

STUDENT LEARNING ASSESSMENT FOR PROGRAM IMPROVEMENT

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Abstract

One of the responsibilities of a department chair is confirming and affirming the quality of the degree credentials being awarded by the programs that fall under their leadership. It is important, now more than ever, for programs to document the level of proficiency that students reach in specified learning areas that make up a degree's credential. Policy makers and accreditation agencies increasingly look toward documentation of student learning beyond course grades and dissemination of content as identified on syllabi. The chair of a department can have important influence on the processes and impact of student learning assessment in programs. This article provides information foundational for understanding of assessment processes and ideas for department chairs to provide leadership in effective documentation of student learning.

Introduction

As department chairs, one of your responsibilities is confirming and affirming the quality of the degree credentials being awarded by the programs that fall under your leadership. It is important, now more than ever, for programs to document the level of proficiency that students reach in specified learning areas that make up a degree's credential. Policy makers and accreditation agencies increasingly look toward documentation of student learning beyond course grades and dissemination of content as identified on syllabi (Ewell, 2013).

As department chair, you are not responsible for determining expected learning outcomes or documenting student achievement, it is essential to provide leadership, as well as guidance for programs. What is needed is a working knowledge of designing effective student learning outcomes, assessment practices that authentically represent learning, strategies for maintaining assessment data and reporting, and confirming departmental expectations for assessment processes to lead toward program improvements.

The first, and maybe the most important element of leadership in this area is to develop a culture of assessment across your department. A culture of assessment refers to broad faculty and program leaders recognition that course grades are in and of themselves insufficient to identify achievement of specific learning outcomes because course grades often encompass multiple learning outcomes as well as other elements unassociated with learning outcomes (Suskie, 2009).

It is also necessary to understand that content and skills taught in a course or curriculum do not automatically equate to content and skills learned. Assessment of learning defines how students make sense of, and in many cases apply, what it taught.

The question that should be on everyone's mind is how to establish a culture of assessment in your department that: (1) embraces student learning assessment that exposes student demonstrations of how they make sense of and apply what is taught and incorporates this as a means of instruction or 'what we do'; (2) recognizes a primary purpose for student learning assessment is to identify not only successful learning but also emphasizes a pursuit of identifying student misunderstandings or lack of learning that lead toward program improvement in response to assessment results; and (3) embraces multiple research-based assessment strategies in an assessment process.

Step 1 - Guide programs to define essential learning for the program credential.

Programs should carefully consider the meaning of their degree in relation to desired student achievement and how they reflect expectations beyond the university. From these learning outcomes, programs must work backward to identify essential levels of understanding and skills that must be achieved at various points throughout the sequence of courses in their curriculum. Programs usually have thought about broad categories of content knowledge that typically make up a course of study, but often neglect to consider the developmental steps that scaffold toward each learning outcome in a sequential curriculum. Each course in a curriculum defines the extent of specific learning within that course. If a curriculum is thoughtfully designed, the program has also defined the sequence of student learning that guides students incrementally to higher levels of difficulty and complexity. The specific learning that should result from a student's successful completion of the curriculum is a learning outcome. The assessment is the selected example of how students demonstrate the level of learning achievement (knowledge, skill, or disposition) exemplifying the outcome.

Through my work with programs, I have found that program directors and their faculty can clearly describe the courses in the curriculum but find it a challenge to define both what is expected to be learned by every student that completes the sequence of courses as well as what defines proficiency of that learning. What is even more challenging is to have a clear map of the developmental sequence of learning for each outcome (see figure 1). Having programs design an outcome/assessment matrix is one way to help programs think about student learning and how their courses and program contributes to student achievement of these outcomes.

Step 2 - Things to remember when programs write Student Learning Outcomes

When defining credential (outcome/completion) learning outcomes, it is important for programs begin with a concept of why specifying programmatic learning outcomes is important. Of least importance, but often the initial reason provided, is because most college/universities and accrediting agencies required such a process to be implemented by all programs (Kuh et al.,

2014). Although compliance is essential, focusing on this reason for leading programs the process of developing student learning outcomes can inhibit its usefulness since it does not require ownership or buy-in to the process. It is important for programs to recognize that relying on course grades to determine student achievement can be deceiving because course grades include many outcomes in one score and often are made up of factors beyond student learning and achievement. What is most important is to consider the development of student learning outcomes as a means to focus and improve curriculum while guiding course-based instructional decisions. If specific student learning achievement is assessed and documented on a regular basis, data could expose areas of student learning needs that could guide course/curriculum revisions for program improvement.

You may be questioning how a department chair would go about helping programs to define essential learning for their program. If the program is accredited, that program should design its learning outcomes and curriculum matrix to fulfill the expectations put forth by the accrediting agency. A typical first step is to review the course content of required courses, then write learning outcomes and create a matrix that reflects the current curriculum. Another effective means of identifying essential learning outcomes is through advice from advisory councils and internships sponsors, as they are keenly aware of the expectations of the profession. Student learning outcomes can, and should when appropriate, focus on current/future employer expectations. Additionally some of the neglected pieces of information that can be used to identify learning needs are the voiced frustrations about students being unprepared for their courses. Such frustrations are probably based on what should be a learning outcome for which the student has not developed the skills or knowledge to be successful. This also will end up being a prime focus for the curriculum matrix.

“Faculty is the key to moving assessment work forward” (Kuh et al., 2004, 3). What might you do to assist with faculty buy-in to the process? First and foremost, help programs build upon their autonomy and focus on what is important to them. As programs are writing outcomes, they often try to develop something spectacular or what they feel someone in authority wants to see. Guide them to first focus on what is currently integrated into their program. It is important that assessments authentically represent how learning is uniquely applied in their program. If not, you will find the faculty very uncomfortable trying to comply with an assessment program that doesn’t authentically reflect the learning that occurs in their program. There are many times when programs have developed student learning outcomes and assessments to only result in frustration and fruitless time consumption. In nearly all of these cases, programs developed learning outcomes and assessments that were not fully implemented and sometimes not associated with their current curriculum. My response usually is to tell them to stop using their current assessment process and identify what is most important to student learning in their curriculum. If what is most important to their program is not taught in their coursework, then change the coursework. Otherwise choose what is currently implemented in their program. Other areas to remind the programs to consider how common learning goals (often considered general education outcomes), such as: effective communication, which includes written, verbal and non-verbal; critical thinking and problem solving; multi-cultural and diversity literacy; etc.

are applied in their programs. Very often, when programs create learning outcomes, they consider only the discipline-specific skills, forgetting to consider how important the general skills of communicating, interaction, ethical decision making, etc. are to their students' future success in the program.

Step 3 - Guide programs to select appropriate measures to assess their outcomes.

Assessment measures may be direct or indirect, but it is essential to have at least one direct assessment measure. A direct assessment measure is one through which the students demonstrate their learning and/or proficiency as indicated by the stated outcome. Examples are: pre/post test; course-embedded questions; standardized exams; portfolio evaluation; videotape/audiotape of performance; capstone course evaluation. Indirect measure are opinions and thoughts about student learning, such as student surveys about instruction; focus groups; alumni surveys; and employer surveys.

Helping programs identify appropriate assessment measures is an area where your leadership will be important. Sometimes those that design or select assessment measures are too close to them to see possible problems or needed revisions. What is most important is that the assessment used reflects the way students authentically demonstrate the knowledge/skill described in the outcome.

Step 4 - determine the rigor of the program

Once the assessment measure is selected, programs will need to determine appropriate rigor, the level of student achievement that signifies minimum acceptable achievement and proficiency for each outcome. Specifying the rigor expected for the program is important for instructional decisions. The minimum level does not require a program to refuse graduation, but with these benchmarks a program will be able to report how many students do not reach the minimum expected achievement, achieve higher than the minimum level but do not reach proficiency, and how many students reach a proficient level or higher for each outcome (see figure 2). If the program wishes to identify a superior level of achievement, an additional level can be identified. The assessment results become an indicator as to student achievement in respect to the expectations held by the program.

I have seen programs for which student grades and graduation rates demonstrate outstanding student achievement, but when specific outcomes were assessed, the findings discovered particular areas in which students were not meeting proficiency for the expectations of the program. In response, the program replaced some of the repetition of instruction in areas of high achievement with focused experiences for the areas of need. In consequent years, the level of the focus area improved providing even higher student achievement than before.

Step 5 - Set up an Annual assessment (reporting) process

One of the most effective means of placing student learning assessment at the forefront of your department is creating an annual reporting process. Each program would annually assess student learning of each outcome with a goal of identifying ways of improving their program as well as achievement.

In an annual reporting structure, assuming each program has a set of student learning outcomes and appropriate assessment measures from their courses, (appropriate defined by an assessment measure that exposes student achievement specific to the associated outcome), the program collects student achievement data for each assessment measure to be reported at end of the academic year. An annual assessment report should consist of the following data (see figure 3):

- The outcome, measure used to assess achievement (rubric or other important aspects to fully understand the assessment used for each outcome), and in what course the assessment occurs
- number of students assessed (identifying if this is a sample or the entire population from the program that took the assessment)
- number and percentage of students that did not achieve the minimum acceptable level
- number and percentage of students that reached the minimum level but not proficient
- number and percentage of students that reached proficient and above
- (if they choose they could identify the number and percentage of students that achieved at a designated superior level beyond proficiency)

The reporting process should also include a description of when the program discussed the assessment findings among their faculty, what was learned about student achievement, decisions made/actions taken in response to the findings, and future plans for student learning assessment. Faculty will be leery of reporting course-based student learning data that does not demonstrate high levels of achievement. This process is meant for program self-assessment and not as a means to evaluate the program on its successes. To be effective, it should be made clear that the intent is to identify specific student learning challenges or deficiencies that could lead to programmatic improvements, not only to expose successes.

For the departmental review, it is advisable to develop a departmental committee to provide peer feedback to the programs. This again is not an evaluation but for peers to provide suggestions relating to improving the assessment process and/or data analysis. This peer feedback should go back to the program faculty that could lead to curricular and assessment discussions.

A process of student learning assessment also allows programs to document student achievement in global outcomes such as critical thinking; communication - written, oral, graphic, exhibition; cultural and diversity learning; teamwork; and other skills specifically demonstrated in the authentic context of the discipline. I am going to share with each of your groups a set of assessment rubrics that have been developed by the American Association of Colleges and Universities. These are called "VALUE Rubrics" (Rhodes & Finley, 2013). They have been

developed by university professors from across the country and have successfully passed validity and reliability testing. The process areas for which the rubrics have been developed are (in alphabetical order): Civic knowledge and engagement-local and global; Creative thinking; Critical thinking; Ethical reasoning; Foundations and skills for lifelong learning; Global Learning; Information literacy; Integrative and applied learning; Intercultural knowledge and competence; Inquiry and analysis; Oral communication; Problem-solving; Quantitative literacy; Reading; Teamwork; and Written Communication. You can see that these are areas often considered university learning outcomes but also areas programs find challenging to assess. They are designed to be adapted for course and program use with instructions not to use them as is but to adapt the language in the rubrics to the specific context.

Step 6 - Program improvement and closing the assessment loop

The most important part of the process is its ability to expose strengths and weaknesses in instruction supporting continual programmatic improvement. There have been many examples in my observing departmental student learning assessment through which program improvements were made.

One such example was in a program that includes a study of the human body, muscles and bones, etc. The students' achievement through course grades showed significant achievement so the program felt there was little to learn from more specific assessments. But when the program analyzed the results from an indirect measure, a survey of seniors concerning each assessment outcome, they discovered a discontent with the curriculum and student concern about not sufficiently learning about the human body. It was stated strongly that there was so much to learn that they felt much of their learning was lost after each test. They suggested that the course be divided into two so they could learn the content more thoroughly. The program took this information and divided the course into two, resulting in higher levels of student achievement and higher levels of student perception of learning.

Another example of program improvement occurred when student achievement in two of the six student learning outcomes were lower than desired. In this instance the program did not create an assessment matrix prior to implementing their assessment process. Once they completed their matrix, it was discovered that no one in the program was teaching toward the two outcomes. Everyone thought the other professor had it included in their course. As a result, content of several courses were revised resulting in increased achievement in these two outcomes in subsequent years.

In one more example a program confirmed through their assessment process that students in their senior capstone courses struggled in orally presenting their research as well as in their writing skills in their research report. Although empirically they had felt this as a frustration for some time, the assessment results prompted a review of their curriculum to identify where students were instructed toward the development of these skills. As it turned out, the last formal training the students in their program had in writing skills was in their freshman English class and the

only format oral presentation skills were taught in the sophomore speech class. When pursuing deeper, the type of writing expected in the senior capstone was not reflective of the type of writing expected in the research report. The same applied to the type of presentations skills associated with a research presentation. At that point there were only three options: 1) lower or remove the expectations of accomplishment in these area; 2) develop a course in the curriculum that contribute to student achievement in research writing and presentation; or 3) probably the most effective is to find places throughout the curriculum coursework in which the students will sequentially develop the specific skills expected for the senior capstone.

Earlier I mentioned the phrase "Closing the Assessment Loop". This refers to a step that is beyond making program improvements. Closing the assessment loop means assessing student learning after the program improvement has been made to confirm if learning has been enhanced. If it has, the curricular change implemented is maintained. If student learning has not improved, then a new strategy is implemented until the desired student learning enhancements are confirmed. An effective assessment process is actually Action Research. As a result, pedagogical articles can easily be a result of an effective assessment process.

Conclusions

There are several purposes for a student learning outcome assessment process. These include:

- Guiding programs to focus more on student learning that results from instruction rather than focusing on content dissemination.
- Faculty involvement in programmatic considerations of curriculum.
- Student achievement data collection for longitudinal analysis.
- Integrated process that leads to program and instructional improvement.

Thoughtful consideration of student learning is not an automatic paradigm in education. For most of the 20th century, academic programs have focused on inclusion and depth of content disseminated. The movement toward identifying student learning outcomes was initiated in the 1980s with an additional focus on student achievement of those outcomes beginning in the mid-90s. The student-centered focus and the student learning outcomes assessment movement has progressed to be a central means of documenting the success of an educational program. A most important aspect of this entire movement is authenticity of assessments. Instead of standardization, each program identifies the intended learning based upon the focus of the curriculum, identifies student achievement levels based upon the rigor of expectations, and collects focused achievement data from currently implemented assessments. This allows for an authentic look at how students apply the knowledge taught and demonstrate skills and proficiencies specific for the program.

References

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Figure 1: Assessment Matrix

For each stated student learning outcome, identify with an 'X' where does the student have the opportunity to learn the outcome and an 'A' where is student achievement of the outcome is assessed.

Student Learning Outcomes	Course #					

Figure 2: Reporting Achievement Levels

Number of Students Assessed	Academic Year	Unsatisfactory < 70%	Developing 70%-79%	Acceptable 80%-95%	Exemplary 96% <
	20__-20__	-----	-----	-----	-----

DATA SUMMARY AND REFLECTION
(type here).

Figure 3: Annual Assessment Report

Student Learning Outcome List of all current SLOs for the program.

Assessment Methods(s) Briefly describe the assessment tools, measures, or forms of evidence that will be utilized to demonstrate students' accomplishment for each learning outcomes. There must be at least one direct measure for each outcome.

Results The summary of data related to the prior-set student achievement goals. For each outcome identify how many students were assessed, where they were assessed, student achievement relating to minimum and proficient competency expectations, (if possible student achievement indicators relating exceptional levels). The results must include achievement data in addition to a narrative summary.

Faculty Review of Annual Assessment Data

Describe the process by which the program faculty reviewed the results and decided on the actions and/or revisions that were indicated by those results.

Actions and Revisions Implemented

Describe the actions and/or revisions that were implemented in response to the assessment results.

Future Plans

Briefly describe the long-range plans to assess all of the outcomes if assessing over a sequence of years.