NVCC Student Learning Outcomes Assessment Handbook

Adapted from
Montgomery College
(MC)
Montgomery County, Maryland

Presented by the Office of Institutional Research and Effectiveness (OIRE)

Nov 2017

Student Learning Outcomes (SLO) Assessment Handbook
Naugatuck Valley Community College

Part One-Overview and Background of Outcomes Assessment (OA)

Part One of this Handbook:
1. explains Outcomes Assessment
2. gives the background of NVCC's Outcomes Assessment Process
3. explores common concerns about Outcomes Assessment

In recent years, institutions of higher education across the country, and internationally, have recognized that a full commitment to teaching and learning must include assessing and documenting what and how much students are learning and using this information to improve the educational experiences being offered. While there is certainly a strong external drive for Outcomes Assessment, NVCC's approach to Outcomes Assessment focuses primarily on improving student learning. In many ways, Outcomes Assessment is a commonsense process that we, as educators, follow already. When we articulate the main goals for a course, check to see whether students achieved them, and then use the results to make our courses better, we're on the way to Outcomes Assessment. NVCC's Outcomes Assessment approach takes advantage of what we are already doing in areas of General Education, the Multistate Collaborative Initiative, and externally accredited programs and ties these efforts to the program and discipline review processes.

Overview of Outcomes Assessment (qtd. liberally from MC)

What is Outcomes Assessment?

Outcomes Assessment (OA) is the process of collecting information that will tell an organization whether the services, activities, or experiences it offers are having the desired impact on those who partake in them. In other words, is the organization making a difference in the lives of the individuals it serves?

In higher education, at its simplest, Outcomes Assessment has three stages:
1. **defining** the most important goals for students to achieve as a result of participating in an academic experience (outcomes)
2. **evaluating** how well students are actually achieving those goals (assessment)
3. **using** the results to improve the academic experience (closing the loop)

Who benefits from Outcomes Assessment?

One of the great advantages of Outcomes Assessment is that when done in a systematic way, it has benefits for people throughout the institution, from our students to the faculty to the administration.

For students, Outcomes Assessment will:

- communicate clear expectations about what's important in a course or program
- inform them that they will be evaluated in a consistent and transparent way
- reassure them that there is common core content across all sections of a course
- allow them to make better decisions about programs based on outcomes results

For faculty, participating in Outcomes Assessment will:

- help them determine what's working and what's not working in their courses or programs
- facilitate valuable interdisciplinary and intercampus discussions
- provide powerful evidence to justify needed resources to maintain or improve programs
- allow them to tell their story to individuals outside their area (e.g. administrators, employers, prospective students, transfer institutions, politicians)
- provide reassurance that all faculty teaching a particular high demand course agree to address certain core content

For administrators, implementing college-wide Outcomes Assessment will:

- demonstrate an institutional commitment to continually improving the academic programs and services offered by the College
- provide valuable data to support requests for funds from state and local government and private donors
- demonstrate accountability to funding sources
- provide valuable data for academic planning and decision-making
- enable them to inform elected officials, local businesses, and potential donors about NVCC's impact on our students and our community in a very compelling and convincing way

Finally, systematic Outcomes Assessment is now a **requirement for accreditation** by all higher education accrediting organizations. In fact, NEASC's Standard 8 is focused exclusively on assessment and makes up the bulk of written self studies.

Why aren't grades enough?

When faced with the news that it's your discipline's turn for Outcomes Assessment, it is tempting to ask why you can't just look at final grades to determine whether a course is successful. Although counting letter grades is easy, it provides neither consistent nor meaningful information about student success in a multi-section course.

In Outcomes Assessment, the terms "scoring" and "grading" have different meanings. Scoring refers to the process of marking an assessment instrument to get data about how

well students across all sections of a course have achieved its outcomes. Grading is the process of marking an assessment instrument (i.e. a writing assignment or test) for the purpose of assigning a student a grade for the course. Scoring needs to be done consistently across all sections; grading can be done differently in each section if instructors desire. In no way does the Outcomes Assessment scoring process infringe on an instructor's grading.

Unless every instructor teaching a particular course assigns final course grades in exactly the same way (same assignments, same exams, same weights, same grading approach), you cannot be confident that one section's A carries the same meaning as another section's A. More significantly, final grades are an aggregate assessment of a student's entire body of work for the course, often including attendance and class participation. Consequently, looking at a distribution of grades will provide little, if any, useful information about the degree to which students are learning skills and information that instructors deem most important in the course.

Grades do not provide:

- specific information about students' performance on core learning outcomes
- meaningful data across sections
- objective student data which can be used for improvement of student learning or recognition of student achievement

It is critical, however, that students do not approach Outcomes Assessment assignments or exam questions thinking they are of no consequence, as they would likely not take assessments seriously, thus creating a negatively false impression regarding the effectiveness of our courses. Regardless of how instructors grade the instruments, they should communicate to students the value of the outcomes and the instruments used to assess them.

NVCC's Outcomes Assessment Approach

What values guide NVCC's approach to Outcomes Assessment?

1. Faculty are best suited to determine the intended educational outcomes of their academic programs and activities, how to assess these outcomes, and how to use the results for program development and improvement.
2. Every academic unit should be expected to engage in Student Learning Outcomes Assessment. Outcomes Assessment should not be performed only in selected academic areas of the College.
3. The results of Outcomes Assessment should be used to evaluate the effectiveness of academic programs, academic activities, and student services, and not the performance of individual faculty or staff.

4. Outcomes Assessment should be as simple and manageable as possible. The process cannot become so onerous that it hampers or interferes with the delivery of the educational experience that it attempts to assess and improve.
5. Outcomes Assessment should be tied to General Education and/or Program/Discipline Review by mapping course outcomes to those at the program level.
6. Faculty must use the information collected to develop and improve academic programs, that is, they must "close the loop." If Outcomes Assessment is used primarily as a reporting tool, then this effort will have been deemed a failure.
7. OIRE and academic deans and directors must provide leadership and accountability for the process.
8. Outcomes Assessment must be ongoing and performed on a regular basis within each academic area; it cannot be episodic. In essence, it must become an academic habit.

What is NVCC's approach to Outcomes Assessment?

There is no one right way to implement Outcomes Assessment. Across the country colleges have proceeded in a variety of ways, each adopting an approach they feel is best suited to the circumstances of their institution.

Within the Outcomes Assessment process at NVCC, outcomes have been categorized into two main types: Student Learning Outcomes (SLO) and Student Progress Outcomes (SPO).

S*tudent Learning Outcomes* (SLO) directly describe what a student is expected to learn as a result of participating in academic courses, experiences, and programs at the College. They focus on knowledge gained, skills and abilities acquired and demonstrated, and attitudes or values changed. These, of course, are the outcomes that are of most interest to educators, but they are also the most challenging to measure and may require a number of iterations before the data collected are deemed valid and reliable.

Student Progress Outcomes (SPO), conversely, reflect student progress in course sequences; in transfer, certificate, and degree programs; in majors; and in workplace experiences after they leave NVCC. Although not directly descriptive of what a student has learned while at the College, SPO nonetheless provide indirect measures of student learning, as well as describing outcomes to our programs that the students themselves may consider to be most important. Academic units should work with OIRE to collect this data.

Because of their immediate connection to assessing student learning, the primary emphasis of the current Outcomes Assessment process and this handbook is SLO. However, SPO are also required for all Academic Program Reviews.

What priorities guide our approach?

Our SLO assessment approach is guided by three priorities:

- directly involving *all* faculty who teach the course being assessed in the assessment process itself
- making the process as unobtrusive as possible in how faculty plan, manage, and deliver their courses
- minimizing potential sources of biased data by maximizing consistency in performing the assessments

What are the key elements of the Outcomes Assessment process that honor these priorities?

Courses should have a set of college-wide, program mapped common learning outcomes

Course outcomes are based on and mirror the student learning expectations agreed on by the discipline when the course was last approved by CEAC. These outcomes must also be mapped to either program or General Education competency outcomes. Faculty from the discipline are asked to agree on the most important learning outcomes at either the course (for Discipline Review) or program level (for Program Review and General Education), three of which will be assessed for courses during each discipline or program review cycle. This does not mean that faculty will be required to teach identical content across the entire course, nor does it dictate how faculty choose to deliver any of the course content to their students. What is expected is that during an assessment cycle, the same course outcomes will be assessed using the same methods regardless of where or how it is taught.

The entire discipline participates

Assessing learning outcomes for courses should be important to all faculty in the discipline. Therefore, the process is structured to engage all discipline faculty directly in the assessment activity as well as in discussions related to the process. Although this approach may require more effort than sampling specific sections or simply soliciting volunteers, it is more equitable and the participation of all faculty results in a full appreciation of the importance of the core learning outcomes, the worth of assessing them, and the value of coming together for meaningful discussions about both.

Embed assessment instruments into the course

When assessing Student Learning Outcomes in a course, the easiest and least obtrusive way for faculty and students is to weave the assessment instrument (assignment, exam questions, etc.) into the course rather than have an obvious, add-on test or assignment that doesn't blend naturally into the course.

In outcomes lingo, course-embedded assessments are assessments that make use of the actual work that students produce in their courses. The assessments may simply select from work that students do in various courses or may be designed overtly for assessment purposes and then incorporated into the courses. The faculty members teaching the courses give grades to the students, but the work selected for assessment is evaluated based on Student Learning Outcomes.

Ensure consistency through common outcomes, common instrument, common scoring
Faculty members are not expected to teach every section of a multi-section course in exactly the same way. However, the best way to get meaningful and reliable results for Outcomes Assessment is to have consistency on both the outcomes being assessed and the method by which they are assessed. For this process, that means establishing a set of collegewide common core outcomes for a course, assessing three of these in a given assessment cycle in all sections using a common instrument, and scoring the assessments using a common rubric or scoring approach.

Remove any incentive for individual faculty to bias the results in their favor
It is natural for faculty to be concerned about how assessment data about their students will be reported and used. The Associate Dean of Academic Affairs and Institutional Effectiveness who oversees the assessment policies and procedures in this document ensures that data collected as part of this process will never be reported in a way that would allow it to be linked to an individual student or faculty member, and that assessment results will not be used in the faculty evaluation process. In fact, using assessment for evaluation is not only against union contract language but it also taints the assessment data collected, rendering it useless. This guarantee, combined with the use of a common assessment instrument and scoring rubric should remove any incentive for individual faculty members to bias the assessment process in order to "make themselves look good."

Common Concerns about Outcomes Assessment

Throughout this handbook, you will find information and advice on how to work through some potential stumbling blocks in the Outcomes Assessment process. In addition to these logistical concerns, some faculty members may be concerned about some of the following broader issues.

Does this process affect my academic freedom?

Nothing inherent in the NVCC Outcomes Assessment process interferes or violates the academic freedom of the instructor. Assessing outcomes is simply about faculty determining whether students are learning those things they deem most important, and then using the information to make curricular and pedagogical changes where appropriate. Nothing in the NVCC process dictates in any way how faculty choose to deliver the course content or how they grade their students. Requiring faculty, every few semesters, to use a common instrument to assess three core course outcomes is far less proscriptive than asking faculty to use a common text, a common requirement in higher education that is generally accepted by faculty as reasonable.

Will this be more work for us?

To some degree yes, but we are committed to not allowing the Outcomes Assessment process to become burdensome in a way that will interfere with a faculty member's commitment to teaching. The vast majority of time faculty will commit to this process will be confined to intra and inter-disciplinary discussions of what are the most important

student outcomes, how these can best be assessed, and what improvements, if any, are suggested by the assessment results. Faculty who serve as assessment committee chairs will work with OIRE to handle the technical aspects of the assessment, e.g., data collection and analysis, for this process. These assessment committee chairs should account for this time when constructing Additional Responsibilities.

Will assessment information be used to evaluate faculty?

Absolutely not. This process is about assessing aggregate student performance in programs, courses, and services, not individuals. In fact, mechanisms and guarantees have been put in place to ensure that the results will ***never*** be reported in a way that will permit them to be associated with any individual, faculty or student.

Isn't the primary purpose of Outcomes Assessment to find fault with things?

No, this is not about finding fault with programs, courses, or individuals; it is about agreeing on what is most important in our courses, communicating that to all stakeholders, and finding out what's working and what's not. Great assessment results can and should be used to trumpet success, market programs, motivate faculty and students, and justify increased resources. Less than satisfactory assessment results should lead to improvements in programs, courses, and services.

Will the results have complete statistical validity and will they be useful?

NVCC's assessment process strives for statistical validity. Assessment plans should involve the collection of **all** student work from **all** faculty teaching courses targeted for the assessment, including faculty teaching online, hybrid, or accelerated course sections. Student work must be redacted to ensure that no features of the work identify the student or faculty member. However, student IDs may be included to allow aggregate data to be compared to student demographic information.

If possible, all student work should be scored by at least two faculty scorers to ensure inter-rater reliability. If the number of student works makes universal scoring unfeasible, a random, statistically significant sample must be generated and each item in the sample must be reviewed by at least two scorers using a common rubric.

Faculty scorers should be trained in order to ensure that they all share a common understanding of the language and use of all assessment tools (e.g. rubrics, appropriate responses to exam questions). Assessment Committee Chairs should work with the Associate Dean of Academic Affairs and Institutional Effectiveness to provide this training to faculty scorers.

The results of this process will not only have validity but will most certainly be useful in the way this process intends – to give faculty members meaningful information about how their students are doing at achieving the goals they themselves defined.

Isn't this just a slippery slope leading to standardized testing?

Absolutely, and unequivocally, not!! Such a direction has never even been contemplated by anyone, including administrators, involved with Outcomes Assessment at NVCC. In fact, the entire Assessment Movement in Higher Education has been a response against standardized testing imposed on K-12 systems through government initiatives like "No Child Left Behind."

Will the results determine whether my course remains in the General Education program?

The short answer is no. Student performance data for specific assessment projects will not affect whether a course remains a General Education course; however, demonstration of the degree to which individual courses support specific competencies as revealed through participation in the assessment of General Education competencies and areas of proficiency, is a factor in maintaining General Education recognition. All faculty teaching courses which are part of the General Education core must participate in the General Education Competency Assessment process.

Is this just another academic fad that will be gone in a couple of years?

Not likely. The Outcomes Assessment movement has been a serious one for at almost twenty years, and its momentum is growing not waning. Every higher education accreditation agency across the country now includes the assessment of learning outcomes as one of their highest priority criterion. It is the single largest aspect which must be explored in all NEASC self-studies.

Most Important Things to Remember About Outcomes Assessment at NVCC

1. Outcomes Assessment improves student learning by systematically evaluating student performance on specific learning outcomes.
2. NVCC's Outcomes Assessment process is based on college-wide participation at the course and program levels.
3. Outcomes Assessment at NVCC is faculty driven and course embedded.
4. It is an on-going, not episodic, process linked to Program and Discipline Reviews as well as General Education requirements.
5. It is about evaluating the effectiveness of aggregate student performance in programs and courses, not individual evaluations.

Part Two: A Closer Look at the Outcomes Assessment Process

Part Two of this Handbook:
1. explains the NVCC Outcomes Assessment process
2. identifies the requirements and expectations for Outcomes Assessment at NVCC
3. gives schedules and timelines for the completing the Outcomes Assessment process
4. describes responsibilities in Outcomes Assessment at NVCC

Outcomes Assessment at NVCC is tied to Program and Discipline Review as well as the ongoing General Education assessment schedule. Faculty participate under the aegis of General Education Outcomes Assessment as well as Discipline or Program Review. Assessment committees develop Outcomes Assessment plans to assess Student Learning Outcomes (SLO). Major stages of NVCC's Outcomes Assessment process are **planning**, **implementation**, and **presentation of findings**.

The NVCC Outcomes Assessment Process

What are the minimum expectations and requirements?

In designing this process, we tried to balance making it as easy as possible with making it valid, reliable, and meaningful. To that end, below are the minimum expectations and requirements for completing an Outcomes Assessment project.

- **Assess at least three outcomes** – These outcomes will come from either the General Education Competencies (Gen Ed Assessment), Program Outcomes as listed in the college catalog (Program Review), or course learning outcomes as listed in course syllabi (Discipline Review).
- **Obtaining faculty consensus** – For the project to be a success, it is essential that there be faculty consensus about the outcomes and the plan to assess them. The faculty workgroup members, department chairs, coordinators, and GEACC representatives will be the leaders in helping foster this consensus. Division Leaders and the Associate Dean of Academic Affairs and Institutional Effectiveness will provide support for respective faculty throughout all phases of the assessment.
- **Common definition of outcomes** – All faculty teaching the course must share the same definition for these three outcomes, regardless of who teaches it or where. Faculty should establish a rubric to further refine these definitions and ensure that all scorers using the rubric share the same definitions.
- **Common assessment instrument and scoring scheme** – All faculty members must use a common assessment instrument and score it the same way for the purposes of the Outcomes Assessment project. As discussed in Part I, faculty members may grade the assessment instrument however they wish for the purposes of calculating their own course grades.

- **Share outcomes with students** – For students to take the process seriously and for the process to be as meaningful as possible, students must be aware of the expected learning outcomes for the course and how their performance on these will be assessed. All this should be communicated early in the course, either as part of a syllabus or through some other
printed material. If a rubric will be used to score the assessment, students should receive this as well, and before they participate in the assessment.

- **Data collection process** - Faculty participating in the assessment are expected to redact student submissions to ensure anonymity and forward the work to the Assessment Committee Chair (Program or Discipline Review point person or GEACC Competency Rep). The chair will work with OIRE to record ID numbers for all student submissions and, if desired, to upload work into TaskStream's Aqua Assessment platform. OIRE will also assist in the development of a feasible sample of student work for assessment and will help with the training of faculty scorers.

- **Use the information** – OIRE will assist the chair with data analysis and reporting. This report must include a section on "Closing the Loop." This means using the results of an Outcomes Assessment project to improve whatever it was that was being assessed. Thus, it is vital that faculty participating in the assessment discuss the results and use them to celebrate and build on its strengths and to discuss and remediate its weaknesses.

- **Presentation to the college community** – Assessment Committee Chairs will be expected to present their process, findings, and conclusions to the college community through scheduled presentations.

The Outcomes Assessment Process - the Nitty Gritty

Typical two-year timeframe

In general, an Outcomes Assessment project will take two years to complete, from planning to implementing recommendations. Disciplines participating in General Education Outcomes Assessment and course specific Outcomes Assessment can expect to follow the timeframe below.

- Semester 1 – planning for the Outcomes Assessment project; completing an Outcomes Assessment Plan
- Semester 2 – providing an overview of the assessment plan as part of the Program/Discipline Review process and educating participating faculty about the process; revising the Plan as needed; collecting and analyzing Student Progress Outcomes (SPO).
- Semester 3 – full implementation of the Plan in all sections of the course
- Semester 4 - data analysis and report to GEACC and the college community; implementing recommendations based on results.

Generally, Semester 1 will be a fall semester. Some disciplines may need to move away from the recommended schedule as they get further into the process. If you think this might happen, talk to your division leader as well as the Associate Dean of Academic Affairs and Institutional Effectiveness to plan a revised schedule.

Definition of key terms

- **Student Learning Outcome (SLO)** – An outcome that describes what a student is expected to learn as a result of participating in academic activities or experiences at the College. SLO focus on knowledge gained, skills and abilities acquired or demonstrated, and attitudes or values changed.

- **Assessment method and instrument** – The assessment method is the general assessment approach used to measure whether students have achieved an outcome, such as a test (multiple choice, short answer, and/or essay questions) or an assignment (short reaction paper, research paper, speech, multimedia project, etc.). The assessment instrument is the actual product (assignment instructions, test, etc.) that is handed out to students, specifically geared to assess whether students have achieved particular outcomes.

- **Rubric** – A printed set of scoring guidelines (criteria) for evaluating work (a performance or a product) and for giving feedback to students. Generally, rubrics specify the criteria for each level of performance on each dimension of the learning outcome.

- **Data demographic variables** – Student demographic or course related variables, such as credits completed, or whether the course was taught online or acceperated, that might significantly influence the likelihood of a student achieving the outcome. It is often very useful to break-out the assessment data according to one or more of these variables to better understand your Outcomes Assessment results.

Outcomes Assessment Tracks

General Education Outcomes Assessment

The intent of the General Education Outcomes Assessment process is to evaluate the effectiveness of the General Education Program, and General Education courses, in developing the broad-based academic skills and values that exemplify a degree in higher education and are embodied in the General Education Competencies and Outcomes. Our General Education Assessment process is a course based process, so assessment of student performance on General Education competencies takes place within the context of General Education courses.

The primary goals of General Education Outcomes Assessment at Montgomery College are first to improve students' performance in the General Education Competencies at the course level and second, to demonstrate the overall impact of the General Education Program at NVCC.

NVCC's General Education courses contribute to developing a well-rounded student's general knowledge, values, skills and ability to participate in and contribute to our community. NVCC has adopted a set of General Education Competencies that align with CSCU's TAP Transfer Ticket Degree Programs as well as NEASC accreditation requirements. Although every course offered at NVCC has a role in giving students the opportunity to practice and improve in each of the appropriate General Education competencies and Areas of Proficiency, each course in the General

Education Program has a greater responsibility toward helping students achieve these General Education goals. Please see **NVCC's college catalog** for the current list of General Education Competencies. Please refer to the General Education webpage at http://www.nv.edu/academics/academic-programs/general-education for more information about the General Education Program.

Faculty who teach courses approved for the General Education Program are required to assess the primary competencies that faculty have identified as part of the General Education application process. With the assistance of GEACC Competency experts, the course faculty develop course based assessments which demonstrate student performance on the selected competency outcomes.

Results of General Education Assessments are presented in report and oral form to the General Education Assessment and Curriculum Design Committee as well as the college community. However, as with all course based assessments, no instructors will be identified through data reporting or other reports. Although one set of assessment results will not affect a course's General Education standing, participating in General Education Assessment is required for all General Education courses.

Program and Discipline Outcomes Assessment

Learning outcomes assessment is included as part of all Program and Discipline Reviews. These occur every five years. In order to prepare for this assessment, Program Coordinators need to work with their faculty in order to map course level learning outcomes to the program outcomes listed in the college catalog. This mapping demonstrates where and how students gain the knowledge and skills promised by the program in its outcomes. It also reveals where faculty should focus their efforts when assessing particular program outcomes.

Once faculty have mapped course to program outcomes, the Program Review Committee Chair works with faculty to identify three program outcomes for assessment. The chair will also work with faculty teaching courses mapped to these outcomes to design assessment methods, instruments, and rubrics to carry out the assessment. OIRE will provide assistance with data collection and analysis, and the chair will generate a report which includes next steps for "closing the loop."

For Discipline Review, the chair of the Discipline Review Committee will lead faculty teaching in the discipline to identify 3 key course level learning outcomes as well as assessment methods, instruments, and rubrics to carry out the assessment. OIRE will provide assistance with data collection and analysis, and the chair will generate a report which includes next steps for "closing the loop."

Implementing the Assessment Plan

Preparing for the Assessment - Who should I include and how should I use the results?

Every Outcomes Assessment Plan includes one semester for building the assessment plan and preparing the faculty for assessment. Such preparation will ensure that your Outcomes Assessment Plan works as intended. Think about factors that may potentially cause problems

when administering the assessment on a full-scale basis and address them in your plan to be included in your Discipline/Program Review. Some questions to consider include the following:

- Is the timing of the assessment appropriate?
- Are the assessment questions and instructions clear to students?
- Are the scoring instructions clear to faculty who are participating?
- Do participating faculty understand how to redact identifying data while maintaining the possibility to collect demographic data?
- What method do you plan to use to ensure timely and effective communication with participating faculty members?

What do I need to do to plan for full implementation?

Unquestionably, the key to a successful full-scale implementation of an Outcomes Assessment Plan is clear and timely communication with all participating faculty, including adjuncts, who will be teaching the course. These individuals need to be made fully aware of all aspects of the assessment plan *prior to the start of the semester* so that they can plan their course without any mid-semester surprises. In particular, participating faculty must be familiar with the following no later than the beginning of professional week:

- the purpose in assessing learning outcomes
- the learning outcomes that are being assessed
- the common assessment instrument to be administered
- when the assessment is to be administered during the semester
- what students should be told about the assessment and its purpose
- the common rubric or answer key to be used in scoring the assessment
- how to submit student work
- the fact that assessment results will never be reported in a way that could reflect on the performance of an individual faculty member or student

Some departments may want to prepare and distribute a memorandum to all faculty who will be participating in the assessment that provides information on the items listed above.

Observations and Recommendations - Closing The Loop

How do we "close the loop" to the Outcomes Assessment process?

During the semester following the full-scale assessment, data will be analyzed by OIRE, and the Assessment Committee Chair will prepare a report that will be shared with the college community and the appropriate academic divisions. The report needs to include the following information:

- the learning outcomes that were assessed
- the assessment instrument
- the assessment rubric, if one was used
- the assessment process, including any limitations or difficulties in the process
- the assessment results
- the next steps which will be pursued to "close the loop" between results and practice

Observations should identify areas of high student performance as well as areas of weakness. Next steps should provide recommendations to improve student performance. This is particularly important with regard to the assessment results, since the overriding purpose of Outcomes Assessment is to document student learning and, where necessary, to suggest and implement changes that might improve it. Identify specific faculty activities or practices that appear affective and can be replicated across sections, and identify areas of concern and specific faculty practices and activities which can be adopted to improve student learning.

Part Three: Guidance for Developing an OA Plan

Part Three of this Handbook:
1. gives advice for developing Student Learning Outcomes (SLO)
2. explains selecting an assessment method
3. gives advice for developing an assessment instrument
4. gives suggestions for developing a scoring tool

This portion of the Outcomes Assessment Handbook is a "how-to" manual of sorts, taking you through the steps of creating an Outcomes Assessment Plan. Each section is designed to give you some basic guidelines for each aspect of an Outcomes Assessment Plan. Although the suggestions below represent best practices in Outcomes Assessment, as well as the experiences of General Education Assessment Committees from previous years, we know that some disciplines have specific needs which may conflict with these recommendations, so use the Handbook as only a beginning point.

Faculty consensus

In the sections that follow, we provide tips and guidance to help you get the most out of your assessment effort. But no matter how you go about the process it ***is absolutely crucial that you take the time to get consensus from your colleagues at each stage of the process***. Remember, all faculty members teaching the course will be required to participate. The Outcomes Assessment process is only as meaningful as faculty and administrators choose to make it – if you can encourage your colleagues to contribute to the creation of good outcomes now, they may be more responsive to assessing those outcomes later.

Student Learning Outcomes

Students who know what is expected of them in terms of their learning have a framework for learning and are more successful. Faculty who have a clear idea of what they want their students to learn are able to align their instructional activities to these outcomes. In these two ways, clearly articulated outcomes are essential to student learning. Outcomes Assessment allows us to systematically examine the alignment between student learning, instructional or institutional expectations, and instructional activities. To this end, we begin planning for Outcomes Assessment with Student Learning Outcomes.

Where do we start?

Every course should have a standard set of expectations for student learning. These expectations are the most important things a student who passes the course should take away from any section of the course. While individual instructors may add to this course, there should be a shared understanding of the core skills and knowledge upon which the course is based. It is these expectations which should be reflected on each course syllabus and which should be used to determine Student Learning Outcomes for the Outcomes Assessment process.

What makes a good learning outcome?

Generally speaking, good learning outcomes are:

- learner centered
- key to the course's mission
- meaningful for faculty and students
- representative of a range of thinking skills
- measurable, using actions from Bloom's Taxonomy of Critical Thinking

First, and most importantly, good learning outcomes focus on **what students can do** instead of the effort we put into teaching them. Second, learning outcomes must be **essential to the course's mission**, something that everyone teaching the course agrees is important. Avoid outcomes that are idiosyncratic or tied to a particular instructor's approach to a course. Third, design outcomes that are **meaningful for faculty and students**. If you cannot explain *why* a certain outcome is important, it probably isn't very meaningful. Finally, outcomes often reflect a **range of thinking skills,** from low level identification to higher level application of knowledge or skills.

Good outcomes **are measurable** in some way; they communicate what student learning will be evaluated in the course. Often courses will have two levels of outcomes; some broader based outcomes which reflect higher order thinking skills and broad topics, and some more narrow, lower level thinking skills outcomes which are essential to reaching the broader outcomes.

The Student Learning Outcomes should be included as a standard part of the course syllabus.

Student Learning Outcomes should:

- be written in terms of what the student will be able to do at the end of the course
- use active verbs

- reflect measurable standards or reflect the basic knowledge and skills that the student will be held accountable for
- reflect a combination of higher order thinking skills and supporting or enabling skills

When defining Student Learning Outcomes to assess, it is tempting to take the easy route and think only in terms of learning outcomes that represent lower order skills because they will be simpler to evaluate. Instead, concentrate on the skills and knowledge which are essential for a student to be considered competent at the end of the semester. While some lower order types of learning outcomes may be essential to reaching higher level outcomes, make sure that you define a range of outcomes which reflect higher order, complex application tasks in addition to any essential supporting learning outcomes which may reflect lower order thinking skills.

Lower Order vs. Higher Order Thinking Skills

While basic recall of facts is important to any course, your assessment results will be more meaningful if you have chosen a more complex skill. Moreover, it will likely reflect what is truly important in your course. Often facts are important because we want students to be able to do something with that information.

Student Learning Outcomes (SLO), which reflect higher order thinking skills, use action verbs that are observable and measurable, as well as ones that reflect higher order skills. Examples of such verbs are solve, design, write, compare, apply, decide, draw, persuade, investigate, and evaluate.

Refer to the following possible outcomes for an information technology course:

- Students will be able to correctly summarize the key differences between open and closed source software development models.

- Students will be able to evaluate the strengths and weaknesses of open and closed source software development models.

While the first outcome is certainly easier to achieve, the second one better represents what students would have to do with the information in the real world. You will get more useful information about student learning with the second SLO.

How do we choose which Student Learning Outcomes to assess?

To select Student Learning Outcomes to assess for this process, consider the following questions:

1. What are the 3 or 4 most crucial outcomes for the course or program?
2. Are there outcomes where students have struggled to achieve in the past?
3. Do you have questions about a particular area of student achievement?
4. Are there outcomes which reflect skills or knowledge students will need in future courses or careers?
5. Are there outcomes which reflect General Education competencies?

Identifying outcomes which reflect any of these characteristics would be a place to start. Ultimately the outcomes you select:

- should reflect higher order thinking skills (**application of knowledge or skills**);
- be agreed upon as essential and core to the course or program (addressed in **every section** of the course or throughout the program); and
- **be meaningful** to the discipline or program.

Supporting Student Activities

To get the most meaningful results, students should be given opportunities to practice achieving an outcome before it is assessed. If faculty believe that a stated outcome is important, then logically they should have supporting activities in their course that help students achieve the outcome. For example, if the science faculty believes that writing effectively is an important skill in their courses, it should include writing assignments.

These supporting activities allow students opportunities to practice the outcome and receive feedback on their performance. Supporting activities will likely vary from instructor to instructor, and that's as it should be. What is essential is that every instructor is able to point to academic experiences that adequately prepare his or her students to successfully achieve the desired outcome.

Assessment Methods and Instruments

The next part of the Outcomes Assessment Plan is choosing an assessment method and writing an assessment instrument. The assessment method is the general type of tool you will use to assess the Student Learning Outcome. The instrument is the actual assignment, quiz, exam, or project you will use to complete the assessment. First, you should determine what method you want to use, and then, you will develop the actual tool.

How do we choose an assessment method and develop an assessment instrument?

Common assessment methods include test questions (multiple choice, short answer, essay), formal writing assignments (essays, research papers, reaction/review papers), performances, and portfolios. You will need to consider a variety of factors as you choose your method, including alignment with the outcome, ability to get faculty consensus, and ease of scoring. It is difficult to separate the method from the instrument; however, it is useful to step back at this point and consider the method separately from the actual assignment. Considering the general approach to the assessment will allow you to determine the most useful method and develop a useful assessment instrument.

Alignment

Probably the most important consideration when choosing or developing an assessment method is whether it is aligned with the Student Learning Outcome. In other words, is what you're asking the students to do in your assessment going to provide you with solid evidence about whether or not they have achieved the desired outcome? If your outcome deals with a student's ability to make a persuasive speech, a research paper is not a good instrument to measure this outcome. If you are assessing a quantitative reasoning outcome which speaks to students' ability to interpret some particular statistical information, simply asking them to calculate something correctly will not tell you whether they've achieved that outcome.

Aligning outcomes with methods may seem like an obvious recommendation, but it's not uncommon to see a disconnect between the outcome and the assessment instrument when assessment committees are in the early stages of writing their Outcomes Assessment Plans. In some instances, workgroups end up revising their outcomes after working on their assessment instrument. That's okay, as long as everything aligns before you run the full scale assessment.

Ease of scoring

We all know that writing good multiple choice questions takes a lot of time, but scoring them is fast. Writing a good essay question is less time-consuming than grading a stack of student essays. With everything we do, we need to consider how much time it will take; you should consider the time involved in scoring the instrument and reporting the data. When choosing an assessment method you must weigh time against meaningful results. It may be challenging to find the balance, but the efforts of going through an Outcomes Assessment Plan won't be worth much if you cannot use the results to make decisions about the strengths and weaknesses of your course. The next main section will discuss scoring in greater depth.

"Pros and Cons of Common Assessment Instruments" in the **Appendix A** goes into much greater detail about the main types of assessment instruments and the benefits and drawbacks of each. It also provides tips and advice for how to use each one in a multi-campus, multi-section Outcomes Assessment process.

Assess multiple Student Learning Outcomes with one method

One way to balance meaningful results with time spent scoring is to use one assessment instrument to measure more than one outcome. This technique has been used successfully by faculty participating in the General Education Outcomes Assessment process as well as the Multistate Collaborative. This approach works especially well if you have both skill- and knowledge-based outcomes to assess.

Assessing each outcome alone certainly works, but combining them gives us a better picture of how students perform in a more "real world" setting. When scoring an assessment which assesses two or more outcomes, you will assign separate scores for each outcome as well as having an overall score.

Writing the Assessment Instrument

Once you've chosen your assessment method (exam, paper, etc.) it's time to write the actual instrument that will be handed out to students. We all have experience with writing assessment instruments; it's one of the major tasks we have as teachers. Creating an instrument for use in multiple sections does require an extra level of scrutiny. Again, you need to make absolutely certain that the assessment instrument you use measures how well the students meet the expected outcomes, rather than something else. Additionally, make sure the instructions to the student clearly explain the expectations for the assignment.

Here are the three easiest ways to ensure a quality instrument for Outcomes Assessment:

- Make sure the assignment or exam questions are directly aligned with the outcomes.
- Write directions that are clear to people who have never seen the instrument before and that clearly articulate the expectations for completing the assignment.
- Ask for feedback from the students and faculty who used the instrument.

Another approach is to give your instrument to a few colleagues in different departments. They will have fresh eyes and can look at your instrument without the tunnel vision that sometimes comes when you know your content so well.

Key Things to Remember about Developing an Assessment Method and Instrument

1. Consider the method separately from the actual instrument to find the best approach.
2. Think about the ease of scoring and alignment with the learning outcomes to help determine the best assessment approach.
3. Consider assessing two or more outcomes with one assessment method/instrument.
4. Make sure the instructions for the assessment instrument clearly lay out the expectations for the student and faculty who will use the assessment instrument.

Scoring Tools

"Consistency, consistency, consistency" is the mantra when multiple individuals are being asked to score a common assessment, as is the case in the Student Learning Outcomes Assessment process. If the assessment instrument consists of a set of objective questions each with only one right or wrong response, e.g multiple choice, then a simple answer key distributed to all faculty who will be administering the exam will do the trick. If, on the other hand, the instrument involves open-ended types of questions or assignments, such as essays, research papers or student performances, which by nature require some subjectivity in their scoring, there are some things you can do to structure a scoring scheme that will maximize consistency among faculty administering the assessment.

How do we score the assessment?

Short answer assessments

In the case of assessments made up of open-ended short answer questions, it is critical that a clear answer key of acceptable right answers for each question be developed. Trained faculty scorers must then score all students or a statistically significant sample based on this common answer key, though classroom faculty are free to grade additional answers as correct in determining their own course grades.

Longer, open-ended assessment instruments

For scoring consistency with longer open-ended assignments such as essays, research papers, or performances, a rubric should be developed. A rubric is a criterion based scoring tool that specifies levels of achievement (e.g. exemplary, satisfactory, unsatisfactory) for each dimension of the outcome. As part of the rubric, criteria are provided that describe what constitutes the different levels of achievement For example, the rubric that is being used to score effective writing with dimensions of mechanics, style, and development would provide the criteria that describe what constitutes exemplary, satisfactory, and unsatisfactory student work in the areas of for writing mechanics, for writing style, and for writing development.

Although only three levels of achievement are specified in the above example, rubrics can have any number of levels that is manageable and makes sense for the given assessment instrument. However, from three and five levels generally make the most sense.

More about rubrics

There are two major types of rubrics: holistic and dimensional. Dimensional is also known as a primary trait rubric. Both detail the particular qualities that separate excellent from poor student work along a spectrum, but the first groups the dimensions together, while the second keeps them separate.

The holistic rubric looks at the instrument as a whole; students receive one overall score based on a pre-determined scheme used by everyone. The dimensional rubric yields sub-scores for

each dimension, as well as a cumulative score which is the sum, either weighted or un-weighted, of the dimensional scores.

Each type of rubric has its strengths and weaknesses. Holistic rubrics allow you to look at a student's overall performance, and often it corresponds better to the grade that pops into our heads immediately after we finish looking at the student work. The dimensional rubric provides more information about what's working and what's not. For example, perhaps students are doing a good job with learning the mechanics of writing, but not so well with learning writing development. A dimensional rubric will provide information with this level of detail, whereas a holistic rubric will not.

Regardless of the type of rubric, it is important that it be shared with students well before the assessment is administered. It is unreasonable to expect students to perform well on an assessment if they don't have a clear understanding of the standards being used to evaluate it.

Assessments based on objective questions

Even if you are using a set of objective questions you may find it helpful to group subsets of these questions together that reflect an assessment of a specific dimension of your outcome. Doing so might be particularly useful in situations where the assessment includes a large number of objective questions. Without grouping the questions to reflect key dimensions of the outcome being assessed, faculty scorers participating in the assessment will have to enter a score for each question in the assessment on a scoring spreadsheet, potentially creating a significant data entry burden. By grouping, say 5 questions within a dimension, faculty could enter one number for the dimension, i.e., the number correct out of the 5 questions, instead of entering a separate student score for each of the 5 questions. There is, of course, a tradeoff in doing this, as the discipline will get back less information from the data analysis, and so this is a consideration that needs to be carefully thought out.

5 Key Things to Remember about Scoring Tools

1. It is imperative that the discipline faculty talk about the assessment instrument and determine what kind of student performance qualifies as successful.
2. When using objective measures (e.g. multiple choice tests), consider grouping questions which reflect a specific aspect of the outcome.
3. When using rubrics, be sure that students see the rubric which will be used to evaluate the assignment before they complete it.
4. When using rubrics, norming is really important.
5. Be sure to get feedback after the pilot on how well the scoring tool worked with the assignment and whether faculty feel that it reflects successful performance effectively.

Appendix A
Additional Resources

AAHE's 9 Principles of Good Practice for Assessing Student Learning

1. **The assessment of student learning begins with educational values.** Assessment is not an end in itself but a vehicle for educational improvement. Its effective practice, then, begins with and enacts a vision of the kinds of learning we most value for students and strive to help them achieve. Educational values should drive not only *what* we choose to assess but also *how* we do so. Where questions about educational mission and values are skipped over, assessment threatens to be an exercise in measuring what's easy, rather than a process of improving what we really care about.

2. **Assessment is most effective when it reflects an understanding of learning as multidimensional, integrated, and revealed in performance over time.** Learning is a complex process. It entails not only what students know but what they can do with what they know; it involves not only knowledge and abilities but values, attitudes, and habits of mind that affect both academic success and performance beyond the classroom. Assessment should reflect these understandings by employing a diverse array of methods, including those that call for actual performance, using them over time so as to reveal change, growth, and increasing degrees of integration. Such an approach aims for a more complete and accurate picture of learning, and therefore firmer bases for improving our students' educational experience.

3. **Assessment works best when the programs it seeks to improve have clear, explicitly stated purposes.** Assessment is a goal-oriented process. It entails comparing educational performance with educational purposes and expectations -- those derived from the institution's mission, from faculty intentions in program and course design, and from knowledge of students' own goals. Where program purposes lack specificity or agreement, assessment as a process pushes a campus toward clarity about where to aim and what standards to apply; assessment also prompts attention to where and how program goals will be taught and learned. Clear, shared, implementable goals are the cornerstone for assessment that is focused and useful.

4. **Assessment requires attention to outcomes but also and equally to the experiences that lead to those outcomes.** Information about outcomes is of high importance; where students "end up" matters greatly. But to improve outcomes, we need to know about student experience along the way -- about the curricula, teaching, and kind of student effort that lead to particular outcomes. Assessment can help us understand which students learn best under what conditions; with such knowledge comes the capacity to improve the whole of their learning.

5. **Assessment works best when it is ongoing not episodic.** Assessment is a process whose power is cumulative. Though isolated, "one-shot" assessment can be better than none, improvement is best fostered when assessment entails a linked series of activities undertaken over time. This may mean tracking the process of individual students, or of cohorts of students; it may mean collecting the same examples of student performance or using the same instrument semester after semester. The point is to monitor progress toward intended goals in a spirit of continuous improvement. Along the way, the assessment process itself should be evaluated and refined in light of emerging insights.

6. **Assessment fosters wider improvement when representatives from across the educational community are involved.** Student learning is a campus-wide responsibility, and assessment is a way of enacting that responsibility. Thus, while assessment efforts may start small, the aim over time is to involve people from across the educational community. Faculty play an especially important role, but assessment's questions can't be fully addressed without participation by student-affairs educators, librarians, administrators, and students. Assessment may also involve individuals from beyond the campus (alumni/ae, trustees, employers) whose experience can enrich the sense of appropriate aims and standards for learning. Thus understood, assessment is not a task for small groups of experts but a collaborative activity; its aim is wider, better-informed attention to student learning by all parties with a stake in its improvement.

7. **Assessment makes a difference when it begins with issues of use and illuminates questions that people really care about.** Assessment recognizes the value of information in the process of improvement. But to be useful, information must be connected to issues or questions that people really care about. This implies assessment approaches that produce evidence that relevant parties will find credible, suggestive, and applicable to decisions that need to be made. It means thinking in advance about how the information will be used, and by whom. The point of assessment is not to gather data and return "results"; it is a process that starts with the questions of decision-makers, that involves them in the gathering and interpreting of data, and that informs and helps guide continuous improvement.

8. **Assessment is most likely to lead to improvement when it is part of a larger set of conditions that promote change.** Assessment alone changes little. Its greatest contribution comes on campuses where the quality of teaching and learning is visibly valued and worked at. On such campuses, the push to improve educational performance is a visible and primary goal of leadership; improving the quality of undergraduate education is central to the institution's planning, budgeting, and personnel decisions. On such campuses, information about learning outcomes is seen as an integral part of decision making, and avidly sought.

9. **Through assessment, educators meet responsibilities to students and to the public.** There is a compelling public stake in education. As educators, we have a responsibility to the publics that support or depend on us to provide information about the ways in which our students meet goals and expectations. But that responsibility goes beyond the reporting of such information; our deeper obligation -- to ourselves, our students, and society -- is to improve. Those to whom educators are accountable have a corresponding obligation to support such attempts at improvement.

Authors: Alexander W. Astin; Trudy W. Banta; K. Patricia Cross; Elaine El-Khawas; Peter T. Ewell; Pat Hutchings; Theodore J. Marchese; Kay M. McClenney; Marcia Mentkowski; Margaret A. Miller; E. Thomas Moran; Barbara D. Wright

http://www.aahe.org/assessment/principl.htm

Pros and Cons of Using Various Types of Assessment

	Pros	Cons
Objective Exams (e.g., Multiple-Choice, True/False, Matching, Short Answer)	Faculty familiar with developing them	Feedback to student can be limited
	Easier to monitor possible plagiarism and cheating	May encourage surface learning only
	Cost-effective	Possibly measure students' test-taking ability vs. content knowledge & understanding
	Time-efficient to administer	Questions may be misinterpreted
	Facilitates rapid feedback through ease of scoring	May involve testing for low level knowledge only
	Broad coverage of content	Constructing high quality test questions may be difficult
		Generally, reliability and validity of tests are unknown
		Tendency to rely on publishers' test banks

Tips for Objective Tests

- Collaborate on selected test questions to make sure they are targeting what you really want to assess
- Have unbiased readers check for misinterpretation
- Pay attention to question layout – make the test easy to follow
- Match your standards – it is easy for questions to get progressively more difficult year by year because YOU understand the material in a deeper way
- Always match syllabus learning outcomes and assessment questions. These should align directly.
- Let students know (by bracketing information on the test) how many points each question is worth and how much time it should take them to complete each section.
- Test questions out beforehand by embedding parts of the exam or similar questions in class assignments. See which ones are misunderstood ahead of time. Make changes as needed.

	Pros	Cons
Essay Exams	Allow for student individuality & expression	ESL students or students with poor writing/thinking skills may be at a disadvantage
	Can reflect the depth of student understanding and higher order thinking skills	May not cover entire range of knowledge
	May include application of Problem-Based learning	Take time to score
	Develop writing and critical thinking skills	Consistency of scoring may be an issue
	Inexpensive and easy to administer; fast to construct	Possible confusion about what is being assessed: writing skills, content, or both

Tips for Essay Exams

- Create well-designed rubric for scoring
- Assessment scoring team should take time to calibrate their scoring so that scores from all the sections of a course are consistent
- Give students criteria for grading essays beforehand and examples of well-written versus poorly written essays
- Show students how to create essay "organizers" for answering essay questions. This organizational structure helps students keep focused in their essays.

	Pros	**Cons**
Written work (reports, papers, research projects, book reviews, etc.)	Active process involving critical thinking skills and revision skills	May be difficult to judge the breadth of student learning
	More flexible for students in preparing the end product	Plagiarism may occur
	Learning occurs in the process as well as in the completion of the end product	Takes time to score
	Usually represents integrated learning	Not easily quantified
	Offers students the opportunity to demonstrate learning	

Tips for Writing Assignments

- Make the assessment criteria explicit for written work
- Create well-designed rubric for scoring
- Assessment scoring team should take time to calibrate their scoring so that scores from all the sections of a course are consistent
- Give students an understanding of the "weight" and distribution of the score: e.g., content, correct form, and level of critical thinking
- Encourage students to submit drafts to facilitate student learning and for better end products
- You may consider using peer assessment before the final products are submitted
- Giving students timelines for completion may assist them in time management

	Pros	**Cons**
Portfolio Assessment	May contain evidence reflecting a wide range of skills & attributes such as research papers, exams, journals, case studies, CD-ROMs, DVDs, audio and videotapes, artwork, etc.	Assessment takes time
	Can reflect student learning over time	Difficult to assess objectively
	May reflect attitudes and values as well as skills & knowledge	Difficulty in scoring consistency across diverse sets of portfolios
	Usually represents integrated learning	Not easily quantified
	Offers students the opportunity to demonstrate learning	Space needed for storage

Tips for Portfolio Assessment

- Propose a general format for assembly of portfolios and necessary items for inclusion
- Don’t underestimate the time it takes to assess (or the weight to transport them!)
- Use rubrics and checklists for content assessment
- Provide interim assessment opportunities
- Allow students to see samples of successful portfolios
- Consider a final reflection on learning as part of the portfolio