

Outcomes Assessment Resource Guide for Schools and Colleges of Optometry

Developed by the ASCO Task Force on Outcomes Assessment

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Abstract

The Outcomes Assessment Resource Guide for Schools and Colleges of Optometry is designed to provide a basic orientation to outcomes assessment. The Guide includes a brief discussion of some important issues and provides resource tools that may be useful in an assessment program.

Keywords

Outcomes, assessment, program, performance, competency, educational research

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Introduction

What Is Outcomes Assessment?

Outcomes assessment is the primary evaluative portion of the strategic management of a student, course, program or institution. An outcome is the result of a particular activity or program (Hollenbeck et al, 1999). Strategic management is a process designed to achieve the results (or outcomes) defined in mission, goals and objectives statements.

The institutional effectiveness paradigm (Nichols, 2000) demonstrates the nature of the management process (Figure 1). Due to its circular nature, each portion of the paradigm is essential. Mission, goals and objectives provide direction for management and allow the application of necessary resources to achieve the intended outcomes. Assessment activities demonstrate the extent to which the outcomes are achieved. Finally, using the assessment results is crucial in assuring that the intended outcomes are achieved. If modification is appropriate, assessment results provide direction to formulating improved strategies to achieve the mission, goals or objectives at the next iteration. The failure to execute any aspect of the paradigm or failing to maintain the connections of the different parts threatens the success of the entire program. Good management knows what it is trying to do (Mission, Goals and Objectives); does it (Outcomes); understands the output of its process (Assessment Activities); and, uses its knowledge of the process to achieve an ever more successful result (Use of Results).

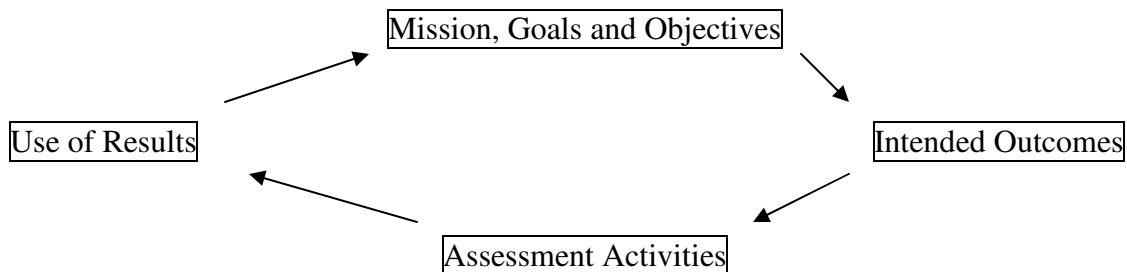


Figure 1. Institutional effectiveness paradigm (Nichols, 2000).

The institutional effectiveness paradigm can be applied at many levels. If applied to an institution (or program), a number of related versions of the paradigm should be aimed at the various goals and objectives for each part of the mission statement. Similarly, the effectiveness program can be aimed at learning within an individual course, and as such, it may be simpler than that applied to programs or institutions. Ideally, an institution will have interlocking effectiveness paradigms that connect the institution to programs to individual students within and across all courses in the curriculum. Although any single paradigm can be straightforward, connecting effectiveness paradigms across programs and courses and students are challenging to develop and manage and to keep connected.

Outcomes assessment, then, is a part of the process of managing an activity or program so that:

- The mission, goals and objectives clearly state the intended outcomes (or products or results) of the activity or program.
- The outcomes of the program or activity are assessed (measured or examined) using appropriate tools designed for the task. And,
- The assessment data are used to modify the program or activity to obtain or maintain the desired outcomes of the program or activity.

The assessment portion of this process provides feedback about the effectiveness of the program or activity.

What Drives Assessment?

Two major issues drive assessment and it may be difficult to untangle them or to parse their relative importance. One obvious driver for assessment is the various oversight agencies (government {state and/or federal}, accreditation agencies, or institutional management). These agencies have in common a desire to certify the extent to which an institution or program is achieving its mission, goals and objectives.

The other major driver of assessment is educational (management) theory and practice. Achieving the best results necessarily discovers a role for assessment (as described in Figure 1 above). Achieving intended results requires goals and objectives; intended outcomes; assessment activities; and, the use of the results. Faculty should play the most significant role in each of these assessment processes.

In summary, an effective assessment process plays an important role in *demonstrating the achievement* of an institution, a program, a course or a student. In addition, however, an effective assessment process provides data to *guide and improve achievement*. The most important driver of assessment should be the desire to make good institutions, programs, courses and students better.

Outcomes Assessment in the Accreditation Process

The Council on Optometric Education (COE) requires appropriate outcomes assessments for optometric educational programs as part of the accreditation process (Professional Optometric Degree Program Standards 2000, Standards 1.3, 5.1, 6.3, 6.4, 6.8, 6.9, 7.6). The COE “recognizes the importance of identifying and assessing educational and programmatic outcomes as a means to define and measure the quality of educational programs. It has woven outcomes assessment throughout its Standards of Accreditation. (COE, 1998).” Crucial to the understanding of assessment required by the COE is that programs are required to select assessment tools that are appropriate for each program. Schools and colleges, therefore, should tailor an assessment program for their own particular mission, goals and objectives considering the resources available and the needs of the program.

Why is Outcomes Assessment Important?

Assessment is simply feedback on the outcome of a process. Without appropriate feedback an open-loop system is created. Open-loop systems (an engineering term) generally are not self-sustaining and do not usually have the ability to achieve

equilibrium. In fact, since there is no feedback, open-loop systems typically do not even incorporate a goal.

A thermostat controlling temperature is an example of a useful feedback system. When the temperature gets too high, cold air is blown in (or the furnace is turned down). If the temperature sinks too low, the temperature is allowed to rise (or the heat is turned on). Assessment is like the thermostat of an educational process and setting it properly provides a way to adjust the process so that the outcome (i.e., like temperature) is appropriate.

A characteristic of post-modernism is a vast amount of available information that does not provide true knowledge and understanding. An effective assessment program should provide information organized to efficiently evaluate the effectiveness of the entity being examined. Either too much, too little or inappropriate information is a problem. Since assessment gives insight into the goodness of the mechanism producing the outcome, without knowledge of the outcomes, it is impossible to critically adjust the mechanism (sort of like tightening a bolt without being able to feel it tightening).

Ineffective assessment programs have several characteristics in common. They may collect information that does not truly reflect the achievement of the mission, goal or objective. Although this may be good information, it represents wasted time, effort and resources. An ineffective assessment program may collect valuable information however it is so disorganized, that its use may be difficult or impossible. Also, the information may be collected and organized effectively but not provided to the appropriate users of the data. Or, the assessment may be completed on an erratic basis that is too widely spaced to effectively control the process. The most frequent ineffective assessment program is one that collects only subjective data from limited sources and therefore is unable to provide a comprehensive view of the program’s achievements or its progress.

A good example of a potentially ineffective assessment program would be a curriculum committee attempting to manage the curriculum solely using student evaluation of teaching (SET) feedback. Of course, SET feedback can be critically useful in gaining student perspectives on the effectiveness of the subject being taught. SET feedback does not evaluate the direct outcome of a course or program like certain performance measures (national or state boards or course-embedded performance tests (i.e., practical examinations)). In addition, the SET does not usually allow in-depth consideration of the causes of issues it may identify. A good assessment program is multi-factorial and uses different sources to consider the many facets of a desired outcome.

Good assessment programs manifest the following characteristics (Palomba & Banta, 1999) as their philosophical foundation (Table 1). A weakness or absence of any of these essentials places the entire program at risk.

Table 1. Essentials for assessment programs (modified from Palomba and Banta, 1999)

CHARACTERISTIC	COMMENT
1. Agree on the goals and objectives	Since the goals and objectives drive the whole process, they must be clearly stated and understood by everyone involved in the process.

CHARACTERISTIC	COMMENT
2. Design and implement a thoughtful approach to assessment planning	Assessment programs must involve the appropriate individuals who must understand and be a part of the process. A good description of how the data are to be used is critical in allaying any fears of participants.
3. Involve individuals from on and off campus	A good assessment program involves many different sources to achieve objectivity and an evaluation of the use of the final products of the program. External groups or data are likely to use criteria specific to their situation. This may provide insight into the manner in which the products (typically students) function in a non-academic situation.
4. Select or design and implement data collection approaches	Only useful data must be collected and the collection of the data must be as efficient as possible and collected from appropriate sources. Data must be collected that meet the needs of the program from the standpoint of allowing modification of the process to achieve a desired result.
5. Examine, share and act on assessment findings	To be effective, the individuals affected by the assessment must know the results. Feedback from assessment techniques must be used to control the outcome of the process. Failure to use the data means that the assessment program, even if elaborate and otherwise effective, fails to achieve its most basic purpose, to make possible better outcomes.
6. Regularly reexamine the assessment process	Assessment programs examine dynamic, constantly changing outcomes. As such, the assessment program itself should be constantly reexamined to make sure it is as effective and efficient as possible.

Who Should Be Involved in Outcomes Assessment?

The best assessment programs gain strength from diversity in the groups of individuals surveyed. Programs should identify individuals from on- and off-campus that they would like to involve in their outcomes assessment.

Opportunities for Outcomes Assessment in Schools and Colleges of Optometry

There are many opportunities for the application of outcomes assessment in Schools and Colleges of Optometry. Assessment techniques can focus on growth and on participation and do not have to look only at the magnitude of certain fundamental aspects such as research dollar support. An effective assessment program may not require elaborate resource allocation. Depending on the needs of the program, assessment programs can be geared to obtain the most critical measures of effectiveness without an elaborate administrative apparatus.

Outcomes Statements

Achieving good statements to define the outcome of a process is a critical step in the successful management of that institution, program, course or student. Basic competency statements are statements of the outcomes of a professional program.

Good outcomes data are:

- Clear and understandable;
- Direct and explicit in meaning;
- Reflective of current philosophies, actions and intentions;
- Written in short, simple sentences that state only one thought; and,
- Quantifiable and measurable (COE, 1998).

Questions to be used in deriving outcomes statements are (COE, 1998):

- What do we want to accomplish?
- What is it we say we do?
- What is it that we want our graduates to be able to do?

Good examples of outcomes statement are:

- The entry-level Optometrist must understand and have skill in the prevention, diagnosis, treatment and management of systemic conditions and processes that relate to vision.
- The entry-level optometrist must demonstrate appropriate personal professional and ethical values.
- The student must demonstrate competency in performing Goldmann tonometry.

Outcomes are the objectives of an institution, program or course. They are the desired endpoints or achievements of the activity.

Characteristics of Assessment Measures

Assessment activities can be broadly classified as either *perception* about the outcomes or measures of the *performance* of the outcomes. Perceptions are subjective assessments and can be powerful measures of the opinions of the various participants or observers about various items within a program. Performance measures are designed to directly examine the outcome of items within a program (or course, etc.). Frequently, perceptions are most useful in helping to explain the performance of some aspect of the program.

Many other features of assessment activities should be considered when developing or using assessment tools. Some of these are described in Table 2. A brief examination of these characteristics demonstrates the challenges involved in understanding the ramifications of the assessment tools. Of course, a given tool can be tightly controlled or relatively uncontrolled as long as the tool meets the needs of the program. Of the many characteristics listed below, the priority and cost as well as thinking about validity, accuracy, strengths and weaknesses are especially critical for the successful selection of a tool.

Table 2. These are characteristics of outcome assessment measures that can be considered in an assessment program.

CHARACTERISTIC	DESCRIPTION
Area	Area is a general description of the program aspect for which assessment is being completed. There are nine assessment areas in the Council on Optometric Education Professional Optometric Program Standards 2000.
N	N is a serial number identifying the assessment activity in a particular area and allows better tracking of a tool.
Assessment Tool	The assessment tool is a brief (clear and simple) description of the assessment activity.

CHARACTERISTIC	DESCRIPTION
Priority	The priority of the assessment tool ranges from “1” (required), “2” (helpful), “3” (possible) to “NA” (not applicable). Tools with priority of “1” are recommended assessment tools. This score is a subjective assessment of the significance of a given tool in obtaining a complete and accurate examination of a given standard.
Type	<ul style="list-style-type: none"> • <u>Internal or external</u>. This describes whether the assessment data are collected from sources external or internal to the institution. • <u>Direct or indirect</u>. This describes the nature of the data being drawn. A direct measure is where the knowledge, skill or value is being measured without intermediary steps, individuals or systems. An indirect measure does not measure the knowledge, skill or value in question but rather examines some proxy. • <u>Qualitative or quantitative</u>. Quantitative data is numerical data with at least ordinal properties. Qualitative data includes controlled subjective assessments from surveys as well as comments or observations that may be relatively uncontrolled in nature. • <u>Perception or performance</u>. This describes whether the assessment tool examines perceptions about the outcomes (subjective, surveys) or the performance of the program (objective, data).
Responsible	The responsible category specifies who is charged with responsibility for the assessment activity in question.
Calendar	Assessment activities should be regularly completed. The calendar describes the appropriate cycle for the assessment activity.
Targets	The target of the assessment activity is the ultimate source of the assessment data.
Data	This specifies the data used by the tool. It ranges from surveys, discussions to questionnaires to transcripts, policies, databases and others.
Data source	The data source specifies the repository from which the assessment data is drawn.
Validity	Validity implies that a tool measures the desired characteristic and encompasses reliability. Invalid data is misleading in that the response may not be representative of the larger sample from which it is drawn because it does not really assess the appropriate attribute among other reasons.
Accuracy	An assessment is accurate if it is a true measure of the activity in question. For example, a clinical skills test may be an accurate measure of a student’s ability to perform a given skill in the clinic. A written test about the same skill may be a good test but may not indicate the student’s ability to actually complete the skill.
Strengths	This is a brief listing of some of the strong points of the assessment activity.
Weaknesses	This is a brief listing of some of the limitations of the assessment activity.
Relevant COE standard	This lists the COE standard to which the assessment activity is being addressed.
Linkage to goals and objectives	This describes the goal or objective to which the assessment activity is directed. Without an appropriate link, an assessment tool represents a waste of time, effort and resources.
Response rates	The response rate provides the expected portion of the available data that is being captured by the assessment activity.
Questionnaire link	This specifies the questions on the surveys that are linked to this outcome.
Feasibility	This describes the feasibility of collecting the data in question.
Cost	This is an assessment of the cost of using the assessment tool. Cost estimates range from \$ (inexpensive), \$\$ (cost involved), \$\$\$ (very expensive, prohibitive). This is not the cost of the activity in question, e.g., research, but is the cost of using the tool to examine the outcome
Methods	This is a brief description of the methodology involved in the assessment process.
Uses of data	This is a brief description of the way the data is used.

Program Assessment vs. Learning Assessment

Much of the literature on outcomes assessment today is aimed at the assessment of learning. An outstanding example of a program using assessment to guide student learning is Alverno College. Alverno College has developed their entire curriculum to incorporate carefully defined objectives for student learning (Alverno College Faculty, 1994, 1995, 2000). The Alverno College faculty has defined eight expected outcomes for their liberal education process (Table 3). Each of these outcomes is a goal of the educational process at Alverno College. Competencies are developed for specific tasks that make up each of the outcomes.

Table 3. The eight expected outcomes for education at Alverno College (Alverno, 1995).

EXPECTED OUTCOMES AT ALVERNO COLLEGE
1. Communication
2. Analysis
3. Problem Solving
4. Valuing in Decision-making
5. Social Interaction
6. Global Perspectives
7. Effective Citizenship
8. Aesthetic Responsiveness

Judging each competency that makes up an ability incorporates a circular process designed to provide appropriate feedback to all of the stakeholders in the educational process but particularly the student and instructor. These components are listed in Table 4. Each of the components is linked to the others.

Table 4. The design and implementation of assessment as learning process at Alverno College (Alverno, 1995).

ASSESSMENT AS LEARNING PROCESS DESIGN AND IMPLEMENTATION
1. Components (or generic criteria)
2. Instrument or Process (stimulus or context)
3. Specific Criteria
4. Performance
5. Judgment by Assessors (including student)
6. Feedback
7. Evaluation

Assessment and Basic Competency

After immense work, the optometric education community recently approved a document describing basic competencies for entry-level optometrists (Heath et al, 2000). This may be the first successful description of the knowledge, skills and values that graduating optometry students should demonstrate. Methods must be developed to confirm these competencies of graduating optometry students. The development of assessment methodology provides Schools and Colleges a way to accurately know what their

products, the optometric graduates, know and can do. This allows the educational institutions to take steps to document the achievement of these competencies and to manage any challenging areas.

Programs may find it helpful to re-organize their basic competency statement into broad categories with appropriate knowledge, skills and values for each. The resulting fewer outcomes may allow a more manageable assessment task.

Basic Methodologies for Conducting Outcomes Assessment

Reliability, Validity and Accuracy

A reliable assessment tool provides data where the variance in the findings is primarily a result of the differences in the sample with respect to what is being measured, rather than bias or other knowledge or skill (Palomba & Banta, 1999). Clarity in the statements, adequate time to complete the instrument and good training for the assessors are vital components of achieving a reliable tool (Palomba & Banta, 1999).

Validity implies that the tool measures the desired characteristic. This is a critical attribute for an assessment tool. Essentially, validity represents the honesty of a tool (that the tool actually measures what it is designed to measure and that this is known; Palomba & Banta, 1999).

Accuracy describes whether a tool is a true measure of an outcome. Written tests may be measures related to a clinical skill. Often, however, the true measure of a clinical skill is a demonstration of that skill in an applied state, such as performing the skill on a patient.

Ideally, assessment instruments should provide evidence of their reliability, validity and accuracy. The NBEO examination provides data to support these factors in their reports. Many local instrument test packages also provide standard error of measurement data to assist in judging reliability, validity and accuracy. Unfortunately, many locally developed assessment tools must operate without substantial measures of these characteristics. Such tools should have face validity i.e., the tool is judged to be valid by an examination of its nature.

Surveys

Surveys are a common method to obtain perceptions about particular aspects of an institution, program or course. Generally, survey questions could consider some or all of the following attributes of a given aspect (Table 5). Frequently, surveys must be limited to only the most important questions for an outcomes assessment plan as a matter of practicality. Appendix 1 provides a listing of possible questions for important areas required by the COE. It is important to remember that good outcome assessment plays a critical role in the ongoing management of a program.

Table 5. Common areas addressed by assessment survey questions.

AREAS FOR SURVEY QUESTIONS FOR ASSESSMENT PROGRAMS
1. I am familiar with _____ for the School of Optometry.

2. The mission, goals and objectives for _____ of the School of Optometry are clear.
3. There is appropriate emphasis on the mission, goals and objectives for _____ of the School of Optometry.
4. I am satisfied with the mission, goals and objectives for _____ of the School of Optometry.
5. I support the mission, goals and objectives for _____ of the School of Optometry.
6. The School of Optometry is achieving its mission for _____.
7. Rate the achievement of the following goals and objectives for _____ of the School of Optometry.

Assessment Tools

Appendix 3 contains a variety of assessment tools. These tools include copies of surveys of students, faculty, alumni, residents, peer institution faculty, exit surveys, exit interviews, mid-curriculum surveys, and a number of other related tools.

An assessment grid may be a useful method of tracking the objectives for each assessment tool. This grid has the assessment tools along one axis and the competencies or standards being assessed along the other. This can be a useful method assuring that all competencies are assessed.

Similarly, individual courses may find it helpful to make an outcome vs. course objectives grid. This may assist in tracking the methodology to assess each course objective. Individual course learning objectives should exist for each course to guide students in approaching the material that is being presented.

A good goal for a curriculum is to have coordinated syllabi. Coordinated syllabi may be useful in tracking curricular contents across courses. This provides the faculty and the curriculum committee a method to understand what is being taught and where. This process may also be helpful in educating faculty about the curriculum.

Selecting or developing an assessment tool should not be taken casually. Assessment tools should span the program and the nine-accreditation standards. Surveys are good methods of obtaining data and can be relatively inexpensive. Data collection should be undertaken for areas other than the curriculum on a judicious basis. The curriculum demands an ongoing, multi-factorial process. Unfortunately, there are few, if any, commercially available assessment tools designed for professional optometric programs outside of NBEO and OAT examinations.

Assessment Programs

Selecting appropriate assessment tools for a School or College of Optometry can sometimes be daunting in view of the large number of possible tools for the nine standards of the COE accreditation requirements. Appendix 2 provides an account of many, many possible tools for the nine standards. This Program Assessment Activity Matrix can be a good source to review in constructing an assessment program since it provides data about many aspects of many possible assessment tools.

Programs may find it useful to select a peer group of optometric institutions that have a similar mission. Within the overall group of optometry schools and colleges, there may be at least two natural peer groups, the public and the private schools and colleges. A

peer group allows appropriate comparison of data. Comparing the total research budget of a large, public institution to the budget of a small private institution may be inappropriate and misleading.

Designing & implementing an outcomes assessment plan is obviously a substantial task and requires the support of the administration of the school or college. Certainly, the task should be assigned to someone or some group. Often this could be either the curriculum committee or an assessment committee. One of the important features of assessment is that to be effective, it must be ongoing and regular. Assessment must not be limited to accreditation self-studies.

Assessment programs have many limitations. As we all know, “garbage in, garbage out.” Starting slowly and carefully is important in assessment. Keeping the program small and efficient is important, particularly initially. The individuals collecting the data should be constantly asking the receivers and users of the data, “Is this useful?” Or, “Does this information help in managing the program?” If the answers are not strongly “yes,” then the assessment effort should be revised. Managing a program or course or institution requires an immersion of the manager into the environment. When this occurs, assessment data provides data that substantiates impressions. The assessment data must be properly interpreted and, of course, most issues in academia are complex and challenge even bright, dedicated people.

Since assessment is an integral part of the strategic management of a program, good assessment requires the integration of the assessment into the program and its management.

There are many challenges to outcomes assessment. Some of these are listed in Table 6.

Table 6. Some challenges to outcomes assessment.

CHALLENGE TO OUTCOMES ASSESSMENT
1. Determining the responsibility for assessment.
2. Achieving goals and objectives for all facets of the program.
3. Developing or selecting the assessment tools.
4. Making sure that the tools are appropriately reliable, valid and accurate.
5. Incorporating assessment into the institution.
6. Selecting a peer group.
7. Obtaining data regarding perceptions or performance of all facets of a program.
8. Organizing and tracking outcomes data.
9. Understanding outcomes assessment data.
10. Reporting outcomes data regularly.
11. Using outcomes data.

Assessment of Standards for Accreditation for Professional Optometric Degree Programs 2000

The Program Assessment Activity Matrix (Appendix 2) has a discussion of issues involved in the assessment of each of the nine standards for accreditation by the COE. A brief discussion of an assessment approach for each standard is contained below. The Program Assessment Activity Matrix discusses issues, the assessment approach and provides a variety of assessment possibilities for each standard. The Matrix also contains a listing of the characteristics of each assessment tool.

Standard I. Mission, Goals and Objectives

The assessment approach for the area of mission, goals and objectives is twofold:

1. An examination of the mission, goals and objectives statement for clarity, completeness, appropriateness and accuracy; and,
2. Documentation of opportunities for examination and revision of the mission, goals and objectives.

The assessment also may include an examination of the style of these statements. Generally, evidence of revision after discussion in new versions of the School catalog and surveys of the stakeholders on a periodic basis is sufficient to achieve a good assessment outcome for this area. In addition, a close look at these statements by the faculty during accreditations may be a helpful anchor point. A comparison to other program's statements may assist in this process. The assessment process for the other eight standards is probably the truest indicator of the practical meaning of mission and goals of the institution. Therefore, in some sense, an assessment of the mission, goals and objectives is also included in assessments of the other standards.

Standard II. Governance, Regional Accreditation, Administration, and Finances

Assessing some portions of this standard is a matter of confirming that certain authority, policies, credentials or accreditation exists. As such the best assessment tool is a verification process that assures that these required elements are in place on a periodic basis. One important element of this assessment is to examine the source documents for each. For example instead of using a curriculum vita as evidence of the CEO's Doctor of Optometry degree, a transcript or a diploma should be used. Certain assessment tools are designed to provide opportunities for comment, discussion and revision of the structures used for governance and administration. Of particular importance is evidence of the use of these data by the institution as opposed to simply gathering the data. Evidence of use may be provided in minutes of faculty or executive meetings or in changes in survey data over time or other linkages between the tools and the daily governance or administration of the program.

Because of the scope and complexity of the area of finance, a simple assessment approach may prove useful unless there are particular areas that seem questionable and are worthy of close examination. Probably a good approach is to assemble data of three basic types:

1. Financial performance data. This data should include a review of the basic financial trends for income and expense categories over time, at least five years. This area can include a more intensive review of certain areas such as faculty or staff salaries and benefits.
2. Perceptions of stakeholders. Surveys of various sorts can be designed to examine the impressions of faculty, staff, students and other interested groups about the financial management of the institution.
3. Evidence of discussion, revision and use of assessment data. A very important aspect is to demonstrate that the appropriate financial data is collected on an ongoing basis, that appropriate individuals including faculty examine and discuss the data; and, that the process is arranged so that appropriate adjustments are made on a periodic basis.

Standard III. Facilities, Equipment and Resources

As a result of the standard's wording, most of the assessment probably should involve an examination of perceptions of the parties involved in the teaching and patient care (faculty, students, alumni, patients and staff). Certain accreditation agencies for patient care (e.g., Joint Commission on Accreditation of Health Care Organizations, <http://www.jcaho.org/index.html>) exist and these agencies potentially may be useful sources of benchmark data regarding patient care. Comparing teaching facilities to other programs may provide a useful subjective benchmark for faculty assessors. The primary benefit of comparisons like these is not so much to provide an "OK" or "not OK" outcome for the assessment but rather to provide ideas for the discussion of desired improvements to these areas. Finally, the assessment program should provide assurance that there are regular opportunities for interested individuals to discuss and recommend improvements to these areas.

The approach to assessing the library falls into a tri-partite pattern:

1. An assessment of the magnitude and scope of several library resources such as the number of volumes or the number of serials available or the number and scope of electronic databases available.
2. A survey of the various users of the library resources to determine their satisfaction with and their perceptions of the library. And,
3. Documentation of an ongoing, continual cycle of discussion, formation of objectives, assessment of outcomes and revision as applied to the library.

Most important of all is to assure that this critical area is considered on a periodic basis and that planning occurs to assure its continual availability and competence.

The approach required for the informational services area involves the following items:

1. An assessment of the presence of appropriate goals and objectives for the area to guide the process.

2. A comparison of resources provided and practices used by IS at other institutions may be a useful guide in formulating opinions about the IS at a particular institution.
3. An examination of user satisfaction with the area and perceptions of strengths and weaknesses. And,
4. Documentation of an ongoing process of goals, outcomes, assessment and revision by the appropriate persons such as IS team, administration, faculty, staff, students and alumni.

Standard IV. Faculty

The approach for assessing faculty includes four basic parts:

1. Assembling goals and objectives for individual faculty and for the faculty as a whole allows an examination of the progress of a faculty.
2. Survey data can be helpful in understanding the perceptions of faculty about the many aspects of their positions.
3. Cross-program compilations can be useful indicators of a faculty's performance. And,
4. Documentation of the examination of goals and objectives, assessment of outcomes and then using that information to modify the outcomes is a critical aspect of assessing faculty.

Standard V. Students

The approach for an examination of students is greatly assisted by survey data provided by ASCO that provides such data as entering GPAs, OAT scores and related data for all institutions. This simplifies cross-program comparisons of entering student characteristics. Perceptions of student needs and perceptions of program strengths and weaknesses can be accomplished by means of survey instruments. Program outcome data such as job success and satisfaction require a survey of alumni. As with each standard, perhaps the most important feature of an assessment program is to assure that continual examination and modification of program characteristics that affect students goes on periodically and regularly.

Standard VI. Curriculum

The assessment of a complex organ such as the curriculum must have many approaches and include measures of program outcomes. The most basic measures can include the following:

1. NBEO pass rates;
2. State board of Optometry pass rates; and,
3. Individual course basic competency examinations.

Particularly if data is examined over time, these can be very effective measures of program success. NBEO scores also are commonly used to consider the effectiveness of individual courses within the curriculum. Individual course competency exams can be designed to assure the presence of critical skills.

Perceptions of the curriculum can be collected from student evaluation of teaching at the time of the course or at specified times within the curriculum such as mid-curriculum or from student exit surveys. Student exit interviews are useful ways to help the curriculum committee (or others) gain a deep, first hand understanding of the issues facing students regarding the program and the curriculum. The first hand experience can be an effective tool for motivating curriculum members to make changes.

Finally, probably the most important feature of a curriculum assessment process is to document occasions for thoughtful and regular examination of the state of the curriculum, its outcomes and modification as necessary and appropriate.

Standard VII. Clinic Management and Patient Care Policies

This is an area where the most important features of the assessment process should be:

1. To document the presence and viability of the required policies, manual and such;
And,
2. To document the presence of appropriate review, discussion and modification of the portions of the program in this area.

Standard VIII. Research and Scholarship

The assessment of research and scholarship for a program or an individual revolves around three aspects:

1. Documentation of various indicators of research and scholarship productivity including research dollars, number of publications and number of citations.
2. Compilation of perceptions of appropriate individuals regarding the status of research and scholarship and the identification of strengths and weaknesses.
3. Determination that an ongoing cycle of review and modification exists to improve research and scholarship.

Standard IX. Residency Education

We recommend that an assessment of residency programs include the following aspects:

1. The number and variety of residency programs;
2. The accreditation of the residency programs offered by an institution;
3. Perceptions of appropriate individuals about the residency program; and,
4. Documentation that an appropriate cycle of strategic planning is ongoing within the institution.

Some Notes

Assessment techniques should be designed to protect the confidentiality of respondents. The assessment program should not make anyone or any institution look bad. Assessment generally should be aimed at broad measures of perception or performance and should not nitpick.

Finally

Managing an educational program in Schools and Colleges of Optometry continues to be a challenging task. Fully utilizing the power and clarity provided by an effective assessment program can provide significant managerial assistance while at the same time providing confidence in the outcomes of the program; demonstrating evidence of success; and, illuminating opportunities for improvement. Assessment, like a good case history, never is truly finished with each outcome and assessment giving light to better and better ways to achieve the mission of the program.

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Appendices

Appendix 1. Survey Questions Resource Catalog.

Appendix 2. Program Assessment Activity Matrix

Appendix 3. Assessment Tools

Appendix 4. Guidelines for Vision Science Libraries, Association of Vision Science Librarians

Additional Resources

Beck DE. *Module 5: Assessment of Instructional Effectiveness*. Health Professions Education Scholar, Teaching Excellence and Scholarship Development Resources for Health Professions Educators. <http://www.educationscholar.org/>

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Appendix 3. Assessment Tools.

Student Evaluation of Teaching/Curriculum (SET) surveys

NBEO scores

Alumni surveys (5 yrs, 10 yrs)

Surveys of externship preceptors

Instructor feedback survey

Student exit interviews

Self-reported alumni state board results

Employer surveys

Residency preceptor surveys

Patient surveys

Course Embedded Assessment (Individual course syllabi, exams and competency tests)