

Approaching assessment from a learning perspective: Elevating assessment beyond technique

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Abstract Assessment is a key process in assuring quality education but how is it linked to the scholarship of teaching and learning (SoTL)? How can we join teaching and learning to the assessment process rather than view it as a stand-alone component in course and/or program development? This paper explores the relationship between assessment and the SoTL in an effort to identify a systems approach to program management practices. The goal is not to dismiss the value of mechanics and tools in assessment but to highlight the value of building an assessment process that brings together the respective components of assessment with the scholarship that constitutes teaching and learning and an understanding of assessment as learning. Incorporating the use of curriculum maps and Fink’s taxonomy of significant learning advances a framework-driven practice that supports assurance of learning.

Keywords Assessment · Scholarship of teaching and learning (SoTL) · Taxonomy of significant learning · Curriculum map · Assessment as learning · Reflective practitioner · Assurance of learning

1 Introduction

Palomba and Banta (1999) define assessment as “a process that focuses on student learning, a process that includes reviewing and reflecting on practice as academics have always done, but in a more planned manner” (p.1). Boyer (1990) introduces the scholarship of teaching and learning (SoTL) into the vocabulary of higher education that expands the view of teaching as scholarship through process efforts that promote the integration and application of knowledge. “Pedagogical procedures must be carefully planned, continuously examined, and relate directly to the subject taught” (Boyer 1990,

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pp. 23–24). Given that assessment is a key process in assuring quality education, how is it linked to the SoTL? How can the practice of assessment join the SoTL rather than exist as a stand-alone component in course and/or program development?

This paper explores the relationship between assessment and the SoTL in an effort to identify a systems approach to program management practices. The result of joining assessment with the SoTL provides an understanding of how to (1) leverage the relationship between assessment and SoTL at the course level and at the program level, (2) apply the practices of significant learning to a curriculum map using the integrated course design taxonomy by Fink (2003), and (3) incorporate the practices of reflection to the assessment process to drive continuous improvement.

1.1 Linking assessment to SoTL

Student learning is at the heart of assessment, driving the efforts to capture data on student learning outcomes and provide assurance that learning is taking place as designed. Yet, for many faculty members, except those intimately involved with the process, assessment is considered a necessary evil and a practice separate from the activities that take place in the classroom. When assessment is viewed as separate from teaching and learning, it becomes a polarizing factor. Viewed as a stand-alone function in a school or college, the assessment process often creates an “us versus them” environment, resulting in minimal and surface-level participation from the faculty. Such faculty sentiments result in the reduction of assessment to mere techniques and methods, enacted under pressure. Naturally, this is not only frustrating for those in charge of assessment but also precludes the type of enhanced outcomes that the assessment process could bring. Further, instead of sparking debate on how to drive improvements in learning, the discussions are often reduced to marginal issues such as sample size and reporting formats.

As faculty, who are themselves learners and believe in education, it behooves the academy to approach assessment from a learning perspective. Such a framework would advance professional growth and development with a focus on deep learning, elevate assessment beyond mere technique, and be the engine in a process change model. More importantly, this framework has the potential to create a central theme around which to build a community—a learning community.

The academy can agree that assessment is integral to student, faculty, and institutional development. Linking assessment with SoTL yields deep change and deep learning by creating what Fink (2003) defines as a significant learning experience across the academy, offers a faculty development approach to assessment by providing the tools and the opportunity to enhance one’s own professional development, provides a student approach with a focus on learning, and incorporates the practice of reflection to the assessment process as part of the integrated approach to teaching.

1.2 Defining the SoTL

Inquiry into teaching and learning has become an avenue for scholarship in the past two decades. The SoTL was first introduced into the vocabulary of higher education in 1990, which gave teaching a place in the broader vision of scholarship that includes

research, viewing the classroom as a site for inquiry and learning ways that can improve one's own classroom while advancing the profession of teaching.

Huber and Hutchings (2005) define this area of scholarship

“...as a big tent, under which a wide range of work can thrive. The core of that work includes the kinds of inquiry and investigation that faculty are most likely to undertake when they examine and document teaching and learning in their classrooms in order to improve their practice and make it available to peers. But this work can include (at one end) studies with elaborate research designs and formal execution that go beyond a single classroom, program, or discipline, as well as (at the other end) quite modest efforts to document and reflect on one's teaching and share what one has learned.” (pp. 4–5).

Several new teaching paradigms have emerged moving away from providing instruction, the conventional teaching paradigm, to one that focuses on producing learning, hence a learning paradigm (Barr and Tagg 1995). A number of theorists, practitioners, and scholars have dedicated their efforts to the discovery, integration, application, and teaching methods in the classroom that advance learning (Barr and Tagg 1995; Campbell and Smith 1997; Smith 1998; Marton et al. 1984). The four defining features of SoTL include finding and framing *questions* about student learning; *gathering and exploring evidence* to address the questions; *trying out and refining new insights* from pedagogical practices in the classroom; and *going public*, that includes making one's knowledge available for others (Huber and Hutchings 2005). Examples of teaching practices that promote learning include the use of simulation and case studies, small group learning, assessment of learning, service learning, problem-based learning, and writing-across-the-curriculum. Academics and practitioners offer any number of resources that explain each of these practices: *Teaching Tips* (McKeachie 1999), *Tools for Teaching* (Davis 1993a, b), *Teaching and Learning on the Edge of the Millennium* (Svinicki 1999), *Changing College Classrooms* (Halpern 1994), and *Better Teaching, More Learning* (Davis 1993a, b). Such long-standing work supports continued efforts in the field of SoTL.

The assessment movement, especially the phenomenon of classroom assessment “sharpened higher education's focus on student learning and provided tools for faculty seeking to investigate the impact of their course design and pedagogies on student learning (Angelo and Cross 1993; Cross and Steadman 1996). Seminal work on the evaluation of student learning (Bloom et al. 1971), and what is today referred to as assessment (Wiliam 2006), distinguishes between summative (assessment of learning) and formative (assessment for learning). Summative assessment focuses on the summarizing or summing up of student and/or class achievements (Bloom et al. 1971; Sadler 1989; Shavelson 2006). This typically occurs at the end of a course and takes the form of exams and summarized as averages of a number of grades across content areas. Formative assessment (Black and Wiliam 2004; Broadfoot 2008; Gipps and Stobart 1997; Stiggins 2002) provides an alternative perspective to the traditional summative assessment with focus on active feedback loops that support learning between the teacher, student learner, and in-class peer group. The five key aspects in assessment for learning involve clarifying and sharing of learning intentions and success criteria, designing classroom discussions and activities to elicit student understanding, providing feedback that advances student learning, introducing students as resources for their peer group, and as owners of their own student learning (Wiliam and Thompson 2007).

Thus, assessment of learning (summative) focuses on measuring learning “after the fact” (Earl 2003, p. 25) and assessment for learning (formative) focuses on feedback throughout the classroom experience. In each case, the teacher acts as the key assessor. Earl (2003) enhances student learning by introducing assessment as learning. The fundamental shift is toward the student as assessor, contributing not only to his/her assessment but to the entire learning process. “(S)tudents personally monitor what they are learning and use the feedback from this monitoring to make adjustments, adaptations, and even major changes in what they understand. Assessment as learning is the ultimate goal, where students are their own best assessors” (Earl 2003, p. 25). The key to each of these approaches in assessment is finding the right balance as they are not mutually exclusive practices. Earl outlines what she describes as a “preferred future” (p. 21) for assessment with the ultimate goal on learning and the role the teacher plays in guiding this process. Thus, the assessment movement places attention on the role of teaching, not only as scholarship but as a way to assess whether one’s teaching is stimulating further learning. Although the focus is on the classroom, the philosophy that informs assessment as learning can be applied at the program level and constitutes the scholarship of teaching and learning. Litterst and Tompkins (2001) and Banta and Associates (2002) represent two cases for viewing assessment as scholarship in their works: *Assessment as a Scholarship of Teaching and Building a Scholarship of Assessment*.

The CASTL Report views the SoTL “as a tool, an attitude, an evolving a set of habits” (Huber and Hutchings 2005, p. xiv). Whatever form SoTL takes, it can be empowering for faculty and for their students. “Through the SoTL, faculty can systematically improve the educational environments they create in their own courses and programs and help build the larger commons in ways that support the work of others in their institutions and disciplines seeking to foster the kinds of learning needed today” (Huber and Hutchings 2005, p. 5).

1.3 Defining integrated course design

The work of Fink (2003) on creating significant learning experiences is a product of the SoTL “movement”. His 25 years as an instructional consultant with college teachers offers the fundamental question, which is at the heart of assessment as learning: how can I create courses that will provide significant learning experiences for students? (Fink 1995, 2001). Drawing from the most widely recognized learning model—Bloom’s taxonomy (Bloom 1956)—Fink notes the taxonomy is valuable yet “(i)ndividuals involved in higher education are expressing a need for important kinds of learning that do not emerge easily from the Bloom taxonomy, for example: learning how to learn, leadership and interpersonal skills, ethics, communication skills, character, tolerance and the ability to adapt to change” (Fink 2003, p. 29). The significant learning taxonomy joins these needs to three values characteristic of such learning: (1) enhancing one’s individual life, (2) enabling contribution to the many communities of which one is a part, and (3) preparing for the world of work (Fink 2003, p. 7). The four components of teaching are knowledge of subject matter, instructional design, teacher–student interactions, and course management. The quality of a student’s learning experience is related to these four teaching components. Hence, the definition of significant learning is the result of integrating the values with the components of teaching.

The key components of an integrated course design are learning goals, teaching and learning activities, and feedback and assessment practices. These basic components are found in other models of instructional design (i.e., analyze the situational factors, formulate the learning goals, design the feedback, and assessment procedures and select the teaching/learning activities). What differentiates Fink’s model is how these components are linked together, which reveals and reinforces their inter-relatedness, or integration.

The success of an integrated course design requires that all of the key components are consistent with, and in support of, each other. For example, if a learning goal is to have students learn how to think critically and innovatively given *X*-content, but the learning and assessment activities are straight lecture and multiple choice exams, then the teaching, learning, and assessment activities do not complement the learning goal.

Table 1 provides an outline of the initial design phases and a step-by-step process in developing an integrated course that promotes significant learning. In effect, Fink’s taxonomy provides a way to integrate one’s teaching practices and resources with assessment in order to foster student learning. Worth noting is that the five steps bring together the SoTL practices and assessment.

The result of an integrated course design is what Millis (2009) refers to as four aspects of deep learning: (1) students have a need to know, therefore motivation is intrinsic; (2)

Table 1 Outline of Fink’s initial design phase to promote significant learning

The five basic steps of the instructional design process help to promote systematic learning experience in the classroom.

Step 1. Give careful consideration to a variety of SITUATIONAL FACTORS

- What is the special instructional challenge(s) of the course? What is the special challenge(s) of teaching this subject to the students?
- What is expected of the course by students, the department, the institution, the profession, and society at large?
- How does this course fit into the larger curricular context?

Use the “BACKWARD DESIGN” Process

This process starts at the “end” of the semester/learning process and works “back” toward the beginning.

The information from the Situational Factors informs the following decisions and course design:

Step 2. Learning goals: What do you want students to learn by the end of the course that will be with them several years later?

- Consider types of learning that exceed “understand and remember”

Step 3. Feedback and Assessment Procedures: What will the students produce to demonstrate that they have achieved the learning goals?

- Consider how to facilitate student learning and criteria for grading

Step 4. Teaching/learning activities: What occurs during the course for students to succeed on the Feedback and Assessment activities?

- Consider creative ways of involving students that support expanded learning goals (i.e., using active learning activities and reflective dialogue)

Step 5. Ensure the key components are all INTEGRATED

- Ensure the key components (steps 1–4) are consistent with and support each other
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students are actively involved; (3) opportunities for inquiry and exploration are part of the classroom experience; and (4) content is taught in integrated wholes rather than piece-meal.

What role, then, does significant learning play and how do we apply this in the classroom? Two interrelated practices influence what occurs in the classroom: course design and teacher–student interaction. Course design involves determining what goals and objectives will constitute the course and why and how the course is taught. Teacher–student interaction flows from the design and directly influences how faculty engage and interact with students.

Broadly speaking, the SoTL offers a paradigm—a way to advance learning by building the teaching commons (Huber and Hutchings 2005). Specifically, the framework by Fink (2003) framework for integrated course design offers a way to create significant learning experiences with assessment being a part of any integrated approach to program development.

1.4 Curriculum map

A curriculum map serves as a tool to capture the essentials of a program. The map provides a snapshot of the educational activities that take place in the courses that constitute a program. A curriculum map thus serves as a visualization tool providing an overview of the assignment of program learning outcomes to core program courses. The typical curriculum map is a two-dimensional table, with each cell in the table indicating whether a particular learning outcome is addressed in a course. Curriculum maps can present a quick view of the skills addressed in the courses in a program and/or the topics covered in the courses.

To construct the curriculum map, the academic leaders of the school or their representatives survey the faculty teaching the core courses in the program and gather data on the program learning outcomes addressed in the different core courses. A simple symbol or checkmark is placed in the table of the curriculum map to show that a program learning outcome is addressed in a course in the program. In some cases, additional information is collected from faculty to identify the level at which a program learning outcome is introduced in a course; for example, is a specific skill or topic introduced or reinforced? The curriculum map would demonstrate the scope and inter-connectedness of the components of the curriculum, which are addressed in the different courses in the program. Fink’s instructional design process can be applied to program development.

1.5 Joining assessment with the SoTL

Historically, the curriculum map has not been viewed as a tool to drive learning but as one activity among the many necessary to show that assessment has been “done” and becomes “one more thing to do!” The focus is on completing tasks, checking boxes, collecting data, calculating statistical measures, and creating tables and reports for assessment. This limited approach to the construction of the curriculum map, typical of much of assessment work in practice, deprives the academic community from coming together to craft a plan of study for their students that would ensure learning uniquely designed to align with the core values of the institution.

However, by constructing the curriculum map as part of a SoTL process, “faculty can systematically improve the educational environments they create in their own courses and programs and help build the larger (teaching) commons in ways that support the work of others in their institutions and disciplines seeking to foster the kinds of learning needed today” (Huber and Hutchings 2005, p. 5). Thus, the focus shifts from content alone to using a process model that places assessment firmly at the center of teaching and learning both in the classroom and in the program.

The initial phase of Fink’s framework for integrated course design provides a taxonomy that merges process with content. Further, Fink’s instructional design process to promote systematic learning experiences in the classroom also informs program development. Table 2 presents an enactment of the stages in Fink’s framework for integrated course design that develops a comprehensive curriculum map. Such a systematic process with specific goals at each stage allows for breadth and depth by addressing the “what and why” in an assessment activity. The curriculum map is inclusive and becomes a centering compass point that facilitates a meaningful discussion on the program goals and objectives.

The initial phase of Fink’s framework for integrated course design provides a taxonomy that merges process with content. Table 2 presents an enactment of the stages in Fink’s framework for integrated course design that develops a comprehensive curriculum map. The collaborative work in the three stages of the development of the curriculum map provides the faculty with the opportunity to view the fit of a particular course within a business degree program and helps alleviate some of the resistance of faculty to conducting course-embedded assessment in “their” courses.

Driven by the shared understanding that the outcomes of the business program should be consistent with the mission of the school, work in the *first stage* started with a careful analysis of the mission statement of the business school by the members of the Assessment Committee. For example, the mission statement included the phrase “... educate students to think critically...” leading to the identification of critical thinking as a learning goal for the business program. The Assessment Committee members presented

Table 2 Curriculum map applying Fink’s framework

<i>From theory:</i> Steps in the initial phase of Dee Fink’s framework for integrated course design	<i>To practice:</i> Steps in building a curriculum map for a business program
Carefully analyze the situational factors	<i>Stage 1:</i> Review of mission statements of school and university, attributes of student population, and best practices in subject area
Identify and set significant learning goals	<i>Stage 2:</i> Two sets of activities:
Create significant forms of feedback and assessment	<ul style="list-style-type: none"> ● Evaluation and modification of <ul style="list-style-type: none"> ○ program goals and learning outcomes and ○ course objectives and course content ● Design of learning and assessment activities to develop and capture learning in course and readiness for future courses
Create effective teaching and learning activities	While completing these activities, consideration is given to development of communication protocols for sharing of data on student learning outcomes and recommendations to all stakeholders
Integrate the four preceding components	<i>Stage 3:</i> Sequencing of content and activities to generate curriculum map

the critical elements they identified from the examination of the mission statement to the business school faculty at large. They also led a discussion on the characteristics of the students in the business programs, the preparation of these students for studies in the business school, and the advancement of students through the business curriculum. Having reviewed the content and structure of programs in peer and aspirant schools, best practices in assessment for business programs, and the requirements of the accrediting bodies, the Assessment Committee members were able to guide this discussion to generate a list of learning goals for the business programs. Small cross-disciplinary faculty groups were created to review each program learning goal and develop specific learning outcomes aligned with the goal.

As in the first stage, scene-setting work in the *second stage* was conducted by the Assessment Committee before a meeting of the entire faculty. The committee members developed a course description form that would be used to collect information on the course learning objectives and the content for every required course in the program. A course champion was identified for each required course; the course champion would be responsible for getting agreement on the basic content and learning objectives for the course and maintaining the course description form. The stage was now set for series of meetings. First, the faculty gathered together to link the learning outcomes they had identified with the course content and learning activities of different courses. Using an in-class response system, faculty responded to questions on a survey to identify courses in the program in which they believed specific learning outcomes were addressed. The responses were immediately available on the screen; these responses generated much discussion since they showed the diverse views held by the faculty on the content of courses. Next, faculty in each department met together multiple times to review the course descriptions for the required courses offered by the department and discuss the course content and learning activities in the courses. The course champions were also asked to relate the course objectives with the program outcomes so that the contribution of a course to the program was clear. While there was some initial resistance to the lengthy activities at this stage, the richness of the discussions and the clarity in course content and objectives that resulted from the activities considerably increased the buy-in for assurance of learning activities among the faculty.

Armed with the course descriptions and the set of the program goals and objectives, the Assessment Committee could now move to the *third stage* to integrate the information and create the curriculum map. The map clearly showed how the different program learning outcomes were addressed across the curriculum to ensure that every student had the opportunity to learn and develop the necessary skills and knowledge. Such a systematic process with specific goals at each stage allows for breadth and depth by addressing the “what and why” in an assessment activity. The curriculum map is inclusive and becomes a centering compass point that facilitates a meaningful discussion on the program goals and objectives.

1.6 Implications

“How well are students learning?” and “How do we know?” are questions that drive the commitment to assessment. How students translate what they learn and what activities promote student learning drive the dialogue about the practice of the SoTL. Perpetuating

the artificial divide between assessment and the SoTL creates a disconnect that leads to discontent with assessment plans and a regimentation that leads to resistance to assessment practices.

How might this artificial divide be addressed? First, develop the understanding that assessment and the SoTL are focused on the issues of *what works?*, which is an open-ended question that leads to a deeper understanding of outcome-based learning. This transactional relationship is also reflected in the commitment to examine and document tools and strategies to improve the practice of teaching and assessment. Second, create a culture of inquiry where “assessment of student learning pursues questions about teaching and learning” (Maki 2004, p. 1). For example, the curriculum map makes the value of the inquiry apparent when it addresses what Flynn, Payne, and Whitefield (Spring 2007, p. 13) call “feed-forward controls”, defined as student learning readiness for subsequent courses in a program. This is also an example of what Earl (2003) identifies as assessment as learning. Third, exhibit how the merging of SoTL and assessment creates a culture that drives continuous improvement while inviting faculty to be reflective practitioners (Schön 1983). The two practices of conversation and engagement drives this process and offers an opportunity to satisfy the intellectual curiosity of learning in a systematic fashion. Finally, as with any merger, support those individuals leading the charge who will need to possess the management skills to deal with complexity and the leadership skills to drive change.

2 Conclusion

The goal of this paper is not to dismiss the value of mechanics and tools in assessment, but to highlight the value of building an assessment process that brings together the respective components of assessment with the scholarship that constitutes teaching and learning. The use of Fink’s taxonomy, as outlined in the construction of the curriculum map, is a significant departure from most attempts at this assessment activity. Rather than ask faculty members to contribute to a process where it is not apparent how the individual steps constitute a whole, a framework-driven practice gives a complete and meaningful picture of the whole assurance of learning process. The framework, which complements assessment as learning, encapsulates steps that educators can implement in the classroom and the process itself creates a sense of ownership and achievement. Assessment is no longer a polarizing factor when driven by a unifying theme that elevates assessment beyond technique.

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