The Expected Outcome: Learning

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Learning is a treasure that will follow its owner everywhere.
—*Chinese Proverb*

Over three decades ago when I was a graduate teaching associate (GTA) for a cognitive psychology lab, I assigned a student, whom I will call J., a "B" on one of her reports. J. met with me and wanted to know why I had given her a B when she was getting A's on all of her other exams. I could have told her that writing research reports required a different skill set than taking fact-based multiple choice tests, or that the contexts were different, or even that the grade was one she earned, not one I had given her. But she struck me as being serious about improving her grade, and I too was serious in wanting to help. So I sat down with J. and tried to explain to her the reasons I thought her work was less than A-level. I told her that while most of the facts in her report were correct, the report "didn't read well." As we began to explore what I meant by this, J. pushed to know exactly what to change and how. I had edited some of her work in a few places, but that was not exactly what I meant. I struggled putting these ideas into words for her. The best I could do was show J. writing samples that I thought illustrated the difference between A-level and B-level work. At the end of the day, neither she nor I was very satisfied with my explanation.

This experience taught me that I needed to be very clear about what I expected students to learn and to be able to do and that I needed to be explicit about what levels of achievement I required. It was also evident to me that some of the "things" I wanted students to be able to do, such as reasoning and writing well, were skills and therefore difficult to put into words. I have not always been successful, but since that time I have tried to break down into components and make concrete for students what they need to know, understand, and do in my classes so I can better communicate these expectations to them. For me, focusing on the tests and assignments were a starting point for verbalizing what I expected.

Early on in my teaching I noticed that I would pay attention to what students missed on exams or failed to do on their assignments. This attention led me to make sure that the tests, questions, or assignments made sense and tapped into what I wanted students in my classes to demonstrate. If these materials seemed all right, I would then focus on the areas students missed or were weak in the next time I was teaching. Over time, I observed that in the courses I taught regularly, my tests and assignments changed much less frequently than my instructional practices. I used this knowledge to make sure students understood what they needed to know at the very beginning of a course. I am not annoyed to hear "what do I need to know for the test?" because I think it is only fair to be as transparent as I can about my expectations. That way everyone in the class has a level playing field, and the success is not limited to a small gifted set who can figure out what they most need to know on their own. As a result, I considered it as a mini-success one day when a student exclaimed after a long (and by student reports, challenging) open-ended midterm, "I loved taking this test because there were no surprises; I knew exactly what I needed to know."

My responsibilities have changed at the institution in recent years, and I now help lead learning outcomes assessment. I came to the initiative in part because of my psychology background in learning and motivation, clinical assessment, and program evaluation. What I quickly recognized was that outcomes assessment is exactly what most good teachers already do, informally or perhaps intuitively. In fact, my own experiences as a faculty member described above eventually came to include, through trial and error, the key components of the so-called iterative assessment cycle to:

1. articulate learning goals;
2. determine means to evaluate whether learning is achieved; and
3. use the information to continue to improve learning.

The ideas are conveyed by relatively simple but key questions:

1. what do I want students to know or be able to do?
2. how do I know they achieved what I expected? and
3. how do I use the evidence I have about their learning to help them improve?

Throughout most of my teaching, I had most assuredly been focusing on the first question given my previous experience as a GTA, but I was not necessarily writing out all of my expected learning goals and including them on the syllabus. As to the second question, I had figured out that I could use different components of my own tests and assignments to determine if students had learned some of the knowledge or skills I expected. I even sometimes moved to the third question to re-cover frequently missed topics. But what I was not doing was following these steps routinely and systematically as is expected in the formal assessment process, or even as I would most assuredly be doing when conducting research. Furthermore, I rarely followed up in any systematic manner to evaluate whether changes in my instructional practices, beyond student satisfaction, actually improved their learning. In assessment jargon this follow-up is called "closing the assessment loop." Assessment is the application of a specific strategy to regularly and systematically improve learning, and this practice is also what distinguishes formal assessment planning and execution from more typical grading practices and efforts to improve teaching.

One pedagogical tool that everyone can employ is to follow the steps of the assessment strategy to improve student learning, the ultimate goal.

If one follows the higher education dialogue, it is hard to miss that there have been shifts in focus over the last several years about teaching and learning. The shifts in evaluating the quality of our educational programs include moving attention from the input side, such as the quality of our entering students and of our faculty, to the outcome side, specifically, whether students are actually achieving what we intend in their programs of study; from a dominant focus on teaching to an increased emphasis on student learning; and from a primary focus on "my course" to a broader view of the "graduates of our programs."

Part of the dialogue is driven by increasing accountability concerns from the public, government, and accreditation bodies. Use of assessment to meet external demands for accountability however, tends not to engage us but more likely aggravates us. Yet it is necessary to provide summative information to be accountable to ourselves and others and to make certain our fundamental responsibilities as educators are met. Since we expect this accountability in most every other arena of our lives, we ought to expect it in our educational efforts.

The more engaging kind of assessment, or formative assessment, comes from following the stages of the iterative assessment cycle designed to improve learning continuously. I first applied the assessment process in General Psychology, a large instructional program I administered. The program consists of a general education introductory course offered in multiple sections and taught by GTAs. Working with a lead GTA who was interested in the project, we first developed a plan, beginning with the goals (Step 1). Some of the goals were already determined by the general education program; even so, we wanted to contextualize them for our course. After several revisions, we clarified a more traditional set of goals that emphasized breadth of knowledge and methods of science, and we highlighted an embedded goal on social diversity. We also developed rationale statements to help clarify how understanding of basic concepts could be generalized and applied to broader skills and outcomes of general education. Our previous short list of educational goals expanded to a full page (*see references*).

We next gathered some preliminary evidence about students' opinions of their learning (Step 2). In our sample, students' opinions about their learning were positive, but there were unexpected discrepancies in the degree of learning among the different goals. We wanted to improve these perceptions and verify with direct indicators that the expected outcomes were achieved (Step 3). Over the ensuing year, we became more targeted in our evaluation practices. We aligned our typical application-based multiple-choice questions to learning goals; we also added goal-specific reflection papers to provide students an opportunity to demonstrate integration and generalization of the material to broader issues. More importantly, we tried to enhance our instructional methods by focusing on areas in which students indicated their learning was weaker. We developed sets of examples to illustrate points that were less well understood, trained GTAs to reframe concepts, and reorganized the content. On the same indicators a year later, there were marked improvements. Now that was exciting! As an added bonus, the lead GTA presented her work at a national meeting (Cheng & Collier).

Our students and graduates are part of a new global and rapidly changing world. We need to make sure they have the knowledge and skills to be successful in life and their subsequent professional careers. Carol Geary Schneider, President of the Association of American Colleges and Universities (AAC&U), has noted that institutions of higher education are saying:

> If we want our students to be more successful as learners, we have to be more intentional as institutions and as educators, meaning we have to know better what it is we want to help them achieve and where it is they're working on different goals. (cited in Redden, *Curricular Intent section*, par. 3)

To be intentional means we are clear about our learning goals in major and general education undergraduate programs and advanced programs of study, and that we identify where in the curriculum and in course work students can achieve these outcomes.

It means that we teach what we really care about and ensure students learn. It means that we have a strategy for improving learning, and assessment is such a strategy that is now expected in all accredited institutions.

Teaching is essential in this process, and there are many facets to gifted teaching. Among these are having expert content knowledge, knowing sound pedagogical practices, using human and technical resources efficiently, and helping motivate and inspire students, who themselves must participate. The list is not exhaustive, and others are much more knowledgeable in this area than I am. But one pedagogical tool that everyone can employ is to follow the steps of the assessment strategy to improve student learning, the ultimate goal.

I wish I had known to begin with articulating the learning goals and making transparent the components of effective writing when I was a GTA grading laboratory reports rather than expecting students to figure it out by reading other reports. When I last supervised GTAs, I most certainly tried to instill assessment skills into their future faculty repertoire. I am on-board with assessment—in part selfishly—because it's thrilling to experiment and get a good outcome. By the way, I did continue to work with J. those many years ago, and she and I both came to understand more clearly what she needed to do to produce A-level work. And then she did it.

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