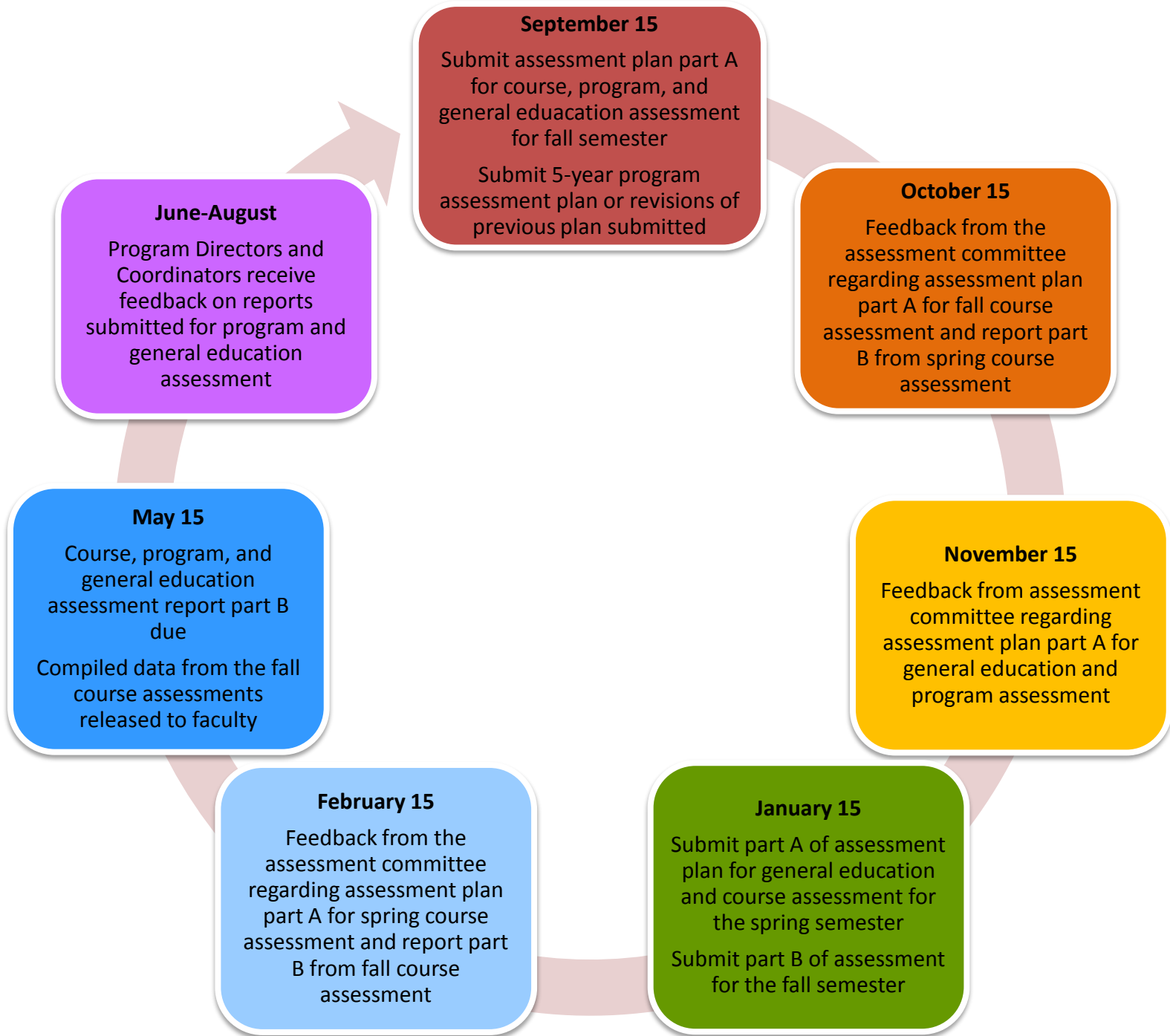


KCC

Assessment Process



ASSESSMENT HANDBOOK CONTENTS

CONTENT OVERVIEW

What is assessment and why should you assess?

This **introduction** explains why we assess, the academic process of assessment, the five different levels of assessment, KCC's assessment timeline, and finally individual responsibilities for assessment.

How do you define and develop student learning outcomes?

Chapter 1 provides you with an overview for writing measurable course and program student learning outcomes. It stresses the importance of defining expectations and standards and includes how to make revisions to existing outcomes in order to assure each statement is clear.

How do you select classroom assessment techniques?

Chapter 2 is a short explanation of classroom assessment techniques (CATs) along with examples that can be used in your classroom. Faculty use CATs for immediate feedback on how students learned at the end of particular module or unit.

How do you plan for course assessment?

Chapter 3 provides ten steps to tailor an assessment plan using the **Plan, Do, Check** process.

How do plan for program assessment?

Chapter 4 This chapter is for individuals needing assistance in developing plans for program assessment from beginning to end.

How do you choose appropriate methods of assessment?

Chapter 5 includes guidelines for selecting appropriate methods of assessment that can help identify strategies and methods to collect assessment data.

How do you close the loop and apply my assessment results?

Chapter 6 How do you use the results to improve courses and programs? This section of the handbook describes how to close the loop of assessment.

Appendices

- A. Assessment forms for planning assessment and report forms for course, program, and general education assessment
- B. Examples of verbs and learning outcome statements following Bloom's Taxonomy
- C. Example questions using Blooms taxonomy
- D. CATs Toolkit
- E. Examples of Rubrics or Primary Trait Scales

Introduction

What is assessment? Why do assessment? What is in it for me?

What is assessment?

Assessment is the process of gathering and interpreting information about student learning. It is evidence that provides an outward sign of “proof”. It may be one of many variables contributing towards success. The real question is not whether we are doing a good job teaching but are we systematically reviewing, documenting and assessing the relevant evidence? It gives us the power to toot our own horns over the success of our courses or programs and the ongoing process with the goal of continually improving teaching and learning effectiveness.

Why do assessment? What is in it for me?

Course and program improvement

One of the primary purposes of assessment is to provide feedback to determine how courses and programs can be improved to enhance student learning.

Self-evaluation of instruction

Assessment can be used by faculty to help them self-evaluate and improve their teaching.

Course design and revision

Assessment can help in the design of new courses with respect to rationalizing the need for that new course and how it should be positioned in the in the curriculum. Additionally, learning outcomes can be used by the faculty in the classes that they teach to assist them in developing assignments that include the intended abilities, knowledge, values and attitudes of that course or program.

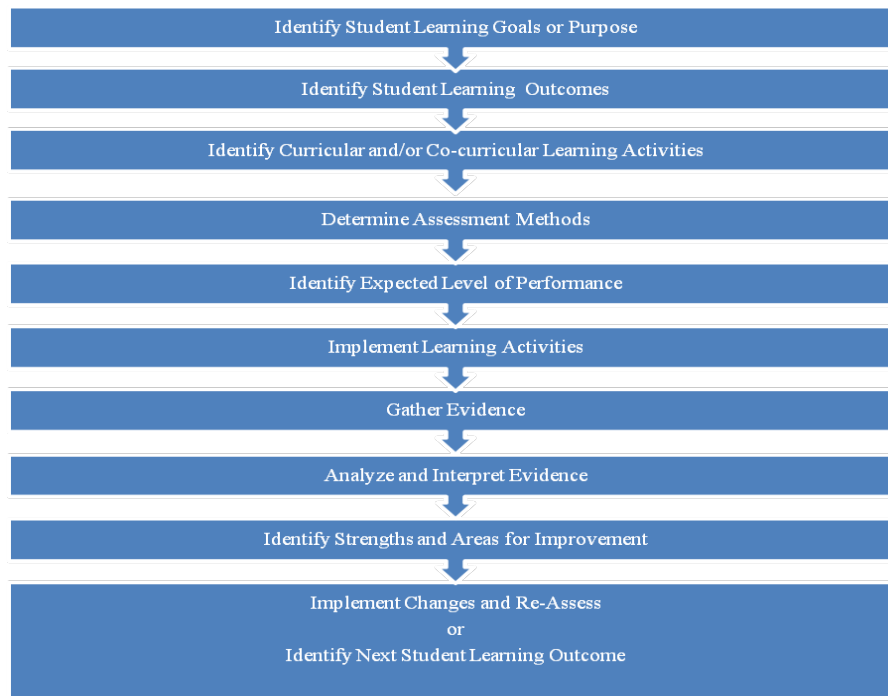
Curricular assessment and change

Assessment can help departments think about their curriculum. A department can determine in which of the offered courses each learning outcome is addressed to determine if redundancy or overlap occur and where gaps exist.

(Adapted from Gronlund, 2000 and Roth, Beyer, and Gillmore, 2002)

Academic Assessment Process

The assessment process begins with identification of curriculum goals and the purpose of the course or program. Then, student learning outcomes are identified - outcomes are core ability statements that focus on measurable and observable skills and knowledge. Existing programs and courses should have already identified goals and outcomes and will skip the first steps and begin each semester by determining the learning activities that are intended to provide the learning experiences that allow students to meet the outcomes identified. This step provides a proactive check to make sure that sufficient activities have been included to meet the learning outcomes and provide information about where and when assessment methods might be used.



After learning activities have been identified, assessment methods are selected. The selection process must take into account the learning outcome being assessed and the inherent advantages and disadvantages that are specific to the methods being considered. Next the expected level of performance is identified for each assessment method.

Once the learning experience has taken place and the assessment data is collected the information is analyzed and interpreted. The expected level of performance is used during the analysis to compare the expectation against what was observed. This information will identify the strengths and weaknesses of a course or program. While assessment results could indicate improvement is needed in the learning activity, it could also indicate that improvements are necessary in the goals, outcomes, and/or assessment methods. These changes are implemented and the assessment process begins again. The newly generated information is used to determine the effectiveness of the changes.

Five Levels of Assessment

Assessment is the mechanism by which we find out if our intentions for a course or program have been successfully transformed into actual student learning. It is essential that assessment practices are practical, achievable, and effective.

Classroom assessment is done by individual faculty within the context of individual classes. Formal and informal measures of learning are collected and assessed and instruction is modified as necessary to improve. This type of assessment is not documented or monitored by the college

Course-level assessment measures student learning upon the completion of a particular course. Each department is expected to conduct course-level assessments. It is important to emphasize that course-level assessment is not measured at the section level. It is a reflection of what students have learned in the course regardless of who is teaching it. Faculty are encouraged to work together within their departments to review and select course outcomes to measure.

Program-level assessment measures student learning upon the completion of a particular degree or certificate. The program assessment process is designed to align course-level outcomes and curriculum requirements to the degree or certificate. Program outcomes are defined by the faculty and are written to reflect the accumulation of skill and knowledge a student will gain through the curriculum. Often program level learning outcomes are identified by a licensure or certification exam and/or other industry and employer standards. Programs will be assessed in collaboration with the existing program review cycle that occurs every five years.

General education assessment is often compared to the program-level outcomes of the transfer degrees – What does the college expect students to know and be able to do upon completion of an A.A. or A.S. degree. The outcomes for the college are more completely defined in the catalog, and include writing, reading, math literacy, scientific literacy, critical thinking, information literacy technological fluency, and global awareness.

The *assessment of student satisfaction and engagement* is guided by the principle that the college is dedicated to measuring and improving student perceptions and learning behaviors as a key strategy towards student success. These reports are summarized and communicated to a wide audience of stakeholders, and individual survey questions are often used as an assessment tool in various goal-setting arenas.

Adapted from Elgin Community College (Elgin, Il.), Assessment of Student Learning Handbook, version 1.1, August 2009

Assessment Timeline

September 15

Submit fall semester **Plans** to assess student learning outcomes in individual courses, courses within programs, or transfer courses aligned with general education outcomes using assessment form **Part A** to the assessment committee chairperson.

Program Directors or Coordinators submit updated 5 year assessment plan to the assessment committee chairperson.

October 15

Receive feedback regarding assessment **Plan Part A** submitted for fall semester.

Receive compiled results from assessment report **Form part B** of the spring semester assessments.

January 15

Submit spring semesters plan to assess student learning outcomes in individual courses, courses within programs, or courses aligned with general education outcomes using assessment **Plan Part A** to the assessment committee chairperson.

Submit assessment report **Form Part B** with results of course, program or general education assessments completed during the fall semester to the assessment committee chairperson.

February 15

Receive feedback regarding assessment **Plan Part A** submitted for spring semester.

Receive compiled results from assessment **Form part B** for fall semester assessments.

May 15

Course, program, and general education assessment **Form Part B** due for spring assessment. Contact the assessment committee chair if an extension is needed.

May 30

Assessment Chair submits all spring and fall assessment results to the Department of Institutional Research to be compiled into a report form to be used by Division chairs and Program Supervisors. This report will be shared with faculty at the start of the fall semester.

July-August

Program Directors/Coordinators and Division Chairs will review compiled data of spring and fall assessments which will be shared with faculty members during in-service week division meetings or in small groups of faculty teaching the same course.

Once shared with faculty, the Division Chairs will submit to the Vice President of Instruction, the Dean of Instruction, and the Office of Institutional Research, a report that summarizes discussions held at the fall meetings, of changes made, if any, and strategies for success for the next assessment cycle.

Who Does What? Assessment Responsibilities

Assessment is a campus wide effort that helps us create a shared academic culture dedicated to assuring and improving the quality of higher education. It involves making our expectations explicit and public; setting appropriate criteria and high standards for learning. The following is a list of duties and responsibilities that reflects the expectations of all those involved in assessment at Kankakee Community College.

Faculty Outcome Assessment Duties

The purpose of the assessment of student learning outcomes is to assess the achievement of students for stated outcomes. Faculty members are the key driver in the assessment process. All faculty, who are either the sole instructor of a course or a group of faculty members teaching the same course section are accountable for:

Course Assessment

- Collaborating with all faculty teaching the same course by determining the outcome to be assessed, the method of assessment, and the expectation standards for the outcome. If there is only one faculty member teaching multiple sections of the same course he/she should assess the same outcome in all course sections using the same outcome and method of assessment.
- Completing course assessment **Plan Part A**, performing the assessment, and collecting data for course assessment **Report Part B** by the due dates indicated in the assessment calendar. If multiple faculty are teaching the same course only one report form should be submitted and include section numbers and names of instructors.
- Participating in the review of course assessment data and discussions to endorse changes that may be made to improve student learning.

Program Assessment

- Assessing at least one high level student learning outcome each semester.
- Collaborating with all faculty teaching the same courses within the program by determining the outcome to be assessed, the method of assessment, and the expectation standards for the outcome. If there is only one faculty member teaching multiple sections of the same course he/she should assess the same outcome in all sections of each course using the same outcome and method of assessment.
- Completing program assessment **Plan Part A**, performing the assessment, and collecting data for program assessment **Report Part B** by the due dates indicated in the assessment calendar. If multiple faculty are teaching the same course only one report form should be submitted to include section numbers and names of instructors.
- Participating in the review of resulting data and using it where appropriate to validate changes that may be made to improve student learning in the program.

General Education Assessment (Program Assessment for Transfer Programs)

- Collaborating with all faculty teaching a transfer course and who are using the same general education outcome, choose the method of assessment, and the expectation standards for the outcome. If there is only one faculty member teaching multiple

sections of the same course he/she should assess the same general education outcome in all sections of the course using the same method of assessment.

- Completing general education assessment **Plan Part A**, performing the assessment, and collecting data for general education assessment **Report Part B** by the due dates indicated in the assessment calendar.
- Examining the resulting data and using it where appropriate to validate changes that may be made to improve student learning.

Program Directors/Coordinators

Outcomes assessment within a degree program is a process of articulating expected student learning outcomes, collecting data to evaluate the extent to which students achieve those outcomes, and using that information for program development. In collaboration with other full time and part time faculty members teaching in their program, he/she is accountable for:

- Determining responsibilities for assessment efforts in their programs by supporting full and part time faculty with the development of program outcome assessment plans, standards for the outcome, and submission of required reports to the assessment committee.
- Completing and submitting the program assessment **5 Year Plan** to the assessment committee chair.
- Assuring the outcomes are measured and the data is collected from all course sections involved in the assessment.
- Collaborating and actively engaging as many faculty as possible in the outcomes assessment process.
- Facilitating the development of a campus-wide culture of assessment.

Division Chairs

Division Chairs work with their division faculty and colleagues to determine appropriate student learning outcomes respective to their majors and lead division faculty through the process of writing outcomes, selecting methods of assessments and standards for assessment. The Division Chairs are also responsible for:

- Assuring outcome assessment plans are updated as needed and assessment reports are submitted to the assessment committee chair.
- Collaborating with faculty using data to compare the outcomes of assessments with intended objectives.
- Communicating results of student outcomes assessment to their divisions.
- Assisting with improvements based on data collected from their courses and programs.
- Summarizing in a yearly report the success of course, program and/or general education assessment and, if needed, using data collected, state proposed plans to make improvements to a course. The report is submitted to the department of institutional research for the purpose of data collection.
- Facilitating the development of a campus-wide culture of assessment.

Chair of the Academic Assessment Committee

The chair(s) of the academic assessment committee is/are a faculty member(s) who works with their colleagues to develop and implement assessment plans within their respective divisions. The assessment chair is also responsible for:

- Serving as the chairperson of the KCC assessment committee.
- Reviewing and modifying assessment guidelines, procedures and forms.
- Assisting faculty with course, program and general education outcome assessment plans and reports.
- Providing faculty with feedback on assessment efforts.
- Suggesting faculty development activities that will advance the effectiveness of assessment.
- Assisting Division Chairs, Program Directors/Coordinators and faculty with implementing assessment plans.
- Assisting the office of Institutional Research with preparing and submitting annual assessment reports.
- Archiving and maintaining assessment documents.
- Facilitating the development of a campus-wide culture of assessment.

Office of Institutional Research

The Office of Institutional Research is responsible for:

- Assisting in the collection and reporting of assessment data to the campus community.
- Collecting data from the assessment chair at the end of the spring and fall semester.
- Creating a compiled report of course, program, and general education assessment results and plans for improvement for the Vice President of Instruction, the Dean of Instruction, Division Chairs and Program Directors/Coordinators.
- Archiving and maintaining a central collection of assessment documents and disseminating assessment results as needed.
- Facilitating the development of a campus-wide culture of assessment.

Vice President of Instruction and the Dean of Instruction

The Vice President of Instruction and the Dean of Instruction coordinate the efforts of all academic assessment plans within the college. The Vice President and Dean are also responsible for:

- Overseeing ongoing operation of the assessment plan.
- Promoting the use of assessment results for improvement.
- Providing resource support for academic assessment efforts and improvement actions based on assessment results.
- Reviewing academic assessment plans and result reports.
- Reviewing the annual assessment summary report from Division Chairs on the individual division's assessment results and plans for improvements.
- Recognizing exemplary assessment efforts and use of assessment results .
 - Facilitating the development of a campus-wide culture of assessment.

Chapter 1 Developing Program and Course Outcomes

Program Outcomes can be written in short, concise statements or are more lengthy statements of specific behaviors and performance expectations that students are projected to meet in order to successfully complete the program. Many program outcome statements are guided by the standards of their certifying agencies and some are developed by the program director and the faculty that teach courses within the program. Regardless, program outcomes are core ability statements that focus on measurable and observable skills and knowledge. Program outcomes should be clear, concise, and measurable and build on what already formally or informally guides your program.

The following questions may be useful in thinking about specific outcomes that would be most important for your program:

- Which characteristics resulted from the program itself?
- What can the ideal student do?
- What does he/she know?
- What does he/she care about?
- What experiences in the program have produced this student?
- What should everyone exiting the program know?

Developing appropriate and useful outcomes is a process; it's not unusual to revisit and refine outcome statements. In most cases, it is only when you try to develop ways of assessing program outcomes that the need for refining them more precisely becomes apparent.

Student Learning Outcome statements for programs include:

- A verb that identifies the performance to be demonstrated
- A learning statement that specifies what learning will be demonstrated in the performance
- A broad statement of the criterion or standard for acceptable performance

Verb (performance)	Learning Statement (what learning will be demonstrated)	Criterion (the conditions of the performance demonstration)
produces	documents	using a word processing software

Examples of Program Outcome Statements

- Utilize safe working techniques and practices
- Operate welding tools and equipment.
- Utilize computerized equipment for welding and cutting.
- Read prints and interpret welding symbols.
- Use measuring and layout tools properly.
- Apply metallurgy principles to welding and metal fabrication processes.

Course outcomes describe small, discreet skills or “nuts and bolts” that require basic thinking skills. Think of course outcomes as the building blocks used to produce whatever is used to demonstrate mastery of an outcome. Course outcomes should focus on observable skills and knowledge, and be measurable. If the course is a part of a program it should be directly linked to the program outcomes. If the course is a transfer level course the outcomes should be directly linked to the college general education outcomes.

Adapted from Mager, R. (1984). *Preparing Instructional Objectives*. Belmont, Ca

The Condition

The condition of the outcome specifies the situation, guidelines, materials, or directions which the student is given to initiate the behavior. Intended student learning outcomes can best be understood within a context of the conditions under which the behavior is to be performed or demonstrated.

The conditions part of an outcome usually begins with a simple declarative statement such as the following:

- Upon request, the student will (this means the student is given an oral or written request to do something)
- Given (some physical object), the student will (this means the student is actually given something, such as a map, a number or multiplication problems, a literary passage, etc., that relates to performing the intended behavior)
- With a word processor, Using Netscape, Using a calculator

Notice that the condition is always followed by a "comma" (.). In the examples above, there is no mention of the description of the instruction that precedes the initiation of the behavior. Here, we want to concentrate on describing only the conditions under which the desired student behavior is to be performed

Student-Centered

All learning outcome should focus on the student. An effective learning outcome will explain expectations for student behavior, performance, or understanding. To ensure that learning objectives are student-centered, a good objective should appropriately complete the statement "The student will..."

The Behavior

Learning outcomes are written in terms of an observable behavior; essentially, learning outcomes should provide a description of what the student will be able to do. When writing the outcome in performance terminology, the selection of an effective action verb is of utmost importance. The use of a clear, targeted verb provides directions about the expectations of student performance at the completion of instructional activities. Because the verb provides the desired direction of emphasis, it is important to choose a verb that is focused and targets a level of performance appropriate for the course.

The Standard/Criteria

Each learning outcome should be measurable and include the criteria for evaluating student performance. Generally, criteria provides information to clarify to what extent a student must perform to be judged adequate; thus effective learning outcome indicate a degree of accuracy, a quantity of correct responses or some other type of measurable information. Standards serve the dual purpose of informing students of performance expectations and providing insight as to how achievement of these expectations will be measured. Since students will utilize the standards to guide their performance, be sure to use specific terminology that has limited interpretations and ensure that all students understand the same interpretation.

Examples of criteria include:

- When asked to do so, the participant will demonstrate effective listening skills, as measured by the ability to accurately paraphrase the comments of other group members at least 75% of the time during the debriefing period, as measured by the program leader.
- Upon request, the participant will demonstrate knowledge of volleyball rules, by correctly answering all of the questions asked during an oral review, as measured by the instructor.

Learning Outcome Statements

The following is a collection of poorly written student learning outcome statements and explanations for and examples of improvements.

Adapted from Carl J. Wenning, Coordinator Illinois State University Physics Teacher Education Program

Example

Poor: Students should know the historically important systems of psychology.

This is poor because it says neither what systems nor what information about each system students should know. Are they supposed to know everything about them or just names?

Example

Better: Students should know the psychoanalytic, Gestalt, behaviorist, humanistic, and cognitive approaches to psychology.

This is better because it says what theories students should "know", but it still does not detail exactly what they should "know" about each theory, or how deeply they should understand whatever it is they should understand.

Example

Best: Students should be able to recognize and articulate the foundational assumptions, central ideas, and dominant criticisms of the psychoanalytic, Gestalt, behaviorist, humanistic, and cognitive approaches to psychology.

How do you fix an unclear outcome?

Example:

"Participants will develop an appreciation of cultural diversity in the workplace."

If you ask a simple question ("Can **it** be measured?"), you see readily that this learning outcome has shortcomings. It is not measurable - one needs to know how a student will demonstrate that he/she "appreciates".

Modified statement:

"Participants will summarize in writing their feelings about cultural diversity in the workplace."

Learners now have a much better idea of what is expected of them. What is the importance of action verbs? Since the learner's performance should be observable and measurable, the verb chosen for each outcome statement should be an action verb which results in overt behavior that can be observed and measured.

Student learning outcome statements should be distinctive and specific.

It is constructive and beneficial to select outcomes that help distinguish and highlight what they have gained. Please note that although a distinctive outcome is recommended, it is not required. You can elect to choose a generic outcome. Examples of generic and distinctive outcomes are provided below:

Example of a generic outcome:

Students completing the Engineering program will be practiced in design skills.

Example of a distinctive outcome:

Engineering graduates will demonstrate knowledge of math, science, and engineering fundamentals. Specifically, the student will have the ability to: demonstrate general design principles; use fundamental engineering techniques, skills, and tools for engineering practice; analyze and interpret data to produce meaningful conclusions and recommendations.

Student learning outcome statements should describe the abilities, knowledge, values and attitudes expected of students and NOT the actual results.

Example of an outcome framed in terms of an individual course:

Students completing the XYZ course in Hypothetical Engineering will receive a B.

Example of an outcome framed in terms of the program:

Graduates from the XYZ program will demonstrate knowledge of engineering fundamentals.

Student learning outcome statements should be simple.

Do not join elements in one statement that cannot be assessed by a single assessment method. In this example you need to measure satisfaction separately from the number of requests for service.

Example of a "bundled" statement:

Customers will be highly satisfied with the service and requests for service will increase

This next example would likely require two different methods of assessment. Notice that an oral presentation would require a different approach than assessing knowledge of mathematics

Example of joined elements

Engineering graduates will demonstrate knowledge of math, science, and engineering fundamentals, and gain competency in basic skills as writing reports, communicating research ideas and oral presentations.

Student learning outcome statements should focus on the learning result and not the learning process

Despite the clear distinction between learning result and learning process, they are often confused in learning outcome statements. Learning outcome statements should be stated such that the focus is on the expected performance of students in terms of their abilities, knowledge, values and attitudes and NOT on the process of instruction and learning.

Example of a statement focusing on learning process:

Introduces computer applications.

The wording of this statement focuses attention on the teaching activity (which in this case is to introduce students to computer applications) and not on the intended outcome of the instruction. This is not a student learning outcome.

Example of a statement focusing on learning result or outcome:

Demonstrates proficiency in XXX computer applications

The wording of this statement focuses attention on the intended learning result or outcome, that is, what is expected from a student. This is a student learning outcome.

Student learning outcome statements should be stated such that the outcome can be measured by more than one assessment method.

An outcome statement should not impose restrictions on the type or number of assessment methods that have to be used to evaluate the outcome.

In this outcome statement only one measure can be used to evaluate the student's performance since this is what is specified in the statement.

Example of an outcome statement that can only be measured by one specific assessment method:

Students completing the Hypothetical Engineering program will score over 95% on a locally-developed Engineering examination.

Specific assessment methods have not been identified in the outcome statement and thus several measures can be used to evaluate the knowledge that the students have gained as a result of the program.

Example of an outcome statement that can be measured by several assessment methods:

Students completing the Hypothetical Engineering program will demonstrate competence and the ability to apply engineering principles.

More **Examples** to Consider

Fine Arts

Broad: Students will demonstrate knowledge of the history, literature and function of the theatre, including works from various periods and cultures.

More specific: Students will be able to explain the theoretical bases of various dramatic genres and illustrate them with examples from plays of different eras.

Even more specific: During the senior dramatic literature course, the students will be able to explain the theoretical bases of various dramatic genres and illustrate them with examples from plays of different eras.

Philosophy

Broad: The student will be able to discuss philosophical questions.

More specific: The student is able to develop relevant examples and to express the significance of philosophical questions.

General Education

Broad: Students will be able to think in an interdisciplinary manner.

More specific: Asked to solve a problem in the student's field, the student will be able to draw from theories, principles, and/or knowledge from other disciplines to help solve the problem.

Chapter 2

Selecting Classroom Assessment Techniques (CATs)

Classroom Assessment is a simple method faculty can use to collect feedback, early and often, on how well their students are learning what they are being taught. The purpose of classroom assessment is to provide faculty and students with information and insights needed to improve teaching effectiveness and learning quality.

Angelo, T. A. & Cross, K.P. (1993). Classroom Assessment Techniques, A Handbook for College Teachers, 2nd ed. San Francisco: Jossey-Bass

CATs possess the following characteristics:

- **Learner-Centered**
CATs shift the focus the attention of faculty and students on observing and improving learning rather than on observing and improving teaching. CATs provide faculty data for making adjustments in the classrooms to improve learning.
- **Teacher-Directed**
CATs respect the academic freedom of faculty. The faculty member gets to decide what to assess, the methods of assessment, and how to address the data gathered through the CATs. In addition, the faculty member can decide whom to share the data with (within and outside the classroom).
- **Formative**
The purpose of CATs is to improve the quality of student learning, not to provide evidence for evaluating or grading students. These assessments should not be graded and be anonymous.
- **Context-Specific**
CATs have to respond to the particular needs and characteristics of the faculty, students, and disciplines to which they are applied. We see that what works well in one class might not work in another.
- **Ongoing**
CATs are an ongoing process. By using CATs, faculty is able to get feedback from students on their learning. Faculty is then able to give feedback, closing the loop, to students by sharing the results of the assessment and make enhancements in the classrooms. To check on the usefulness of their enhancements, faculty use CATs again, continuing the "feedback loop." As the approach becomes integrated into the classroom routine, the communications loop connecting faculty and students becomes more effective.

Getting Started

When getting started, it is recommended that you try only a few of the techniques in a class. This will minimize preparation time and time for analyzing the data. In most cases, CATs will require only five to ten minutes of class time and less than an hour of time out of class. This process of starting small involves three steps:

Step 1

■ Planning

Select one of your classes in which to try out the Classroom Assessment. Decide on the class meeting and select a CAT.

Step 2

■ Implementing

Make sure to spell out to students what you are doing. This includes spelling out your expectations of the students. Collect the responses and analyze them as soon as possible.

Step 3

■ Responding

Closing the loop is important. Assess the data and provide feedback to students. This can be addressing questions raised or developing content to address concerns.

Four suggestions for a successful start:

1. Don't make CATs into a self-inflicted chore or burden.
2. Walk through the CAT before you try them out on your class.
3. Make sure that you allow ample time. It is easy to underestimate the time needed to complete the CAT.
4. Make sure to "close the loop." Let students know what you learn from their feedback and how you and they can use that information to improve learning.

Chapter 3

Planning for Course Assessment

Course Assessment is used to assess student learning in a course and provides evidence of achievement of the goals and outcomes that were outlined within the course. The data that is collected provides the instructor with the opportunity to compare education techniques with the results of the overall product, therefore providing valuable data that will provide direction for the improvement of student learning. Overall, the purpose of assessment is to **improve, inform, prove** and/or **support** your courses. Thinking of assessment in these terms will help you identify your need (which is the first phase) as well as help you with your assessment plan.

Plan

Step 1 Organize for assessment

Before assessment can begin, the key players must be identified. One or more persons may lead the course assessment process, but it is crucial for all faculty to assume the responsibility for designing, implementing and carrying out the assessment process to include reviewing the results and implementing improvements.

It is important to define the scope of the assessment plan. In particular, you need to determine what the assessment will include and what it will not include. Will you assess resources (e.g., facilities, faculty, and equipment)? Will you assess processes (e.g., pedagogy, advising, feedback processes)? Who and what will give you the feedback?

Step 2 Define the intended student learning outcomes of the program

The learning outcomes of a course describe the intended educational outcomes in terms of specific abilities, knowledge, values and attitudes that you want students in your course to possess.

If the course is directly aligned with a program the goals of the course must concur with the goals of the program.

Step 3 Inventory existing assessment methods and select new assessment measures and methods

Initially, identify, list and describe all available information and existing processes that can provide information that can be used for assessment.

Step 4 Select assessment methods and identify assessment targets

Typically, several methods are used to measure each learning outcome unless you are using a standardized test. Programs will, for each student learning outcome, describe where you would like to be within a specified time period (e.g. 10% improvement in student performance within two years). Also, determine what standards are expected from students in your course. For some intended outcomes, you may want 100% of completers to achieve them, but realize that this expectation is unrealistic for other learning outcomes. Or you may want to determine what proportion of your students achieves a specific level. If you have previously measured an outcome, it is helpful to use this as the baseline for setting your target for next year.

Do

Step 5 Collect the data

After the plan has been developed, you must implement the plan. It is important to determine how the data will be collected, who will collect the data, and where and how the data will be archived. The data must also be kept secure.

Check**Step 6 Analyze the results**

After the data has been collected, it is important to summarize the results in a meaningful way so that the faculty can review them and determine what actions are needed to improve the course.

Step 7 Provide feedback

No matter how well assessment activities are planned and conducted, they are worthless unless the plan incorporates a timely feedback mechanism. The results and information gained should be distributed to the faculty and other appropriate parties to obtain their ideas on how to make improvements.

Act**Step 8 Implement changes**

At this point in the continuous improvement cycle, the planned changes should be implemented. In some cases, the changes are easy to implement, while in other instances the proposed changes will have to be implemented over a period of time or through a series of steps. The results of the assessment should be used to identify changes to improve the course.

Step 9 Develop a plan to monitor the changes and compare the results

The implemented changes should be monitored to determine whether or not the changes had the desired effect. One way of achieving this is to use the same assessment plan as used in the previous cycle and compare the actual results to the intended results. Any discrepancies should be carefully studied to determine the underlying cause. In other situations, when the outcomes have been met, the action might be to continue monitoring the outcome to ensure quality or define another outcome to begin monitoring.

Step 10 Review information

Review all of the information obtained from the assessment process and determine how this will affect your next assessment plan. This provides the starting point for the next iteration of the plan-do-check-act cycle to continuous improvement of the academic program.

Chapter 4

Planning for Program Assessment

This step-by-step guide to designing a program evaluation is for individuals needing assistance in developing plans for program assessment. While some of the steps are used in the description of course assessment the additional steps included are necessary to create a valid evaluation.

Plan

Step 1 Organize for assessment

Before assessment can begin, the key players, committees and structures must be identified. One or more persons may lead the program assessment process, but it is crucial for all faculty to assume the responsibility for designing, implementing and carrying out the assessment process including reviewing the results and implementing improvements. In addition, it is important to define the scope of the assessment plan. In particular, you need to determine what the assessment will include and what it will not include. Will you assess resources (e.g., facilities, faculty, and equipment)? Will you assess processes (e.g., pedagogy, advising, feedback processes)? Will you assess results or outcomes? Who and what will give you the feedback?

Step 2 Define the mission of the program

The program mission is a broad statement of the directions, values and aspirations of the department with regard to its programs. It should provide a clear description of the purpose of the program and the learning environment. The mission should be aligned with the Department and College mission.

Step 3 Define the goals of the program

The goals of a program must concur with those of the college, and ultimately with the goals of the institution. Program goal, faculty participation and ownership are essential for the success of program assessment. Academic program assessment must include a major focus on student learning outcomes, provide the basis for assessment and therefore should be defined adequately and clearly.

Step 4 Define the intended student learning outcomes of the program

Program goals are general while program outcomes are more specific and reflect the broader goals. The learning outcomes of a program describe the intended educational outcomes in terms of specific abilities, knowledge, values and attitudes that you want students in your program to possess.

Step 5 Inventory existing assessment methods and select new assessment measures and method

Initially, identify, list and describe all available information and existing processes that can provide information that can be used for assessment. Referring back to the needs of the program and the desirable targets, identify what additional methods need to be used to provide you with the necessary information for assessment.

Step 6 Select assessment methods and identify assessment targets

Typically, several methods are used to measure each learning outcome unless you are using a standardized test. Programs will, for each student learning outcome, describe where you would like to be within a specified time period (e.g. 10% improvement in student performance within two years). Also, determine what standards are expected from students in your program. For some intended outcomes, you may want 100% of graduates to achieve them, but realize that this expectation is unrealistic for other learning outcomes. Or you may want to determine what proportion of your students achieves a specific level. If you have previously measured an outcome, it is helpful to use this as the baseline for setting your target for next year.

Do

Step 7 Collect the data

After the plan has been developed it is time to implement it. It is important to determine how the data will be collected, who will collect the data, and where and how the data will be archived. The data must also be kept secure.

Check

Step 8 Analyze the results

After the data has been collected, it is important to summarize the results in a meaningful way so that the faculty can review them and determine what actions are needed to improve the program.

Step 9 Provide feedback

No matter how well assessment activities are planned and conducted, they are worthless to a program unless the plan incorporates a timely feedback mechanism. The results and information gained should be distributed to the faculty and other appropriate parties to obtain their ideas on how to improve the program.

Act

Step 10 Implement changes

At this point in the continuous improvement cycle, the planned changes should be implemented. In some cases, the changes are easy to implement, while in other instances the proposed changes will have to be implemented over a period of time or through a series of steps. The results of the assessment must be used to identify changes to improve the program.

Step 11 Develop a plan to monitor the changes and compare the results.

The implemented changes should be monitored to determine whether or not the changes had the desired effect. One way of achieving this is to use the same assessment plan as used in the previous cycle and compare the actual results to the intended results. Any discrepancies should be carefully studied to determine the underlying cause. In other

situations, when the outcomes have been met, the action might be to continue monitoring the outcome to ensure quality or define another outcome to begin monitoring.

Step 12 Review information

Review all of the information obtained from the assessment process and determine how this will affect your next assessment plan. This provides the starting point for the next iteration of the plan-do-check-act cycle to continuous improvement of the academic program.

Chapter 5 Selecting Course and Program Assessment Methods

Certainly, it is intimidating to look at a list of learning outcomes and try to plan the assessment for all of them. This chapter helps you identify the strategies and methods you can use to collect assessment data as part of your department's assessment program.

When selecting means to assess your course or program think about how you can provide **evidence of student learning**. **Evidence** is information that provides an outward sign of "proof." It may be one of many variables contributing towards success. The real question is not whether we are doing a good job teaching, but are we systematically reviewing, documenting, and assessing the relevant evidence? It allows us to identify curricular limitations associated with student skills for remediation. Evidence gives us the "power" to "toot our horns" over the success resulting from the course or program.

Benedictine University (Lisle, IL), *C. Arnold, 04/17/07*

What is not evidence of student learning?

- Faculty/Student ratios
- Grade point averages
- Faculty accomplishments
- Percent of students who study abroad
- Individual course enrollment data
- Diversity ratios
- Curriculum review reports

Does the method you choose provide **measurable** or **observable** information? Does it answer questions that are important to you? Is the assessment method **manageable** given available resources-including time and money? Does the method result in **useful feedback** that highlights accomplishments and identify areas requiring attention?

What are some guidelines for selecting assessment methods?

Each department will select and develop assessment methods that are appropriate to departmental goals and outcomes, i.e., methods that will provide the most useful and relevant information for the purposes that faculty in the department have identified. Not all methods work for all departments or are appropriate to all reasons for assessing. However, there are some general guidelines for selecting assessment methods.

Use multiple methods to assess each learning outcome.

Many outcomes will be difficult to assess using only one measure. The advantages to using more than one method include:

- Multiple measures can assess different components of a complex task
- No need to try to design a complicated all-purpose method
- Greater accuracy and authority achieved when several methods of assessment produce similar findings
- Provides opportunity to pursue further inquiry when methods contradict each other

Include qualitative as well as quantitative measures.

All assessment measures do not have to involve quantitative measurement. A combination of qualitative and quantitative methods can offer the most effective way to assess goals and outcomes. Use an assessment method that matches your departmental culture. For example, in a department where qualitative inquiry is particularly valued, these types of methods should be incorporated into the plan. The data you collect must have meaning and value to those who will be asked to make changes based on the findings.

Qualitative measures rely on descriptions and **Quantitative** measures assess teaching and learning by collecting numbers and analyzing numeric data using statistical techniques. The following are selected methods of qualitative measures. (Palomba and Banta 1999).

- Ethnographic studies
- GPA
- Grades
- Exit interviews
- Primary trait analysis scores
- Formal recitals
- Exam scores
- Participant observations
- Demographics
- Writing samples
- Forced-choice surveys
- Open-ended questions on surveys and interviews

Include both Direct and Indirect Measures

Direct methods ask students to demonstrate their learning while indirect methods ask them to reflect on their learning. Direct methods include some objective tests, essays, presentations and classroom assignments. Indirect methods include surveys and interviews.

Examples of Direct Measurement

Embedded questions related to learning outcomes are embedded within course exams. For example, all sections of Philosophy could include a question or set of questions relating to a learning outcome(s). Faculty score and grade the exams as usual and then aggregate and report findings.

Locally developed essay questions that faculty develop to align with the learning outcome(s). Performance expectations in the form a rubric or primary trait analysis should be made explicit prior to obtaining results.

Locally developed exams with objective questions that faculty creates and that are aligned with a learning outcome.

Capstone courses could be a senior seminar or designated assessment course. Learning outcomes can be integrated into assignments

Case studies involve a systematic inquiry into a specific phenomenon such as an individual, event, program, or process. Data are collected via multiple methods often using both qualitative and quantitative approaches.

Classroom assessment is often designed for individual faculty who wish to improve their teaching of an individual course. Data collected can be analyzed to assess student learning outcomes for a course or program.

Debate provides immediate feedback to the student. It reveals thinking and ability to respond based on background knowledge and critical thinking ability. It assesses teamwork and oral communication as well as specific discipline content.

Reflective essays are generally brief (five to ten minute) essays on topics related to identified learning outcomes. Students are asked to reflect on a selected issue. Content analysis is used to analyze results.

Content Analysis is a procedure that categorizes the content of written documents. The analysis begins with identifying the unit of observation, such as a word, phrase, or concept, and then creating meaningful categories to which each item can be assigned. For example, a student's statement that "I learned that I could be comfortable with someone from another culture" could be assigned to the category of "Positive Statements about Diversity." The number of incidents that this type of response occurred can then be quantified and compared with neutral or negative responses addressing the same category.

Flow chart or diagram is a very high level, multi-dimensional assessment displaying original synthetic thinking on the part of the student.

Collective portfolios are samples of student work throughout the course or work from various courses within a program. The collection is used to assess the specific outcome. Portfolios can be assessed using scoring rubrics so that expectations are clarified before portfolios are submitted and examined.

Content Analysis/Observations can be of any social phenomenon, such as student presentations, students working in the library, or interactions at student help desks. Observations can be recorded as a narrative or in a highly structured format, such as a checklist, and they should be focused on specific course or program objective.

Primary Trait Analysis is a process of scoring student assignments by defining the primary traits that will be assessed, and then applying a scoring rubric to each trait.

Internship or Practicum is an excellent evaluation of the student's ability to perform in actual job settings. It evaluates knowledge, skills, and some affective criteria. Overall evaluation may include the supervisor, the faculty member, and self evaluations.

More Direct Measures

- Team/group projects and presentations
- Scores and pass rates on standardized tests (licensure/certification as well as other published tests determining key student learning outcomes)
- Content based comprehensive program exam
- Oral examination
- Internships, clinical experiences, practical, student teaching, or other professional/content-related experiences engaging students in hands-on experiences in their respective fields of study (accompanied by ratings or evaluation forms from field/clinical supervisors)
- Service-learning projects or experiences
- Authentic and performance-based projects or experiences engaging students in opportunities to apply their knowledge to the larger community (accompanied by ratings, scoring rubrics or performance checklists from project/experience coordinator or supervisor)
- Graduates' skills in the workplace rated by employers
- Online course asynchronous discussions analyzed by class instructors

Examples of Indirect Measurement

Students or others report their perception of how well a given learning outcome has been achieved. Indirect measurement uses information that indirectly links to the learning outcome and is used to report academic program student success.

Exit interviews and student Surveys provide meaningful assessment information; exit interviews or student surveys should focus on student learning – knowledge, skills, and abilities – in addition to student satisfaction. The questions should be designed to gain insight into student knowledge and skills. The questions might also focus on student experiences such as internships, participation in research, independent projects, numbers of papers written or oral presentations given, and familiarity with tools of the discipline.

Faculty Surveys aimed at getting feedback about perceptions of student knowledge and skills.

Alumni Surveys these surveys are aimed at evaluating perceptions of knowledge, skills, and abilities gained while studying in the program

Surveys of Employers/Recruiters aimed at evaluating specific competencies, skills or outcomes.

More Indirect Measures

- Course grades
- Comparison between admission and graduation rates
- Number or rate of graduating students pursuing their education at the next level
- Reputation of graduate or post-graduate programs accepting graduating students
- Employment or placement rates of graduating students into appropriate career positions
- Course evaluation items related to the overall course or curriculum quality, rather than instructor effectiveness
- Number or rate of students involved in faculty research, collaborative publications and/or presentations, service learning, or extension of learning in the larger community
- Grade distribution
- Employment retention
- News of accomplishments linked to learning outcomes

Chapter 6

Closing the Loop- Applying the Results

In order for improvements to take place in a course or program the division chairs, directors, coordinators and faculty need to actively review assessment results and act upon them by experimenting with ways that the course or program can be changed with the goal of graduating successful, ideal students.

Reviewing and Reporting Assessment Results

Outcome measures, once taken, must be analyzed and presented in report form. The way those results are reported may differ depending upon the audience to whom a particular report is addressed. The KCC faculty can download the assessment report located on the “O Drive” in the folder labeled **Assessment**. Examples of the assessment forms are located in this workbook appendix A. The portion of the report form labeled **Plan Part A** is completed and submitted to the assessment chair by the due date indicated in the assessment calendar. Once the assessment cycle is completed and **Report Part B** is submitted to the assessment chair the group of reports are sent to the department of Institutional Research which will then compile the assessment results. Once the data is extracted from the compiled report is sent to Division Chairs, Program Directors, Coordinators and faculty for review and discussion during division meetings or in small faculty groups teaching the same course within their specific areas. The department of Institutional Research will catalog and archive assessment data in order for the data to be used as needed for accreditation or documentation of ongoing improvements and success.

The following questions may be useful in working through the process of determining the best ways to synthesize and present program or course assessment information.

Thinking through the Process

- How can data be best linked to program or course goals and outcomes?
- How can the best balance of quantitative and qualitative data be presented?
- Can the data be presented in various ways suitable to differing audiences if necessary?
- What will the data show about students' preparation for the next level in their course and/or program or for their future career or as a transfer student?
- Are there areas where students are outstanding?
- Are there areas where students consistently perform poorly?
- Are there areas where students' performance is adequate but where a higher degree of performance would be particularly desirable?
- Are there general skills areas where students consistently reveal problems?
- Can you write pro and con statements regarding the successes and weaknesses of the program or course based on the data?
- Can you develop concrete recommendations for change based upon the data?

Implementing Changes

Once a course or program has completed the assessment process and data is collected and compiled the application of the knowledge that is collected is essential to reap the benefits of the assessment process.

Assessment should be viewed as an opportunity for continued improvement. It would be beneficial as a faculty member to come to an understanding as to “why” students do not learn certain areas of content, yet retain others. It would also be beneficial to know what projects/assignments are beneficial to the students, and may save the faculty member precious time in the long run.

Part of the reporting phase is identifying changes to make in both the program or course itself and the assessment process (these often go together). In order to implement these successfully, it is crucial to undertake making these changes as soon as possible.

- Identify targets of change during the review and reporting process
- Select a workable number and target group of changes to focus on (as appropriate work collaboratively to develop these changes)
- Create a timeline for putting changes into effect
- Revise assessment measures as necessary based upon prior experience (as appropriate work with faculty to develop these changes)
- Ascertain that all faculty (especially part-time faculty) are fully informed about the results of the assessment process, the subsequent changes, and resulting changes in the assessment measures being employed.
- Proceed with the next cycle of assessment

In order for change to take place it is critical that part-time faculty be brought into the process and kept informed of department and divisional thinking. The more completely their experience and expertise can be incorporated into the process, the more invested they will be in its success.

Appendix A
KCC Assessment Forms

*You can save these fillable PDFs to your **My Documents** folder and complete each part as required.*

Classroom Assessment form

Course Assessment Plan and Report Form

General Education Assessment Plan and Report Form

Program Assessment Plan and Report Form



Kankakee Community College
Classroom Assessment Form

Class: _____

Year: _____

Instructor: _____

Semester: _____

This is a follow-up.

(No need to re-describe the technique or response. See "follow-up" section near the bottom of this form.)

Classroom assessment technique:

Student/instructor response:

Did you make any changes based on the assessment results?
(If so, please submit a follow-up.)

Follow-up to Year _____, Semester _____
How did the changes work?



Kankakee Community College

Course Assessment Plan and Report Form

*****To be completed by Faculty*****

You can save this PDF to your **My Documents** folder and complete each part as required.

Complete Part A (Plan) in September, for each course outcome that will be assessed for the semester. A separate form should be completed for each outcome assessed. Part A should be completed and submitted to the assessment committee chair at the beginning of each semester by e-mail to assessment@kcc.edu or through interoffice mail.

Part B (Report) should be completed at the end of the semester. Submit the completed report to the assessment committee chair by e-mail to assessment@kcc.edu or through interoffice mail. The assessment chair will send the completed assessment reports to the appropriate division chair.

Part A (Plan):

Semester and Year:

Course Title:

Section(s) Assessed:

Faculty Member(s) Participating:

Is This a Follow-Up to a Previous Assessment? Y / N

Course Outcome Assessed:

Method of Assessment:

Desired Target (what percentage of students do you want to achieve the outcome):



Kankakee Community College

Course Assessment Plan and Report Form

*****To be completed by Faculty*****

Part B (Report):

Number of Students Assessed:

Results of the Outcome Assessed:

What is the Plan to Improve on the Desired Outcome (if needed)?



Kankakee Community College

General Education Assessment Plan and Report Form

*****To be completed by Faculty*****

You can save this PDF to your **My Documents** folder and complete each part as required.

Complete Part A (Plan) in September, for each general education outcome that will be assessed for the year. Part A should be completed and submitted to the assessment committee chair at the beginning of the year by e-mail to assessment@kcc.edu or through interoffice mail.

Part B (Report) should be completed at the end of the school year. Submit the completed report to the assessment committee chair by e-mail to assessment@kcc.edu or through interoffice mail. The assessment chair will send the completed assessment reports to the appropriate division chair.

Part A (Plan):

Semester and / or Year:

General Education Outcome Assessed:

Faculty Member(s) Participating:

Courses Included in Assessment Process:

Is This a Follow-Up to a Previous Assessment?

Yes

No

Method of Assessment:

Desired Target (what percentage of students do you want to achieve the outcome):



Kankakee Community College

General Education Assessment Plan and Report Form

*****To be completed by Faculty*****

Part B (Report):

Results of the Outcome Assessed:

What is the Plan to Improve on the Desired Outcome (if needed)?



Kankakee Community College

Program Assessment Plan and Report Form

*****To be completed by Program Director / Program Coordinators*****

You can save this PDF to your **My Documents** folder and complete each part as required.

Complete Part A (Plan) in September, for each program outcome that will be assessed for the year. Complete and submit the remainder of the form, Part B (Report), at the end of the year. Part A and Part B should be submitted to the division chair and assessment committee chair by email to assessment@kcc.edu.

Part A (Plan):

Program Title:

Semester and/or Year:

Faculty Member(s) Participating:

Program Outcome Assessed:

Method of Assessment (How and when outcome is assessed):

Direct Method(s) (required):

Indirect Method(s) (optional):

Desired Outcome:



Kankakee Community College

Program Assessment Plan and Report Form

Part B (Report):

Number of Students Assessed:

Results of the Outcome Assessed:

Is This a Follow-Up to a Previous Assessment?

Yes

No

What is the Plan to Improve on the Desired Outcome (if needed)?

KANKAKEE COMMUNITY COLLEGE
ASSESSMENT PLAN – FY _____
_____ PROGRAM

Program Outcomes	YEAR 1 20__	YEAR 2 20__	YEAR 3 20__	YEAR 4 20__	YEAR 5 20__
1.					
2.					
3.					
4.					
5.					
6.					

Appendix B
Action Verbs for Writing Learning Outcomes
Based on Benjamin Bloom's Taxonomy of Cognitive Levels of Knowledge

Bloom's taxonomy of learning objectives is often referred to in various teaching/learning contexts. The six levels indicate increasing levels of complexity with the top three (analysis, synthesis, evaluation) often referred to as "higher order learning." The first three levels – often used in entry level courses - form the basic groundwork on which higher order skills can be developed.

The following provides the name of each taxonomy level beginning with the lowest level of complexity, an explanation, and some of the verbs often used in writing an outcome aimed at a particular learning level.

Knowledge: Students recall information, content of a principle; working rules, and/or steps of a process in the approximate form it was learned.
(A knowledge base is necessary and supportive of more complex mental processing to take place)

Verb: Collect, Draw, Identify, Label, List, Locate, Name, Recall, Recite, Recognize, Select, Show, State, Tell, Write

Comprehension/Understanding: Using their own words, students will explain, interpret, and/or paraphrase new information based on prior learning. Inferences and generalizations are made from data, related to new information, and examples of uses(s) can be given. This level has two parts: Translation and Interpretation.

Verb: Change, Compare, Convert, Defend, Define, Describe, Distinguish, Explain, Illustrate, Infer, Interpret, Match, Paraphrase, Predict, Restate, Rewrite, Say, State, Summarize

Application: Students solve real-life problems and situations using relevant information, prior knowledge, steps or processes, working rules, and/or principles.

Verb Adapt, Apply, Build, Classify, Construct, Demonstrate, Develop, Discover, Dramatize, Draw or Graph, Modify, Operate, Plan Prepare, Produce, Show, Sketch, Solve, Structure, Survey, Use

Analysis: Complicated, complex material can be separated into parts and analyzed to determine relationships and organization of those parts as they relate to each other, to the whole, to other concepts, problems, or material.

Verb: Analyze, Categorize, Classify, Compare/Contrast, Determine, Deduce, Differentiate, Distinguish, Examine, Analyze, Categorize, Classify, Compare/Contrast, Determine, Deduce, Differentiate, Distinguish, Examine

Synthesis: Students combine, order/organize, transfer, and integrate prior knowledge and current learning to form a new whole enabling them to formulate a new hypothesis, solve a problem and/or produce a result.

Verb: Change, Combine, Compose, Create, Design, Develop, Formulate, Hypothesize, Incorporate, Invent, Integrate, Order, Originate, Organize, Plan, Predict, Produce, Revise, Structure

Evaluation: Students' critique, judge, predicts, and justify based on specific, carefully spelled-out standards and criteria. Evaluation is not based on personal opinion.

Verb: Appraise, Assess, Compare, Insider, Critique, Defend, Evaluate, If...then..., Judge, Justify, Predict, Rank, Summarize, Support, Weigh

Bloom, B.S. (Ed.) (1956) Taxonomy of Educational Objectives: The classification of educational goals: Handbook I, Cognitive Domain. New York; Toronto: Longmans, Green.

Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
Recognize or recall information	Understand, organize or interpret information.	Transfer skills and knowledge into new or unfamiliar situations.	Break concepts into component parts.	Creatively combine parts into new or original structures.	Judge the worth of an idea or solution, often in the absence of right or wrong answers.
Sample question at this level: Name the muscles of the rotator cuff.	Sample question at this level: How does the rotator cuff help you to raise your arm?	Sample question at this level: Why does throwing a curve ball cause rotator cuff injury?	Sample question at this level: Diagram the sequence of the throwing motion stress on each component of the rotator cuff.	Sample test item at this level: Design a physical therapy program to strengthen each component of the rotator cuff.	Sample test item at this level: Evaluate another physical therapist's program to strengthen and prevent injury to the rotator cuff.
Arrange Choose Collect Define Eliminate Identify Know Label List Match Name Quote Recall Recognize Record Remember Reproduce Select Show Tabulate	Associate Classify Compare Contrast Describe Display Estimate Explain Extrapolate Interpret Locate Paraphrase Report Restate Summarize Tell Translate Understand	Apply Calculate Complete Compute Demonstrate Develop Employ Give examples Illustrate Manage Manipulate Perform Predict Present Produce Publish Relate Report Show Solve Translate Use Write	Analyze Determine evidence Diagram Differentiate between Draw conclusions Edit Identify causes Infer State a point of view Support reasoning	Adapt Compose Combine Construct Create Design Develop Formulate Incorporate Integrate Invent Modify Organize Synthesize	Appraise Assess Criticize Critique Decide Defend Discriminate among Draw conclusions Evaluate Judge Justify Measure the value of Recommend Revise Summarize

Appendix C

Example Questions Using Blooms Taxonomy¹

Level 1 Knowledge

1. What is ...?
2. How is ...?
3. Where is ...?
4. When did _____ happen?
5. How did _____ happen?
6. How would you explain ...?
7. Why did ...?
8. How would you describe ...?
9. When did ...?
10. Can you recall ...?
11. How would you show ...?
12. Can you select ...?
13. Who were the main ...?
14. Can you list three ...?
15. Which one ...?
16. Who was ...?

Level 2 Comprehension

1. How would you classify the type of ...?
2. How would you compare ...?
3. Contrast ...?
4. Will you state or interpret in your own words ...?
5. How would you rephrase the meaning ...?
6. What facts or ideas show ...?
7. What is the main idea of ...?
8. Which statements support ...?
9. Can you explain what is happening . . . what is meant . . . ?
10. What can you say about ...?
11. Which is the best answer ...?
12. How would you summarize....?

Level 3 Application

1. How would you use ...?
2. What examples can you find to ...?
3. How would you solve _____ using what you have learned ...?
4. How would you organize _____ to show ...?
5. How would you show your understanding of ...?
6. What approach would you use to ...?
7. How would you apply what you learned to develop ...?
8. What other way would you plan to ...?
9. What would result if ...?
10. Can you make use of the facts to ...?

11. What elements would you choose to change ...?
12. What facts would you select to show ...?
13. What questions would you ask in an interview with ...?

Level 4 Analysis

1. What are the parts or features of ...?
2. How is _____ related to ...?
3. Why do you think ...?
4. What is the theme ...?
5. What motive is there ...?
6. Can you list the parts ...?
7. What inference can you make ...?
8. What conclusions can you draw ...?
9. How would you classify ...?
10. How would you categorize ...?
11. Can you identify the difference parts ...?
12. What evidence can you find ...?
13. What is the relationship between ...?
14. Can you make a distinction between ...?
15. What is the function of ...?
16. What ideas justify ...?

Level 5 Synthesis

1. What changes would you make to solve ...?
2. What would happen if ...?
3. Can you elaborate on the reason ...?
4. Can you propose an alternative ...?
5. Can you invent ...?
6. How would you adapt _____ to create a different ...?
7. How could you change (modify) the plot (plan) ...?
8. What could be done to minimize (maximize) ...?
9. What way would you design ...?
10. What could be combined to improve (change) ...?
11. Suppose you could _____ what would you do ...?
12. How would you test ...?
13. Can you formulate a theory for ...?
14. Can you predict the outcome if ...?
15. How would you estimate the results for ...?
16. What facts can you compile ...?
17. Can you construct a model that would change ...?

Quick Flip Questions for Critical Thinking, based on Bloom's Taxonomy and developed by Linda G. Barton (1996)

Appendix D CATS Toolkit

In 1993 Angelo and Cross compiled a collection of 50 CATs. To assist in the diverse disciplines and areas of measurement, a table the CATs are provided below indexed by discipline and teaching goals.

<i>Name:</i>	<i>Description:</i>	<i>What to do with the data:</i>	<i>Time required:</i>
Application Cards	After teaching key section or concept, ask students to write down at least one real-world application for what they have just learned to determine how well they can apply their learning.	Quickly read through the responses and categorize them according to their quality. Select a sampling of the responses and present them to the class.	Prep: Low In class: Low to Med Analysis: Low to Med
Background Knowledge Probe	This CAT is used to measure student understanding of concepts that will be tied to future assignments. Probing questions can be open-ended questions, short-answer, multiple choices, or a combination of each.	Categorize the data into four categories: Erroneous knowledge; no relevant knowledge; some relevant knowledge; and significant relevant knowledge. This can be used to modify curriculum delivery.	Prep: Med In class: Low Analysis: Med
Chain Notes	Students pass around an envelope which shows a question about the class. When the envelope reaches the student, he/she spends a moment to write a response and place it in the envelope.	Read through the responses and categorize them. Discuss the patterns of responses with students can lead to better teaching and learning.	Prep: Low In class: Low Analysis: Low
Directed Paraphrasing	Ask students to write a layman's definition/explanation of something they have just learned to assess their ability to comprehend and transfer concepts.	Categorize student responses according to characteristics you feel are important. Analyze the responses both within and across categories.	Prep: Low In class: Med Analysis: Med
Electronic Mail Feedback	Via E-mail or Angel students can respond to instructor questions or provide course feedback.	Summarize answers and categories into major themes. Communicate results to the class via class, e-mail, or discussion board.	Prep: Low In class: Low Analysis: Low to Med

<i>Name:</i>	<i>Description:</i>	<i>What to do with the data:</i>	<i>Time required:</i>
Muddiest Point²	Ask students to respond to one question: "What was the muddiest point in (e.g., lecture, discussion, homework, or films).	Review response and look for common muddy points. Organize by themes and address major clusters in following courses.	Prep: Low In class: Low Analysis: Low
One-Minute Paper²	Ask students to answer on a half-sheet of paper: "What is the most important point you learned today?" and, "What point remains least clear to you?". The purpose is to elicit data about students' comprehension of a particular class session.	Review responses and note any useful comments. Depending on the questions, discussion, handout, or formalized lecture might be utilized to address factors raised.	Prep: Low In class: Low Analysis: Low
One-Sentence Summary²	Students summarize knowledge of a topic by constructing a single sentence that answers the questions "Who does what to whom, when, where, how, and why?" This focuses student responses to key factors.	Evaluate the quality of each summary. Note whether students have identified the essential concepts of the class topic and their interrelationships. Share your observations with the class.	Prep: Low In class: Med Analysis: Med
Pro-Con Grid²	Students provide a quick list of pros and cons on a given issue.	Conduct a frequency of pros and cons. Compare the student results to your pro/con grid. Address omissions and misplacements in upcoming class sessions.	Prep: Low In class: Low Analysis: Low to Med
Student-Generated Test Questions²	Allow students to write test questions and model answers for specified topics, in a format consistent with course exams. This will give students the opportunity to evaluate the course topics, reflect on what they understand, and what good questions are.	Cluster the questions into major topics. Evaluate the questions and use select examples as prompts for discussion. You may also want to revise the questions and use them on the upcoming exam.	Prep: Med In class: Med to High Analysis: Med to High

Example of CAT's The Clearest and Muddiest Points

Description:

The *Muddiest Point* is just about the simplest technique one can use. It is also remarkably efficient, since it provides a high information return for a very low investment of time and energy.

The technique consists of asking students to jot down a quick response to one question: "What was the muddiest point in?" The focus of the *Muddiest Point* assessment might be a lecture, a discussion, a homework assignment, a play, or a film.

Step-by-Step Procedure:

1. Determine what you want feedback on: the entire class session or one self-contained segment? A lecture, a discussion, a presentation?
2. If you are using the technique in class, reserve a few minutes at the end of the class session. Leave enough time to ask the question, to allow students to respond, and to collect their responses by the usual ending time.
3. Let students know beforehand how much time they will have to respond and what use you will make of their responses.
4. Pass out slips of paper or index cards for students to write on.
5. Collect the responses as or before students leave. Stationing yourself at the door and collecting "muddy points" as students file out is one way; leaving a "muddy point" collection box by the exit is another.
6. Respond to the students' feedback during the next class meeting or as soon as possible afterward

What was the clearest point in today's session?
(In other words, what did you understand best?)

What was the muddiest point in today's session?
(In other words, what did you understand least?)

Teaching Methods CAT
Designed by Jan Thom Health Education, fall 1997

Which of the following have been the most valuable tools to help you learn the content material for this class?

- | | |
|---|---|
| <input type="checkbox"/> Reading the text | <input type="checkbox"/> Quizzes highlighting the main points |
| <input type="checkbox"/> Class lecture | <input type="checkbox"/> Class discussion |
| <input type="checkbox"/> Guest lectures | <input type="checkbox"/> Study guide |
| <input type="checkbox"/> Handouts | <input type="checkbox"/> Other: |

What suggestions do you have for teaching methods/classroom instruction techniques that would help you learn the content material for this class?

Which of the following have been most helpful in helping you to apply the content materials to your own life?

- | | |
|---|---|
| <input type="checkbox"/> Reading the text | <input type="checkbox"/> Quizzes highlighting the main points |
| <input type="checkbox"/> Class lecture | <input type="checkbox"/> Class discussion |
| <input type="checkbox"/> Guest lectures | <input type="checkbox"/> Study guide |
| <input type="checkbox"/> Handouts | <input type="checkbox"/> Other: |

What suggestions do you have for teaching methods/classroom instruction that would help you apply the material learned in this course to your life?

Teaching Methods CAT Results (Number of students = 24)

1. Which of the following have been the most valuable tools to help you learn the content material for this class?

- | | |
|---------------------------|--|
| <u>7</u> Reading the text | <u>17</u> Quizzes highlighting the main points |
| <u>15</u> Class lecture | <u>16</u> Class discussion |
| <u>18</u> Guest lectures | <u>20</u> Study guide |
| <u>10</u> Handouts | <u> </u> Other: |

2. What suggestions do you have for teaching methods/classroom instruction techniques that would help you learn the content material for this class?

3. Which of the following have been most helpful in helping you to apply the content materials to your own life?

- | | |
|---------------------------|---|
| <u>6</u> Reading the text | <u>3</u> Quizzes highlighting the main points |
| <u>15</u> Class lecture | <u>17</u> Class discussion |
| <u>17</u> Guest lectures | <u>6</u> Study guide |
| <u>15</u> Handouts | <u> </u> Other: |

The Minute Paper

Description: No other technique has been used more often or by more college teachers than the *Minute Paper*. This technique -- also known as the *One-Minute Paper* and the *Half-Sheet Response* -- provides a quick and extremely simple way to collect written feedback on student learning. To use the *Minute Paper*, decide first what you want to focus on and, as a consequence, when to administer the *Minute Paper*. If you want to focus on students' understanding of a lecture, the last few minutes of class may be the best time. If your focus is on a prior homework assignment, however, the first few minutes may be more appropriate. The instructor stops class two or three minutes early and asks students to respond briefly to some variation on the following two questions: "What was the most important thing you learned during this class?" and "What important question remains unanswered?" Students write their responses on index cards or half-sheets of scrap paper and hand them in.

Please answer each question in 1 or 2 sentences

What was the most useful of meaningful thing you learned during this session?

What questions remain upper-most in your mind as we end this session?

The Minute Paper: Completing the Feedback Loop (Responding to students)

1. Most useful in Chapter 3?

 8 Problem solving skills, road maps, bridges conversion factors

 7 Empirical formulas, molecular formulas

 6 The Mole Hill (g→mol→molecules)

 6 Stoichiometry (Wt-Wt problems)

 5 Molarity

 3 Percent, theoretical and actual yields

 3 Limiting reactant, excess reactant

 3 Balancing equations

 1-2 Other

2. Questions that remain in Chapter 3?

 14 Limiting reactant, excess reactant

 11 Empirical formulas, molecular formulas

 3 Percent, theoretical, and actual yields

 1-2 Other

Misconception / Preconception Check

Please place a T for true an F for false and an NS for not sure in response to each of the following statements. (Adapted from CAT # 3 Cross/Angelo pg. 132)

- All Germans were Nazis in WW II
- Most prejudice is learned in the home
- Jews had equal rights in European countries from 1900-1945.
- Only a handful of Nazis committed atrocities.
- Jews had conspiracies to take over the world.
- The Holocaust is the same as any previous massacres in history.
- The Free/Western world did all they could to help Jews and other Nazi victims.
- Citizens living in the environs of Death Camps had no way of knowing what happened there.
- Jews walked into the gas chambers like sheep to slaughter.
- Jews could have immigrated to other countries and could have saved themselves when Hitler came to power.
- Jews are a race.
- All Jews look alike
- Jews always try to be different
- Jews represent a major portion of the American and World population.
- The Treaty of Versailles, following WW I, planted the seeds for WW II.
- Jews never took up arms against the Nazis.

Misconception / Preconception Check Results

Total of 16 students

Question #`	True	False	Not Sure
1	4	10	2
2	11	1	4
3	1	12	3
4	12	2	2
5	1	10	5
6	13	2	1
7	10	4	2
8	9	6	1
10	12	1	3
11	14	1	1
12	1	14	1
13	5	10	1
14	6	8	2
15	2	2	12
16	8	7	1

Cultural Interaction Cat
Designed by Andrew Holm, fall 1995

Lisa Delpit, in *Other People's Children: Cultural Conflict in the Classroom*, states that:

"The question is not necessarily how to create the perfect 'culturally matched' learning situation for each ethnic group, but rather how to recognize when there is a problem for a particular student and how to seek its course in the most broadly conceived fashion."

We would like to ask your help in trying to recognize any problems that you may be having this semester that relate to your race, gender, culture, or ethnic background.

What problems have you experienced in the classroom (either relating to your instructor, the material, or your peers) that may be related to race, gender, culture, or ethnic background?

How could the classroom activities be structured differently to help prevent or alleviate this problem?

Has working in a cooperative-learning group helped you to feel more included as part of this class? Please give some specific examples.

Other ideas, comments, or suggestions:

Reality Check CAT
Adapted by Gina Walls and Jennifer Satterlee

Designed for use before class for our under prepared students.

To get ready for today's classes I: (Please check all that apply.)

- reviewed notes from the last classes.
- reviewed reading material.
- thought up and wrote out a few questions.
- did the assigned homework.
- slept at least seven hours last night.
- ate a healthy breakfast.

I arrived for today's classes: (Please circle your response.)

Early On time 10 minutes late 20 minutes late 1 hour or more late

If I arrived late, I was respectful of teachers and other students by quietly taking my seat and waiting to ask what I missed. (Skip this one if you were on time.)

Definitely Yes, except for _____

Reality Check CAT

Designed for use after classes

During classes today I took notes when appropriate.

Not often Often Always

During classes today I participated by asking questions and making comments.

Not often Often Always

During classes today I treated others with respect and courtesy.

Not often Often Always

During classes today I listened carefully while others spoke.

Not often Often Always

I would learn more if I would: _____

RSQC2

Recall pertinent facts that relate to the target concept. Map them, perhaps?

Summarize the main point in one well-constructed sentence.

Question? What central question do you still have about this material?

Connect the topic to the theme of the course. How do you see this topic relate?

Comment? What's useful or not? What's relevant or not? What did you like or not?

RSQC2

Recall: Recall the most important, useful terms or phrases from the class.

Summarize: Summarize as many of the above points into one summary sentence.

Question: Write one or two questions that remain unanswered after the class.

Connect: Write one to two sentences connecting the main points of the class with the major goals of this course.

Comment: Please write an evaluation comment about the class.

Reading Rating Sheet

Title of Reading Assignment: _____

Circle the response to the following questions

How well did you read the assignment?

- Completely and carefully
- Completely, but not carefully
- Only partially, but carefully
- Not completely or carefully

How useful was the reading assignment in helping you understand the topic?

- Very useful
- Useful
- Not very useful
- Useless

How clear and understandable was the reading assignment?

- Very
- Adequately
- Not very
- Not at all

Having read this assignment, do you think it should be assigned again next term?

- Yes
- No

Please explain your answer to question 4 in a couple of sentences below.

Class Feedback Form

Please respond honestly and constructively to the questions below by circling the responses and writing brief comments.

On the scale below, please rate the clarity of today's session.

1	2	3	4	5
totally unclear	somewhat unclear	clear	very clear	extremely clear

Overall, how *useful* was today's session in helping you understand the material?

1	2	3	4	5
useless	not very useful	somewhat	very useful	extremely useful

Overall, how *interesting* did you find today's discussion?

1	2	3	4	5
Totally boring	mostly boring	somewhat interesting	very interesting	extremely interesting

What did you find most beneficial about today's class?

How could the class have been improved?

Goal Ranking and Matching

Please write 3-5 goals you wish to accomplish during this course. This should not include basic goals, such as “Pass the course”, but detailed hopes of what you wish to learn and gain from the experience.

a.

b.

c.

d.

e.

Now return to your goals and rank them in order of importance.

Appendix E
Examples of Rubrics or Primary Trait Scales

Nursing and Occupational Therapy: Group Activities

Judith Bloomer, Occupational Therapy and Evelyn Lutz, Nursing, Xavier University, Cincinnati, Ohio

Assignment: Group projects in occupational therapy and nursing

Group Project: _____ Member being assessed: _____

Instructions

Using the key that follows, circle the number that represents your opinion on the group member's performance on each item.

- 1. Outstanding
- 2. More than satisfactory
- 1. Satisfactory
- 0. Less than satisfactory
- N/O Inadequate opportunity to observe

Work Related Performance					
<i>Comprehension:</i> Seemed to understand requirements for assignment	0	1	2	3	N/O
<i>Organization:</i> Approached tasks(such as time management) in a systematic manner	0	1	2	3	N/O
<i>Acceptance of responsibility:</i> Shared responsibility for tasks to be accomplished	0	1	2	3	N/O
<i>Initiative/Motivation:</i> Made suggestions, sought feedback, showed interest in group decision making and planning.	0	1	2	3	N/O
<i>Creativity:</i> Looked at ideas from viewpoints different than the usual ways	0	1	2	3	N/O
<i>Task completion:</i> Followed through in completing own contributions to group project	0	1	2	3	N/O
<i>Attendance:</i> Attended planning sessions, was prompt, and participated in decision making	0	1	2	3	N/O

Portfolio Rubric

6. A portfolio that is excellent in quality

- is substantial in content and mature in style
- handles varied prose tasks successfully
- uses language effectively and creatively
- has a strong voice and clear sense of audience
- takes risks that work in content or form

5. A portfolio that is very good in overall quality

- is substantial in content and competent in style
- handles most prose tasks successfully
- uses language effectively and sometimes creatively
- demonstrates a clear and distinct, if not powerful, voice
- takes some risks

4. A portfolio that is good in overall quality

- is substantial in content and mature in style
- handles varied prose tasks successfully
- uses language effectively and creatively
- has a strong voice and clear sense of audience
- takes risks that work in content or form
-

4. A portfolio that is good in overall quality

- is competent both in content and style
- handles some prose tasks successfully
- uses language effectively
- has an uneven sense of voice and a somewhat formulaic sense of audience
- takes minimal risks

3. A portfolio that is fair in overall quality

- contains recurring problems in content and/or style
- handles few prose tasks successfully
- contains noticeable language problems
- lacks a clear sense of audience and voice

2. A portfolio that is below average in overall quality

- is thin in substance and undistinguished in style
- has difficulty with a variety of prose tasks
- contains recurring language problems that interfere with reading
- lacks a sense voice and a sense of audience

1. A portfolio that is unacceptable in quality

- contains severe weaknesses that render the content incomprehensible

Rubric to Work Assess Related Interactions with Others

<i>Collaboration:</i> Worked cooperatively with others	0 1 2 3 N/O
<i>Participation:</i> Contributed “fair share” to group project, given the nature of individual assignment	0 1 2 3 N/O
<i>Attitude:</i> Displayed positive approach and made constructive comments in working toward goal	0 1 2 3 N/O
<i>Independence:</i> Carried out tasks without overly depending on other group members	0 1 2 3 N/O
<i>Communication:</i> Expressed thoughts clearly	0 1 2 3 N/O
<i>Responsiveness:</i> Reacted sensitively to verbal and nonverbal cues of other group members	0 1 2 3 N/O

Add total score Total: _____

Divide by number of items scored with a number Average: _____

Name of evaluator: _____ Date: _____

Criteria for Evaluation: Hypothetical Newspaper Article
Christine Havice, Art History, University of Kentucky, Lexington.

Assignment: For a hypothetical “newspaper” in the ancient Assyrian empire, write a news report on the unveiling of the palace relief titled “Ashurnasirpal II at War.”

14-15	Describes work concisely Relates message to artist’s choices and use of various devices Develops how message affects beholder Considers audience in writing Clearly organized and presented Well-imagined Legible No problems with mechanics, grammar, spelling, or punctuation
11-13	Good description Relates message to artist’s choices and use of various devices Some consideration of effect on beholder Considers audience Perhaps could be better organized or presented Adequately imagined Legible, few problems with mechanics, grammar, spelling, or punctuation
8-10	Adequate description Less thorough analysis of how artist conveys message and devices Audience not necessarily kept in mind Needs significant improvement in organizations or presentation Needs better imagination Problems with legibility mechanics
6-7	Lacking substantially in either description or analysis Problems with audience, organization, presentation, or mechanics interfere with understanding
0-5	Substandard on more than two of these: description, analysis of choices and devices, effects on beholder Major problems with audience, organization, presentation, or mechanics

Statistics: Statistical Investigation

William Marsh, Mathematics, Physics, and Computer Science, Raymond Walters College of the University of Cincinnati

Assignment: Conduct a statistical investigation, including identifying a problem, developing an hypothesis, obtaining a random sample, measuring variables, analyzing data, and presenting conclusions. This PTA scale identifies only three critical thinking traits. It does not include all the traits that would be included in the student's grade.

Methodology

- 5 Correct statement of problem with accompanying null and alternative hypothesis. Well-defined population with appropriate random sample. Data collection is free of bias or contamination.
- 4 One part of the 5 level is not as high as it should be, and overall the quality of the methodology is just slightly lower than the highest level.
- 3 All the necessary parts of the methodology are present, but the quality level is only adequate.
- 2 There is a serious deficit in the methodology in the form of poorly performed tasks or some portions simply omitted. The results are compromised and may be unusable.
- 1 There is total failure to understand the task. The results will be invalidated because the methodology is erroneous.

Data Analysis

- 5 Uses appropriate statistical test with correct results. Provides an interval estimation of the values of the parameter. Includes a hypothesis test and gives accompanying p-level stating probability of type 1 error.
- 4 Provides most of level 5, but one of the characteristics is missing or unclear.
- 3 Uses correct statistical test, but estimation or interpretation is omitted.
- 2 Uses correct statistical test, but there are errors in calculation and other work.
- 1 Incorrect statistical test: data are erroneous or missing.

Conclusions

- 5 A complete presentation of results with conclusions, estimations, and p-levels for type 1 errors. Identifies possible threats to the study and also any areas in need of additional study.
- 4 As in 5, but one characteristic could be improved.

- 3 The presentation is only adequate. Conciseness and clarity are lacking.
- 2 Conclusions are vague and inaccurate. There has been an effort by the student, but there is an obvious lack of understanding and thoroughness
- 1 A failure to make the necessary conclusions and implications.

First- Year Composition: Essay

Assignment: To write an essay that explores an idea or insight. Students are to use external sources as needed, but this is not a term paper.

A Range

Originality of thesis: The author develops an authentic, fresh insight that challenges the reader's thinking. The paper shows a complex, curious mind at work.

Clarity of thesis and purpose: The thesis and purpose are clear to the reader.

Organization: The essay is organized in a way that fully and imaginatively supports the thesis and purpose. The sequence of ideas is effective, given the writer's thesis and purpose. The reader always feels that the writer is in control of the organization, even when the organizational plan is complex, surprising, or unusual. The sub-points serve to open up and explore the writer's insight in the most productive way.

Support: The writer offers the best possible evidence and reasoning to convince the reader. No important pieces of available evidence and any important points or reasons are omitted. It is clear that the writer is very well informed, has searched hard and effectively for appropriate evidence, and has thought about how evidence may be used for the argument. Evidence presented is always relevant to the point being made. Through telling detail, the writer helps the reader to experience what the writer is saying.

Use of sources: The writer has used sources to support, extend, and inform the ideas but not to substitute for the writer's own development of an idea. The writer has effectively combined material from a variety of sources, including, as relevant and needed, personal observation, scientific data, authoritative testimony, and others. (This is not to say that the writer must use a certain number or type of sources. Need and relevance should be the determining factors.) The writer uses quotations to capture a source's key points or turns of phrase but does not overuse quoted material to substitute for the writer's own development of an idea. Quotations, paraphrase, and citation are handled according to accepted scholarly form.

Ethos: The writer creates a "self" or "ethos" that sounds genuine, that is relevant to the writer's purpose, and that is consistent throughout the essay.

Style: Language is used with control, elegance, and imagination to serve the writer's purpose. The essay, when read aloud, pleases the eye and ear.

Edited Standard Written English (ESWE): Except for deliberate departures (the quoted speech of a person, a humorous purpose, and so on), the writer uses ESWE forms of grammar, punctuation, spelling, and syntax.

Presentation: The essay looks neat, crisp, and professional.

B Range

Falls short of the A range in one or more ways.

C Range

Originality of thesis: The thesis may be obvious or unimaginative.

Clarity of thesis and purpose: The thesis and purpose are clear to the reader.

Organization: The essay is organized in a way that competently supports the thesis and purpose. The sequence of ideas is effective, given the writer's thesis and purpose. The reader almost always feels that the writer is in control of the organization, even when the organizational plan is complex, surprising, or unusual. The sub-points serve to open up and explore the writer's insight in a productive way.

Support: The writer offers solid evidence and reasoning to convince the reader. No important pieces of available evidence and any important points or reasons are omitted. It is clear that the writer is well informed and has thought about how evidence may be used for the argument. Evidence presented is usually relevant to the point being made.

Use of sources: The writer has used sources to support, extend, and inform the ideas but not to substitute for the writer's own development of an idea. The writer uses quotations to capture a source's key points or turns of phrase but does not overuse quoted material to substitute for the writer's own development of an idea. Quotations, paraphrase, and citation are handled with reasonable consistency, according to accepted scholarly form.

Ethos: The writer creates a "self" or "ethos" that sounds genuine, that is relevant to the writer's purpose, and that is generally consistent throughout the essay.

Style: Language is used competently, though it may be awkward at times. There are few or no sentences that confuse the reader or are incomprehensible.

Edited Standard Written English (ESWE): Except for deliberate departures (the quoted speech of a person, a humorous purpose, and so on), the writer generally uses ESWE forms of grammar, punctuation, spelling, and syntax. There are no more than average of two departures from ESWE per page in any combination of the following areas: sentence boundary punctuation, spelling and typos, use of apostrophe and plural, ESWE verb and pronoun forms, ESWE agreement between subject-verb and pronoun-antecedent.

Presentation: The essay looks neat, crisp, and professional.

D-F Range

Anyone of the following may result in a D or F:

The thesis is obvious, cut-and-dried, and trite.

The reader cannot determine the thesis and purpose. The organization is not clear to the reader.

The organizational plan is inappropriate to the thesis; it does not offer effective support or explanation of the writer's ideas.

The writer offers little or no effective support for the ideas. The writer has neglected important sources that should have been used.

The writer has overused quoted or paraphrased material to substitute for the writer's own ideas.

The writer has used source material without acknowledgment. (This may also result in the kinds of penalties attached to plagiarism).

The language is so muddy that the reader is frequently at a loss to understand what the writer is trying to say.

The use of ESWE falls below the standard established above for a C.

Rubric for Team Work			
Criteria for	Level of Achievement		
Group Function	4	2	0
	Exemplary	Satisfactory	Unacceptable
Attending	Most, if not all, members attend all meetings.	Most members are present at most meetings. When members have to be absent they inform and/or seek the agreement of the team.	Many members frequently miss meetings and do not inform the team.
Participating	There is a clear definition of tasks to be accomplished, anticipating future needs. All members take an active role. Tasks are defined by the group and assigned to all members. The team engages in follow-up activities to monitor progress.	Tasks are defined informally, and most but not all members understand them. Most members contribute. Follow-up is sporadic.	Tasks are not defined, and few members participate actively. There is no follow up.
Defining Members' Roles	Every member's role on the team is defined and understood by all. Each team member can explain the role of others.	Members' roles are defined informally and may not be completely understood by all. Some members may not be able to explain the role of others.	There is little understanding of who does what.

	4	2	0
Group Function	Exemplary	Satisfactory	Unacceptable
Team Member Support	Every team member is treated with respect. All members listen to all ideas. The work of each person is acknowledged. Members feel free to seek assistance from others or to ask questions.	There is a general atmosphere of respect for team members, but some members may not be heard as much as others. Acknowledging others' work is serendipitous rather than planned. Some members may not feel free to turn to others for help.	The team atmosphere is competitive and individualistic rather than cooperative and supportive.
Managing Conflict	Conflicts are consistently resolved through open discussion and compromise.	Members are generally able to resolve conflicts through open discussion and compromise.	Conflicts that arise are either not dealt with or cannot be resolved.
Process Management Meeting Regularly	Weekly or biweekly meetings are scheduled and held at defined times.	Meetings are schedule sporadically to keep the project going.	Meetings are rare.
Establishing Goals	Realistic, prioritized, and measurable goals are agreed upon and documented.	Goals are establish, but some may be too general or unquantifiable	Priorities may be unrealistic. Documentation may be incomplete. Clear goals are not formulated or documented.

Group Function	4	2	0
	Exemplary	Satisfactory	Unacceptable
Adjusting	When working to achieve goals, the team is able to adjust plans as needs arise. There is a clear understanding of the nature of mid-course corrections and why they were needed.	The team is not always able to adjust as needed to meet goals. Realization of the need for midcourse corrections sometimes comes too late.	The team seems to be thrashing about. Activity plans (if they exist) are unfocused, and thus there is no ability to adjust and make corrections.
Timely Submission of Work Assignments and Reports	Team is self-motivated and can complete work assignments and reports in a timely manner without being reminded.	Work assignments and reports are submitted but are sometimes late. Work assignments and reports are submitted inconsistently.	The team is no self-motivated and needs constant chasing to get the work submitted.