators must devote significant blocks of time to it, secretarial and other support staff must be assigned, space and office supplies must be committed, and funds must be set aside to pay external reviewers, if they are used.

While it is appropriate for the department to provide its own staff support for the self-study, the larger review process should be staffed centrally in order to keep the findings confidential and to avoid overloading departmental staff. Central staff and general administrative personnel should be at a professional level high enough to handle the complexity and sensitivity of the review, e.g., contacting external reviewers, coordinating site visits, serving as resource persons for the department and review committees, initiating and explaining requests for institutional research, and generally keeping the process moving.

Successful reviews also depend on accurate institutional data. Data on academic programs should be developed and maintained centrally wherever possible but should be reviewed and evaluated by the program faculty. At many institutions, a central office that collects and maintains data on academic programs can produce much of the information needed for a graduate program review: data on admissions, enrollment, sponsored research activity, and numbers and types of faculty. Sometimes this is a university-level office; at other times, the graduate school collects this information for graduate programs, as well as information from graduate student surveys. Wherever such a central repository of data exists, it should be brought into the process early to ensure that it can produce the desired reports in a timely fashion and that the desired data elements are indeed available. A standard report format using a single set of definitions should be developed in advance of the first review so that each individual report can be generated rapidly and so that the data are consistent across programs.

Where data are maintained in various offices for different purposes—e.g., admissions, faculty records, and contract and grants—information will have to be requested separately but in a standard agreed-upon format. Where there are no central data services available, the university should consider creating a database strictly for program-review purposes or, at a minimum, designing a standard format and a set of definitions for departments to use in reporting their own data, e.g., placement of graduates. The best information on graduate programs most often comes from a combination of central and departmental sources.

SELF-STUDY

Once the administrative mechanisms are in place, the first step in a program review is usually a departmental or program self-study. The self-study is prepared by the faculty of the department and is descriptive, evaluative, and aspirational. It provides basic information on the program, gives the faculty's assessment of the program's strengths and weaknesses, and presents the faculty's vision for the program's future. Candid and clearly written, it should adhere to a standard format, with agreed-upon definitions for at least the data portions of the presentation. In writing a self-study, program faculty may be asked to address specific goals or criteria as required by the institution, state legislature, or other stakeholder.

A self-study is the program's opportunity to scrutinize itself, to publicize its accomplishments, examine its flaws, and focus on future directions. It is also a chance—perhaps the only one—to explain itself and how it is viewed by its peers. A self-study should answer the following questions:

- What are the critical features of the program (students, faculty, curriculum, research, etc.)?
- What is the quality of these features and what evidence supports your assessment of the quality?
- Does the quality of the program match expectations? Where does the quality fall short of expectations and why?

- How will the program faculty address the areas that do not meet expectations in order to enhance the quality of the program?

The topics below cover the major areas to be addressed. Wherever possible, data should be provided for at least the previous five years.

- ***Departmental mission and organization:*** If program is associated with a department, mission of the department, contribution to the institution's mission, and departmental policies and organization
- ***Purpose and position of program:*** Program outcomes, intellectual place in the discipline, and national and local need for the program
- ***Program Assessment Plan:*** Clear statement of program outcomes, recent assessment of program outcomes, and explanation of how assessment findings are used continually for program improvement
- ***Program demographics and metrics:*** Graduate faculty, support staff, master's students, doctoral students, degrees awarded, instructional and general expense budget, portion of budget used for graduate program(s), amount of externally funded research, and amount of other externally generated funds (e.g., gifts and sponsored awards)
- ***Faculty profile:*** Number and classification of graduate faculty (full/part-time, visiting, tenure/non-tenure track, junior/senior, regular/associate/adjunct); total number of faculty; number of new and retiring faculty during the past five years, and average age, sex, and race/ethnicity of tenured and untenured faculty
- ***Faculty research and scholarly activity:*** Description of faculty research, scholarship, or creative activity, individual productivity, and external grant proposals submitted and funded
- ***Faculty contributions to graduate programs:*** Faculty/graduate student ratio, average course load, average thesis load per faculty member and distribution across department, distribution of grades in graduate courses, and teaching evaluations
- ***Student profile:*** Admissions criteria; number of applied and admitted students; actual enrollments (pre- and post-candidacy)

for doctoral students); average standardized test scores and undergraduate grade-point averages of applying, admitted, and enrolled students; citizenship; average age; sex; race/ethnicity; and part-time/full-time status

- **Professional development opportunities:** Percentage of students participating in professional development programs such as teaching assistant training, internships, dissertation support groups, and workshops on topics such as grant-writing, presentations, responsible conduct of research, academic publications, and making oneself competitive for jobs in industry and academia
- **Financial support for graduate students:** Departmental and institutional funding, percentage of students with financial aid, average level of support, ratio of grant to loan funds, number of teaching and research assistantships and fellowships, and the selection process for them
- **Facilities:** Space (classroom, research, offices for faculty and students, social/community space), laboratory and instructional equipment, and library and computer resources
- **Curriculum:** Degree requirements, program structure, current graduate courses, frequency of course offerings, and pass rates on preliminary and final oral exams
- **Student productivity:** Number of theses and dissertations for the last five years; sample dissertation and thesis quality; student publications, exhibitions, and professional presentations; attrition rates and time of attrition in the program; degree completion rates; and average time to degree; post-graduation placement
- **Programmatic climate:** Scholarly community, quality of student mentoring, esprit de corps, critical mass of faculty and students, and activities that support diversity among students and faculty
- **Collateral support (given and received):** Interactions with other departments, units, or professional development and research programs that strengthen the program or other university offerings; and involvement of students and faculty in outreach efforts (e.g., industrial and public-sector interactions)
- **Profile of graduates:** Number of graduates, job placements, and continued contributions to the profession or field

- ***Future directions:*** Plans for new faculty hires, new courses, new facilities, new approaches to recruiting or supporting students, new or expanded research and curricular thrusts, etc.
- ***Overall evaluation of program:*** Strengths, weaknesses, and national reputation

SURVEYS/QUESTIONNAIRES

Surveys/questionnaires completed by students, faculty, program alumni, and advisory board members may supplement and validate the information and opinions presented in the self-study. Surveys from current students can provide important information on their perceptions of the faculty, curriculum, and overall value of their graduate experience. Similarly, individual faculty impressions of the program can paint a picture that statistics alone cannot provide. Finally, input from recent alumni may be the most valuable for its objectivity, since alumni are the most removed from the program. Especially for professional programs, alumni and employer surveys are a helpful way to assess the professional value of the degree.

In determining whether to include questionnaires in the review process, the following factors should be considered: the time and expense required to develop and distribute the questionnaires and collect responses, the likely response rate, the additional paperwork burden on the respondents and the department or review committee, and the uniqueness of the information to be gained. If used, questionnaires should not duplicate information available elsewhere (except for purposes of validation) but should concentrate on the knowledge that can be gained only through this method, e.g., student opinions of the quality of the instructional or research experience, faculty assessment of the overall quality of the research effort, and alumni opinions on which parts of the program were the most challenging or useful. The analyses of survey results can be used to highlight specific areas for improvement or to explore the views of faculty or students.

In some cases, departments may administer questionnaires themselves; however, it is better to have such surveys conducted at the institutional level in order to provide adequate staff and financial support and to ensure the confidentiality and objectivity of the process. Institutions may want to design their questionnaires themselves, or they may want to enlist the services of the Council of Graduate Schools in developing effective questionnaires. If questionnaires are not used, it is especially important that reviewers meet with graduate students and faculty to elicit their impressions of the program.

STUDENT PARTICIPATION

Whether or not they serve on the review committee, graduate students should participate in the program review process. They should be asked to complete confidential questionnaires where feasible, they should be interviewed individually and collectively by the review committee, and they should have input into the departmental self-study. Where they are also appointed to serve on review teams or standing committees, they should be full voting members and have access to all relevant documents. The results of the review process should be shared in some form with graduate students.

REVIEW COMMITTEE

There may be one committee to review the program and another (standing) committee to coordinate the process and receive the reports of the review committee and of the department. Alternatively, one committee may perform both functions. In either case, the committee assessing the program should examine the departmental self-study and the results of any questionnaires and then conduct its own investigation and interviews, as needed.

The committee reviewing the graduate program should be composed primarily of graduate faculty members from inside and outside the university. Students are sometimes appointed to serve on review

committees, though they are more often members of standing committees that govern the review process and receive the review report.

The review committee typically reads the departmental self-study and may conduct a one- to two-day site visit in the department, interviewing faculty and students, touring facilities, examining sample student files and dissertations or theses, meeting with the department chair, etc. The committee may also review additional materials that the process has elicited (e.g., results of questionnaires). Alternatively, external consultants may conduct the site visit and report their findings to the review committee.

When the review is complete, the review committee prepares a succinct report on its findings, including recommendations for changes and improvements. In some cases, this report is most often confidential except to the department, appropriate deans, and any relevant standing committee. In other cases, it is posted on the program's website to make it available to students, boards of advisors, and any other interested stakeholders.

EXTERNAL REVIEWERS

The use of external reviewers varies. They may be included on the institutional review team, they may comprise an entirely separate external review team, they may serve as individual experts conducting independent evaluations, or they may be brought in only when special expertise is needed that is otherwise unavailable. They should be paid an honorarium for their time, plus travel expenses.

External reviewers can be identified in several ways. Most often, the department or program is asked to submit a list of potential external reviewers—faculty from other institutions who are well respected in the field. The dean or committee in charge of the review then chooses and contacts one or more reviewers from the list provided and invites that person or persons to serve. In other cases, the college dean, the graduate dean, or other administrator responsible for the review will select external reviewers by contacting professional

associations or deans and department chairs at institutions with strong reputations in the field. In either case, external reviewers should be at “arm’s length” from the program. Although they will typically know some of the faculty and their research, they should not be connected to the program as graduates, former faculty, or research collaborators.

External reviewers add to the costs and time taken for the review, and their intellectual orientation may not match that of the program being reviewed. Nevertheless, they can enhance the review process in significant ways, providing input as recognized experts in the discipline, ensuring the objectivity of the process, and placing the program in a larger disciplinary context both nationally and internationally. External reviewers may lend credibility to the final report through their recognized expertise and broad knowledge of the discipline.

INTERNAL REVIEWERS

Internal members of the committee are usually members of the graduate faculty from outside the college or other organizational unit of the program being reviewed. As with external reviewers, the “arm’s-length” principle applies in selecting internal reviewers. Sometimes they are drawn from the university’s graduate council or a standing committee responsible for the graduate program review process. If possible, the internal reviewers should be from fields that give them some understanding of the program being reviewed; however, disciplinary expertise is normally left to the external reviewers. Internal reviewers provide knowledge of the university, its mission, and its graduate programs. They are an important resource to the external reviewers regarding the policies and practices of the university, and they can evaluate how well the program under review supports the institutional mission.

RESPONSE BY PROGRAM FACULTY

Soon after the committee report is submitted to the person or group coordinating the review, the program faculty should be given a

copy and asked to prepare a written response. This gives the faculty a chance to correct any factual errors in the report and to reply to specific criticisms or recommendations that the committee has made. Except for factual errors, the review committee may choose not to change its report; however, it is important to keep the program faculty informed about the findings and to give them a chance to comment on the evaluation. If there are multiple reports at this stage, the program faculty should have a chance to comment on each report or version.

FINAL REPORT AND RECOMMENDATIONS

Even though there may have been multiple documents and reports along the way, the program review process should culminate in a single, comprehensive report, including the program faculty's response and specific recommendations for change. This report, which should be submitted to the chief academic officer and/or graduate dean, with copies to all relevant parties, should be used to develop a plan of action.

CONFIDENTIALITY VERSUS OPENNESS

If possible, some level of confidentiality should apply to reports in progress and interim reports; that is, they should be available only to those directly involved in the review so as to encourage candor and ensure that those directly affected by the review have the opportunity to respond freely. However, program administrators need to find the appropriate balance of confidentiality and openness regarding the finished self-study, reviewers' report, and final report. These reports could be made available only to the immediate stakeholders or, perhaps by posting prominently online or distributing copies, to a broader set of stakeholders including present and prospective students, advisory board members, interested legislators, and even the general public. In some cases, universities or external organizations requiring the review will define what is to be done with these documents. Otherwise, it is left to the discretion of people in the program. Maintaining relative confidentiality limits the

materials to those whose responsibility it is to improve the program and to see that the program is improved. And limiting availability also has the effect of limiting accountability, that is, fewer people to hold the program accountable for implementing recommendations. At the same time, it also reduces the number of people who are invested in the improvement of the program. Full openness may feel like airing one's dirty laundry and making the program susceptible to misunderstandings based on uninformed readings of the documents. Yet, it can create a broader sense of identification with the success of the program. It is important to weigh the advantages and disadvantages of each approach.

IMPLEMENTATION

The most important step in program review is not to produce the review report but to implement its recommendations. Since the goal of program review is to improve graduate programs, timely implementation of these recommendations is essential. Turning recommendations into actions involves at least the following steps:

1. One or more meetings of the department chair, the graduate program administrator, college or faculty deans, graduate dean, and chief academic officer to discuss the recommendations
2. An action plan or memorandum of understanding drawn up and agreed to by the participants in this meeting as to what specific actions will be taken—by whom, with what resources, and by what deadlines
3. Discussion of the recommendations with program faculty for understanding and implementation
4. Integration of the action plan into the institution's long-range academic planning and budget processes

These steps can be accomplished only through a concerted effort by all the relevant parties, including budget officers, admissions directors, and facilities planners whose cooperation is essential for success. The proposed timetable to implement each action should be

realistic but not extending so far into the future as to be irrelevant. Goals for the program to meet before the next program review are also in order. The action plan should be preserved centrally, in a form readily accessible to the program faculty, regardless of changes in program administration.

FOLLOW-UP

Since most improvements to graduate programs can be made only over a period of time, it is essential to establish a procedure to ensure that the plan of action is implemented. Approximately one year after the action plan or memorandum of understanding is signed, or at some other agreed-upon date, the parties responsible for each action item should be asked to report on what has been accomplished. If the task is not completed by the date specified, the relevant faculty and/or administrators should agree on additional action to be taken and on a timetable for its completion. This process should be repeated until implementation is complete, with the final evaluation occurring at the next scheduled program review.

Depending on the structure of the process and the content of the recommendations, follow-up may take one of several forms: the use of an external committee or single reviewer, one or more meetings of the department/program chair and relevant deans, review by a standing university committee or panel, or review by the graduate council. Whatever mechanism is chosen, it must ensure that action is taken—action that has the support of the administration and confidence of the faculty.

2. ASSESSMENT OF STUDENT LEARNING OUTCOMES

OVERVIEW

Outcomes assessment is a process of improving graduate programs by which program faculty (1) identify what students are expected to learn as a result of their educational experience in the program, (2) evaluate the extent to which the students have achieved those expectations, and (3) apply the findings of this evaluation to improving the program where it falls short of enabling students to achieve the outcomes. This mode of evaluation has taken on greater importance as regional accrediting bodies in the U.S. have required that universities assess outcomes for all academic programs and demonstrate evidence of improvement based on that assessment.

In short, outcomes assessment invites faculty to see education differently, a shift in perspective from educational inputs, what faculty provide for students, to educational outcomes, what “comes out” of learning experiences.

SIMILARITIES TO AND DIFFERENCES FROM FORMAL PROGRAM REVIEW

Like formal review, outcomes assessment provides accountability to both internal and external stakeholders in graduate education and has as its ultimate goal program improvement. However, outcomes assessment offers a different approach that is complementary to program review. First, whereas program review occurs periodically, outcomes assessment is an ongoing process and thus provides the opportunity for continually monitoring and improving a program. Second, whereas program review typically focuses on an evaluation by people outside the program, outcomes assessment is carried out by program faculty based on their expectations for the program. And third, whereas formal program review has historically focused on a wide range of indicators of program quality, outcomes assessment emphasizes what students learn.

Outcomes assessment may be integrated with program review by including outcomes and results of assessment in the review self-study. Also, the review process may benefit outcomes assessment when external reviewers suggest additional or revised program outcomes to be measured or improved processes for using assessment data toward continual program improvement.

VALUE OF OUTCOMES ASSESSMENT

Assessment of graduate program outcomes has at least four kinds of value. First, and most important, it provides the groundwork for increased responsiveness and agility in making needed programmatic changes—and for faculty to make such changes in ways that are agile and responsive to changes in the environment—and for making them based on evidence rather than anecdote. Second, it provides one critical form of accountability to various stakeholders, including accrediting agencies. Third, because the outcomes are defined and assessed by program faculty, assessment can increase faculty ownership of the graduate program as a whole. Finally, provided that the program’s outcomes are communicated to students, outcomes assessment can give students a clearer picture of faculty expectations and goals for them as participants in the program.

KEY ELEMENTS OF OUTCOMES ASSESSMENT

Assessing student learning outcomes is an ongoing process that begins with articulating program outcomes and creating an assessment plan. Once a plan is in place, faculty can put it into action by initiating the collection and analysis of evidence and using that evidence to make value judgments about the program and identify and implement program improvements. Faculty submit periodic reports of their evidence-based evaluation of the program and actions taken for improvement. This section describes that process.

PREPARING FOR OUTCOMES ASSESSMENT

Before faculty can institute the actual outcomes assessment process, they must generate program outcomes and create a plan for assessing those outcomes.

Generating Outcomes. As we have mentioned, the primary focus of outcomes is on what students are expected to learn, as indicated by what they are able to do, as a result of their experience in the program. One approach to identifying outcomes is to establish broad goals or objectives for students and then to operationally define them with specific outcomes. Two broad objectives for many graduate programs are for students to develop as professionals in the field and to master the research skills of the discipline. For each of these goals, outcomes define specifically what is expected of students to demonstrate that by the time they graduate they have engaged in appropriate and sufficient professional development and have successfully mastered research abilities of the discipline. Student learning outcomes generally have these characteristics:

- Outcomes are focused on students, typically beginning with the phrase, “By the time they graduate, students should be able to/are expected to....”
- Outcomes incorporate action verbs to describe what students are expected to do to demonstrate they have achieved faculty expectations for learning. For example:
 - By the time they graduate, students should be able to *identify* a research problem whose solution makes an important contribution to the field.
 - By the time they graduate, students are expected to *present* scholarly papers at local, regional, and national/international conferences.
- Outcomes avoid such verbs as “to understand” and “to be familiar with” because an outcome should describe what students are expected to do, which may be observed, rather than to indicate their understanding or familiarity, which can be inferred through observations but not directly observed or documented.

Though the primary focus of outcomes is on student learning, it is also possible for faculty to include outcomes that could serve as indicators of the goal of monitoring and improving program quality, such as number of faculty publications, amount of grant funding, GRE scores of entering students, time to degree, etc.—whatever metrics faculty identify as critical indicators of program quality.

Creating Assessment Plans. Once outcomes have been established, the next step is for faculty to make a plan for determining the extent to which the program enables students to achieve the outcomes. An assessment plan includes the evidence to be collected to assess each outcome, the frequency of collection of evidence, a process for interpreting the evidence and identifying logical program improvements based on the evidence, and when and to whom the results of an evaluation will be reported.

There are many possible forms of evidence faculty can use, including graduate placement information, evaluation rubrics from final defenses, number of student publications, results of certain exit interview questions, and results of surveys of recent graduates. As faculty discuss what evidence should be incorporated in their assessment plan, there are some guidelines they may consider:

- The evidence should be meaningful. That is, it should be appropriate to the outcomes it is intended to assess. Evidence should allow faculty to come to a judgment as to how effectively the program has enabled students to achieve each outcome.
- The evidence should be manageable. The process of collecting and analyzing the evidence should be practicable and realistic. If it is not, it is unlikely to be done.
- Evidence should be appropriate to the goal of outcomes assessment: for faculty to make a reasonable judgment about the effectiveness of their programs and have appropriate information to guide decisions about how to improve programs. Sometimes faculty assume that they should bring the same evidential rigor to outcomes assessment that they expect of publishable research

in their disciplines. That kind of rigor may not be necessary for achieving the goal of assessment and may indeed become an obstacle to faculty in creating and implementing an assessment plan that is feasible. Faculty should be encouraged to consider both qualitative and quantitative evidence.

- Certain kinds of evidence are considered of less value in judging effectiveness of a program, including course grades, number of students who complete required courses, and number of students who pass preliminary exams. The problem with these kinds of data is that in most cases they don't allow faculty to determine why course grades were low or why fewer students passed prelims and thus limit the potential to identify specific strategies for improving the program.
- Generally, outcomes assessment plans are weighted toward relatively direct evidence of what students do rather than relatively indirect evidence, such as surveys.

The frequency of collection depends on what is appropriate to the kind of evidence. For instance, updated student CVs might be collected annually, surveys of recent graduates might be done biennially, and evaluation rubrics for preliminary exams and final defenses might be done when they are held for individual students.

Typically, universities ask faculty to submit assessment reports annually or biennially. Faculty need to take these due dates into account as they identify when they will report results for each outcome. For example, if programs are to report every year, it may be that it is not feasible, effective, or important to collect and analyze some evidence annually. In this case, the results would be reported at an appropriate frequency, say, biennially. As a rule of thumb, an assessment cycle—how long it takes to report findings for all outcomes—should be no more than three years.

IMPLEMENTING OUTCOMES ASSESSMENT

After the outcomes have been articulated and the evidence for each outcome determined, the actual assessment process may be implemented. The outcomes are the criteria that drive this process, and the evidence to be gathered provide the basis to evaluate the program in terms of how well it has enabled students to meet the outcomes. It may be useful to conceive the assessment process as comprising four elements: collecting evidence, analyzing evidence, evaluating the program based on the evidence, and identifying strategies for improving the program.



- **Collecting Evidence.** This is an ongoing process that proceeds according to the assessment plan. The collection process works best when it becomes a routine part of program activities. It is important to identify who is responsible for gathering evidence for particular outcomes and where the evidence will be stored.
- **Analyzing Evidence.** Analysis in this case refers to putting raw evidence in a form that allows faculty to draw conclusions from it. For example, information from evaluation rubrics of preliminary exams and final defenses could be turned into bar charts and responses to particular questions on exit interviews could be summarized.

- **Evaluating Programs.** At this point in the process, the focus shifts from what students are able to do to the effectiveness of the program in enabling students to meet faculty expectations. Faculty draw conclusions from the evidence to identify the strengths of the program and areas that should be improved so that students are better able to meet expectations. Because this judgment of effectiveness depends on faculty involvement, it is important to provide faculty the occasion to participate in the process, for instance, involving members of a graduate committee or all faculty in the program at a faculty meeting or retreat.
- **Improving Programs.** This, of course, is the goal of outcomes assessment. Thus, for each area for improvement that has been identified, faculty discuss possible strategies for enabling students to better meet faculty expectations. The result of this discussion will be strategies to be implemented and methods for implementation.

Because outcomes assessment is an ongoing process, the closing of one assessment loop is followed by another for which further evidence is collected and analyzed, the strengths and areas for improvement are identified, and strategies for improvement are determined and implemented.

REPORTING THE RESULTS OF OUTCOMES ASSESSMENT

Outcomes assessment is an ongoing process that is punctuated by periodic assessment reports by program faculty. In those reports, faculty present the results of their assessment activities from the previous reporting period, typically one or two years, depending on whether the reports are to be submitted annually or biennially. The reports are important for three reasons: (1) they encourage programs to adhere to the requirement for outcomes assessment, (2) they can provide evidence of accountability for stakeholders, such as boards of trustees, legislators, industry advisory boards and regional and professional accreditation agencies, and (3) they can shape the way

that faculty reason about their assessment results and make explicit decisions about program improvement.

It is perhaps this last reason that is, in terms of guiding the improvement of programs, the most important. The critical elements of reasoning about assessment may be understood according to the following questions:

1. What type of evidence did you collect and what were the findings from the evidence?
2. What did the program faculty learn from the evidence about the strengths of the program and areas that need improvement?
3. What strategies did faculty implement or plan to implement to address the areas that need improvement?

Reports that lead faculty through this reasoning have the added advantage of allowing stakeholders and accreditation reviewers to observe the way faculty move from evidence to evaluation and then toward improvement of programs.

ISSUES TO BE ADDRESSED BEFORE BEGINNING OUTCOMES ASSESSMENT

As with program review, outcomes assessment requires careful planning before it can be implemented effectively. Faculty and administrative buy-in is crucial to the success of outcomes assessment. It is therefore important to educate people who will play important roles in the process and solicit feedback from them: graduate faculty, graduate students, deans, department heads, and those university administrators whose offices will be supporting outcomes assessment. Some of the issues to be decided are discussed below.

COORDINATION WITH OTHER ASSESSMENT EFFORTS

To reduce demands on faculty time and departmental resources, every effort should be made to streamline and coordinate the various dimensions of university assessment, especially assessment of undergraduate and graduate programs. Efficiencies may be achieved and confusion reduced by providing, to the degree appropriate, a common lexicon for outcomes assessment, joint workshops, common assessment tools, and central sources of assessment data. Thought should also be given to creating a master assessment schedule that avoids redundancies but also distributes reporting requirements in ways least burdensome to the faculty.

Assessment coordination must, however, take into account the differences between graduate and undergraduate education. Perhaps the most significant difference is that in research-based graduate programs, a larger proportion of student learning takes place outside the classroom than in undergraduate programs. Therefore, graduate program assessment is seldom as course-based as undergraduate assessment may be. Also, graduate programs usually already have in place more milestone experiences and products than undergraduate programs: e.g., preliminary and qualifying exams, theses and dissertations, and the final thesis defense. Preparation for graduate outcomes assessment should therefore take into account how best to use existing opportunities for evaluation to collect data which, when aggregated, can provide measures of the effectiveness of the program.

LOCUS OF RESPONSIBILITY

Closely tied to decisions about coordination are decisions about which office or university committee will manage graduate outcomes assessment: the office of the chief academic officer, the graduate school, an office of institutional research, or an office of institutional effectiveness. Whatever the decision, it is important that the dean of the graduate school play a key role in determining the form that program outcomes assessment will take and in seeing that the results

of such assessments are integrated with formal graduate program review. It is equally important that the academic deans be involved in the process: in the planning for outcomes assessment, in the discussion of the resources needed to support it, and in the creation of a climate where outcomes assessment is valued. Without this support, outcomes assessment will likely founder.

ADMINISTRATIVE RESOURCES

Before beginning outcomes assessment, a clear understanding must be reached as to who will provide the funding necessary to support it at both the institutional and program levels. Some of the activities that must be supported include the following:

- **Planning:** Organizing task force and focus group meetings, developing a proposed “master plan” for outcomes assessment, and vetting it with faculty, the graduate council, academic deans, and the chief academic officer
- **Training:** Providing workshops and consulting services by outcomes assessment experts to help faculty develop outcomes and assessment plans for their programs, as well as rubrics by which they can gather and aggregate data from preliminary exams, theses/dissertations, final orals, etc. (Often these experts are already present on campus in either faculty or administrative positions, but even then it may be necessary to “buy” their time from their home department or office.)
- **Data Management:** Centrally providing as much data as possible to help graduate faculty with assessment, e.g., making available comparison data from peer programs at other universities or designing and administering surveys of students, alumni and employers
- **Reporting:** Developing a timetable and format for assessment reports and the infrastructure (Web-, e-mail-, or paper-based) to make reporting and follow-up as easy as possible
- **Operational Support:** Providing a central point for questions and consultation about outcomes assessment as well as Web- or paper-based assessment guidelines, templates, examples of

outcomes, copies of workshop slides, etc. to assist faculty in outcomes assessment

- **Program Improvement Support:** Providing administrative support to help faculty implement needed improvements identified through the assessment process and to disseminate among all graduate programs the “best practices” developed as a result of outcomes assessment

Rarely, if ever, can these activities be carried out without new resources or at least a reallocation of existing resources. Institutional commitment to outcomes assessment must include the necessary funding.

FEATURES OF SUCCESSFUL OUTCOMES ASSESSMENT

In launching an outcomes assessment program, the greatest challenge is getting faculty buy-in. For outcomes-based assessment to succeed, faculty must understand it, value it, and take ownership of it. Faculty buy-in is more likely if the assessment program has the following features or characteristics:

- **It allays faculty concerns about excessive requirements of time and expertise.** Faculty are understandably concerned that outcomes assessment will take too much time away from their teaching and research and will require them to become “assessment experts.” Strategies for allaying these concerns include the following:
 - *Introduce graduate outcomes assessment through a small pilot program of 5-10 graduate programs.* Identify a consultant, preferably a faculty member, to help each pilot program’s faculty develop their outcomes, assessment plans, and any rubrics or surveys they wish to use in collecting data—and also to assist the faculty in completing their first assessment reports. Not only does this process produce materials that can be used in future workshops for remaining programs but it also establishes a coterie of faculty who can share their experience of outcomes assessment with others.
 - *Hold workshops on every phase of the assessment process.* Graduate administrators and/or the chairs of the graduate committees in each department should be invited. Workshops offer opportunities for participants to learn how to construct assessment plans, to work with their graduate faculty, and to share their plans with each other for constructive criticism.
 - *Make available an assessment consultant who can work with faculty on a “just-in-time” basis.* Ideally, the person who conducts the workshops will also be available for faculty to contact for one-on-one assistance. A good consultant can

often significantly reduce the time that faculty must spend developing their assessment plans.

- *Create an information-rich website on program review and assessment, including guidelines, workshop materials, sample assessment plans, etc.* If a Web-based reporting system is to be developed in conjunction with this website, it may be necessary to hire a temporary programmer.
- *Make the published guidelines on assessment as simple, user-friendly, and jargon-free as possible.* Word choice matters. For example, assessment experts at some universities learned that their faculty react more positively to the term “faculty expectations” than to “student learning outcomes.”
- *Determine what data faculty need to make their assessments and provide as much centrally as possible.* As faculty develop their assessment plans, focus groups can help determine what kinds of data are generally needed. For example, providing questionnaires or surveys that are developed and administered centrally will take a tremendous burden off individual departments.
- *For programs such as those in education and engineering, where professional accrediting agencies also require outcomes assessment, work with faculty to create assessment plans that can satisfy both the university and the accrediting agency.* Keep in mind, however, that because of the different agendas of the university and the accrediting agency, the assessment plans for each may not be identical.

➤ **It gives faculty full ownership of the assessment process.**

The development of an assessment plan is an opportunity for faculty to discuss and clarify their goals and aspirations for their programs and students. Unless there is a legislative mandate otherwise, neither outcomes nor the kinds of data to be collected should be prescribed across programs. It is important to remember that “data analysis” means different things in different disciplines. Faculty should determine what they want to assess, how they want to assess it, how often they want to assess it, and

what changes they will make in light of their assessments. If their assessment plan is to be critiqued, this is best done at the time of the formal review. External reviewers who are experts in the discipline can determine whether the outcomes designated by a specific program are in line with those of its actual or aspirational peers.

➤ **It makes clear who will see the assessment results and how they will be used.**

The point of submitting assessment reports is primarily to document that the faculty are making evidence-based decisions for the improvement of their programs. It is critical that faculty be given a commitment that the results of outcomes assessment will not be used by others for making administrative decisions about the future of programs. If that commitment cannot be made, then reports could become merely occasions for faculty to “dress up” their programs for administrators.

➤ **It is integrated into the institutional culture.**

For outcomes assessment to have significant and lasting impact, it requires the continuous and visible support of the institution. Such support includes centrally provided assessment feedback, training, guidelines, tools, and data, as well as college-wide or university-wide forums to discuss assessment results. Assessment will be valued and taken seriously at the program level only if it is valued and taken seriously at the institutional level.

3. PROGRAM EVALUATION FOR INSTITUTIONAL STRATEGIC PLANNING

OVERVIEW

The two forms of evaluation we have discussed so far—program review and outcomes assessment—are typically formative, that is, they are designed for program faculty to learn about their programs and to use what they have learned to improve the programs. This section addresses a mode of evaluation that is guided by a different purpose, summative as opposed to formative. Summative evaluation of programs is designed to sum up the relative quality of a program at a particular time so that others outside the program may make decisions about its future. The summative evaluation we are concerned with here is related to institutional strategic planning.

In an institutional setting, strategic planning is the structured process of identifying actions that may be taken to achieve institutional goals. Because resources, financial and otherwise, are always limited, it is often necessary for universities to make strategic decisions about how best to allocate those resources to achieve their goals. For our purposes, that means making decisions about improving graduate education, such as providing more resources to the highest quality programs to raise them to an even higher level nationally and internationally, providing more resources to lower quality programs that demonstrate potential for distinction, consolidating programs whose faculties could be more effective and efficient in the same unit, or eliminating programs that have outlived their promise.

Of course, to make sound strategic decisions about investments in graduate education requires a sound process for surveying the present state of graduate education across a heterogeneous set of degrees and disciplines. This means instituting a process by which valid data for graduate programs are identified, collected, and analyzed. Graduate schools are well positioned to make a valuable contribution to this process. Indeed, a good case could be made

for graduate schools to take the lead on their campuses. It is the mission of graduate schools to improve graduate education at their universities. If graduate schools are not proactive in this process, it could be taken up by other campus units.

ISSUES TO CONSIDER IN PROGRAM EVALUATION FOR STRATEGIC PLANNING

To make the strategic planning process effective, the university must be able to make productive discriminations among programs. These discriminations are necessary to provide a basis for distributing resources strategically. Different universities will identify different kinds of data to be collected to reflect differences in what is important to each institution. Though the details will differ among institutions, we will discuss some common considerations in the process.

INSTITUTIONAL VALUES

The temptation when beginning to gather data for evaluating programs is to identify what data are already available. However, because no measurement exists in a vacuum, it is essential to ground the process of evaluation in the values that are driving the strategic planning, that is, the institutional goals to be achieved. This grounding in institutional values is beneficial in three ways. (1) It allows the investigators to identify the particular kinds of measures that will enable the university to further its goals. Instead of simply gathering data that are convenient, beginning with institutional values allows investigators to take a more focused approach to the data. (2) It allows the investigators to be more persuasive in describing to stakeholders the basis for identifying appropriate data to collect. If measures are derived from a set of values shared by stakeholders, they are more likely to be accepted as valid. (3) Beyond the descriptive role of measurement, what we measure often affects the behavior of those whom we measure. For example, if programs are ranked according to the institutional value to promote interdisciplinarity, then faculty in programs that rank low in this area may have the motivation to increase their participation in interdisciplinary programs. It is important, then, to use measures that conform to the institution's values and prompt desired behaviors and actions.

Identifying the formal institutional values is typically not very difficult. Universities tend to spend a lot of time delineating their values in mission and vision statements, lists of university goals or thrust areas, and in previous strategic plans. Because these documents are often the result of much collective reflection and negotiation, it is safe to claim that they represent what is important to the university and may serve as a source of information for articulating the values on which to base the evaluation of graduate programs.

FOCUS OF THE EVALUATION

In most cases, the unit of analysis of this sort of evaluation is the program, but because *program* may be understood differently in different contexts, it is necessary to define it at the beginning for this context. The process of gathering data could focus on all graduate programs or solely on doctoral or master's or professional programs or on any other division that is appropriate. The focus depends on the scope of the strategic plan and the perceived need that drives the planning process. It is important that both the scope and the perceived need be clarified ahead of time so that the focus of the data-gathering process is neither so narrow as to be of limited use nor so broad as to unnecessarily expend university resources.

DATA FOR EVALUATION

The primary challenge in identifying data to gather for evaluating programs is validity: the data should convincingly represent the values they are expected to measure. For example, for the value of encouraging more opportunities for interdisciplinary education, the data for each program could include the percentage of faculty officially participating in interdisciplinary programs, chairing dissertation or thesis committees in those programs, and serving on committees in any other programs. Relevant data could also include the number of students from interdisciplinary programs working in the labs of program faculty. It is arguable that these are valid measures of a program's level of involvement in interdisciplinary

education. However, the participation of program faculty in research projects with faculty in other disciplines may not be considered equally valid because this participation does not focus on formal interdisciplinary education as the other measures do. This measure may be more valid for the value of encouraging more cross-disciplinary research.

In addition to validity, there are other issues related to gathering data. One is time, how many years of data should be included. To a certain extent, this choice is a function of whether or not the data will be collected for a single strategic plan or will be collected on a regular basis in the future. If the former, then the data should include enough years to provide meaningful conclusions. If the latter, then it may be useful to include the number of years of the projected interval of data collection, for example, two years for a regular biennial report of the data. A second issue is when to standardize the data across programs, such as by dividing a measurement by the number of program faculty. For instance, applications received by a program provide information about the demand for that program, but in a comparison among all programs, smaller ones would be disadvantaged. In this situation, dividing the number of applications by the number of program faculty provides a fairer comparison. Dividing by program faculty is also useful for measures of efficiency of a program. The number of graduates is an indication of the academic productivity of a program, but when that number is divided by program faculty, it also is an indicator of the relative efficiency of the program in graduating students. Because how *program faculty* is defined (e.g., whether to include adjuncts, research professors, non-tenure-track faculty) is critical to a fair analysis, this definition must be duly considered and appropriate to the institution.

A third issue is whether to collect data for comparing programs within the institution or for comparing programs with similar programs at other universities. Comparing programs that are as dissimilar as landscape architecture, music, physics, and social work in the same institution may be problematic, though a case could be made that since the goal is the strategic distribution of resources

among programs in that institution, such a comparison is legitimate. Comparing programs with those in other institutions is on its surface a fairer representation of quality. However, it can be very difficult to gather data from programs at other universities at all, much less data that can be consistently applied to a comparison of one's own programs. Since neither method is ultimately fair, the institution must weigh the advantages and disadvantages in achieving its strategic goals in its choice of one approach or the other.

RESPONSIBILITY FOR COLLECTING DATA

Faculty in programs may be asked to collect their own data and submit them to the university. In this case, the requested data must be clearly defined to lessen the potential for inconsistency across programs. Though this approach may require much faculty time, it has the advantage of involving faculty in the process so that they are very much aware of how the data were collected, which may contribute to a greater sense of the reliability of the data. Another approach is to collect the data at the university level using sources from the office of institutional effectiveness. More likely, the process will be a combination of the two approaches, with the university providing data it has collected and the program faculty contributing what may not be available in university-level databases, such as placement of graduate students and faculty publications. If this data collection is to be done on a regular basis, it would be beneficial to make the process a routine part of university life, with various parties responsible for certain kinds of data, queries designed to automate data-gathering, dates on which data are to be submitted, etc.

ANALYSIS OF THE DATA

Because the goal of this form of program evaluation is to make productive discriminations among programs, the data should be analyzed in a way that makes those discriminations accessible. One approach is to analyze the data by ranking programs according to each kind of data collected. To make the rankings more meaningful, each kind of data could be grouped with related data, such as various

rankings of faculty productivity or racial and gender diversity. The data for each category could be compiled to make overall rankings by category. This has the advantage of highlighting the different strengths of different programs. Also, all rankings could be further compiled to create a single overall ranking of programs. Another approach to making meaningful discriminations is to identify programs in the top and bottom quartiles or quintiles and rank programs according to how many times each appears in the top or bottom for each measure. This method is designed to aid strategic planning by highlighting sharp distinctions between the highest and lowest ranked programs.

It may be advisable to weigh measures differently for different kinds of programs. For instance, extramural grant expenditures could be weighed more highly for programs in the sciences and book publications for programs in the humanities. Of course, comparisons among programs may be more valid if they are separated appropriately, doctoral programs from master's, for example, or within master's degrees, academic separated from pre-professional.

If a university has chosen to evaluate programs in terms of a set of similar programs at other institutions, discriminations among programs can be based on the ranking among peer programs or on benchmarks related to aspirational programs.

RESPONSE TO THE ANALYSIS

In most cases, faculty in individual graduate programs should be offered the opportunity to respond to the analysis of data. This response will allow faculty to identify what they see as the strengths of their programs and those areas in which the data point to shortcomings, to explain problems that the data have uncovered, and to comment on the rankings in particular measures (e.g., a low ranking for completion of degrees is actually above average among the program's peers). Program faculty could also address qualitative issues, such as need for the program on a regional or national level and importance in achieving the mission of the university. Even

though the data are intended to inform strategic planning at the university level, it is important that program faculty be encouraged to have a voice in the process. The responses could influence the planning process by providing planners a deeper understand of the value of a program beyond its numbers.

RELATION TO PROGRAM REVIEW AND OUTCOMES ASSESSMENT

The summative evaluation of programs for strategic planning is in no way a substitute for the formative evaluation of program review and outcomes assessment. These formative assessments are important for improving programs. However, there are possible links among these three modes of evaluation. Data and rankings from the university analysis could be made available to outside reviewers in formal reviews along with the responses produced by the program. These data may be useful to the reviewers in their understanding of the program within the context of the university (or peer universities) and may aid them in identifying areas for improving the program and address those areas with recommendations. For outcomes assessment, program faculty may choose to incorporate some of the data from the evaluation for strategic planning in their assessment plans to measure existing outcomes or create new outcomes that reflect university values shared by the program and use the data to measure those outcomes. This is one way that programs may achieve university goals by adding them to their own goal structure as represented in program outcomes.

CONCLUSION

Formal program review and outcomes assessment are a crucial part of institutional planning and development. They document the achievements of faculty and students in an academic program, indicate the degree to which program outcomes have been achieved, suggest areas for improvement, and help chart new programmatic directions. This document has outlined the critical components of graduate program review and outcomes assessment. Regarding formal program review, among the most important principles are the following: the review may be an internal and/or external process, it should evaluate the quality of the program and the adequacy of resources, it should be objective and forward-looking, and it should result in action. Regarding program outcomes assessment, it should be internal and formative, it should focus on what students know and can do as the result of their graduate program, it should be strongly supported by central administrative resources but “owned” by the faculty, and it should lead to ongoing program improvement based on data rather than anecdote.

The role of the graduate dean in graduate program review and outcomes assessment is clear and central, whether or not the reviews are graduate-only or comprehensive and whether or not graduate program outcomes assessment is coordinated by the Graduate School or by another institutional unit. If formal reviews are of graduate programs exclusively, then the dean should participate in meeting with the review committee and/or external consultants and receiving and implementing the final report. If the review is more comprehensive, then the graduate dean should be involved at the campus-wide level, formulating the final set of recommendations based on the review report. Regarding outcomes assessment, the graduate dean should help ensure that graduate faculty are supported in this effort by adequate resources (e.g., training, data necessary for outcomes analysis, and ease of reporting results), as well as by appropriate feedback.

The academic review of graduate programs and the continuous assessment of graduate program outcomes are time-consuming, sometimes exhausting, and expensive. They are also enlightening, stimulating, and gratifying. When done well, they provide an impetus for change and strengthen the quality of graduate programs. Most important, they affirm for the academic community and the public alike the inherent values of graduate education: intellectual rigor, collegiality, and excellence in the pursuit of knowledge.



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