Evaluating Teaching Excellence across Diverse Disciplinary Units within Agriculture Higher Education

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Abstract

Workshops were organized at Michigan State University by the College of Agriculture and Natural Resources (CANR) to help faculty and students understand scholarship in teaching and learning. As an outgrowth, a faculty effort was initiated to improve evaluation of teaching and strengthen teaching scholarship across CANR. A Faculty Learning Community (FLC) was formed to review teaching evaluation literature. The FLC synthesized their understandings of evaluation used in other disciplines/institutions to create a conceptual understanding in the discrete domains of effective teaching; scholarly teaching; and scholarship of teaching and learning. Based on consensus, tools were developed to facilitate evaluation of teaching in a flexible manner to accommodate a range of values and teaching assignments. The domains provide the framework for a multi-evidence and multi-source evaluation tool which includes criteria (derived from the definitions and characteristics of each domain), indicators (evidence for the achievement of the criteria) and descriptors (examples of how the criteria have been addressed). It is our intent that these tools be flexible, yet powerful, in helping each individual recognize approaches in their teaching that can be modified/improved, while allowing them to be recognized and rewarded in areas in which they excel. The ultimate goal is to improve student learning.

Introduction

A series of workshops were organized at Michigan State University (MSU), East Lansing, MI by the College of Agriculture and Natural Resources (CANR) Scholarship of Teaching and Learning Working Group during the winter and spring of 2008 to help faculty and students better understand what defines scholarship in teaching and learning. As an outgrowth of these workshops, a grassroots faculty effort was initiated to understand how to improve the evaluation of excellence in teaching and to strengthen the role of teaching scholarship within the college.

A Faculty Learning Community (FLC) was organized in August 2008 within the CANR Office of Academic and Student Affairs. The goal of the FLC was to investigate factors that need to be considered to objectively evaluate components that contribute to teaching and enhanced student learning. Based upon this investigation, it is our belief that teaching within agriculture higher education must be thoroughly evaluated for our work within the academy to have the same level of regard as is given to research and service.

Background and Objectives

The evaluation of teaching should recognize the contextual impact of the unit and institutional missions, cultural norms and performance expectations on teaching (Braskamp, 2000). Statements in several MSU public documents indicate teaching is to be regarded as an integral part of the University's mission; as confirmed by the statement that describes the role of the University as "providing outstanding undergraduate, graduate, and professional education to promising, qualified students in order to prepare them to contribute fully to society as globally engaged citizen leaders" (MSU Mission, 2008). Teaching is often a component of faculty duties that support the MSU Promise (1999) to "offer one of the best undergraduate educations available by providing the advantages of intellectual inquiry at a major research university and practical learning in the land grant tradition." In MSU-CANR, stated support for teaching is represented through support of "learning that imbues current and future stakeholders with intellectual curiosity and offers relevant knowledge and skills, discovery that advances knowledge and enhances productivity and sustainability, and engagement with society that achieves social, economic and environmental equity" (MSU-CANR Mission, 2008). Yet, with all of the official statements of support, MSU-CANR units struggle with how to represent excellence in teaching and learning in merit and promotion evaluations. The MSU-CANR initiative to strengthen faculty

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scholarship across the mission, including research, teaching, outreach/extension/engagement (MSU-CANR Promotion, 2008) has led to the newly formulated promotion and tenure philosophy and protocol that mandate "assessment of faculty performance should recognize the importance of both teaching and research and their extension beyond the borders of the campus as part of the outreach dimension." (MSU-CANR Promotion, 2008)

Ultimately, evaluation should be about improvement and assessment in teaching and learning. Evaluation includes development to improve teaching and learning, appraisal to assess individual competency of teaching, accountability to assess course or institutional outcomes, and innovation to develop knowledge about teaching (Light and Cox, 2001). While the focus of the work of the FLC was on the evaluation of teaching at the individual level, it does not negate the value of assessing, promoting, and enhancing learning or assessing curricular and institutional outcomes. In fact, the ideas presented as a result of the FLC's work give value and merit to the work of teaching that can lead to the improvement of scholarship for our students and advance the body of knowledge of teaching and learning. The focus was also on the external "evidences" that can be documented, communicated, evaluated, and reviewed by others. This approach supports holistic teaching philosophies denoting action and reflection, professionalism, learning communities, and attention to individual character and self-knowledge (Braskamp, 2000; Glassick et al., 1997; Light and Cox, 2001; Palmer, 1997; Ramsden, 2003; Rockquemore and Laszloffy, 2008; Schon, 1983; Tagg, 2003).

Whether teaching is a small or large percentage of a faculty member's assignment, with freshmen or graduates, or with large or small classes, all MSU-CANR faculty are expected to be effective teachers (i.e., student learning outcomes are positive). Faculty may also elect to pursue a scholarly approach to their teaching. Scholarly teaching includes practices of classroom assessment and evidence gathering, it is informed by the latest ideas in the field and by current ideas about teaching in the field, and it invites peer collaboration and review (Hutchings and Shulman, 1999). The scholarship of teaching and learning (SoTL) goes beyond scholarly activity; it is grounded within the disciplines and can be an applied research agenda (McKinney, 2007). The integration of these areas will overlap and should be matched with both the individual's expertise and the needs of the unit.

The current metrics for evaluation of teaching within MSU-CANR include the number of courses taught, student satisfaction as measured by the SIRs (Student Instructional Reports) instrument (MSU Faculty Handbook, 2008) and appraisal by a unit chair or director. Although each of these factors may need to be included in the overall assessment of teaching, they are insufficient measures of teaching for personnel and promotion decisions. Additionally,

higher education has shifted from an instructional model to one that is learner-centered and allows educators to rethink how we approach the teaching component of our responsibilities (Barr and Tagg, 1995). The works of Boyer (1990) and Glassick et al. (1997) have stimulated conversation about what constitutes scholarly work and scholarship in teaching; influencing how we teach, how we evaluate teaching and how we reward the intellectual contributions of teaching across the U.S. Thus, there is a need to incorporate the robust knowledge from the literature into a process for evaluating teaching excellence across the diverse disciplinary units within MSU-CANR and agriculture higher education.

Methods

The FLC was to engage in an iterative process involving review of literature, analysis of existing unit materials (i.e., MSU Animal Science Promotion, 2008) and guidance (i.e., MSU Boldness by Design, 2008; Mission, 2008; Outcomes of Liberal Learning, 2008; Promise, 2008; and Washington State University Teaching Portfolios, 2008), followed by dialogue and reflection. Other disciplines within higher education have long debated the implementation of effective methods for evaluating teaching and learning. An examination of the literature provided a robust discussion of common practices that were initially reviewed by the FLC. As a result of this evaluation, two books, *Evaluating Faculty Performance: A Practical Guide to Assessing Teaching, Research, and Service (Seldin, 2006) and Preparing for Promotion, Tenure, and Annual Review: A Faculty Guide* (Diamond, 2004) were selected to direct our initial base line discussions at bi-weekly meetings during the fall 2008 and spring 2009 semesters. Additional information and materials were shared within the group by utilizing a course management software system (ANGEL) to post journal articles and thoughts from different FLC members.

Following the initial review and dialogue, the FLC proceeded to generate and synthesize our understandings of the evaluation of teaching and learning used in other disciplines and institutions. We arranged our conceptual understanding of teaching evaluation into three discrete domains: (a) Effective teaching, (b) Scholarly teaching and (c) SoTL

After developing consensus on the rationale and content of each of these domains, evaluation tools were developed to clarify the evidence and criteria for each domain. Evaluation of teaching would be facilitated in a manner flexible enough to accommodate a range of values and teaching assignments. It was the intent of the FLC to use these evaluation tools to begin a serious discourse among faculty, staff, and administrators that would ultimately lead to a workable and equitable process for evaluating excellence in teaching.

Results and Discussion
Teaching Domains

The three teaching domains identified by the MSU-CANR FLC are discrete, but can be integrated (Figure 1). Thus, evaluation can be focused on effective teaching, scholarly teaching and/or SoTL. Effective teaching should be required of every faculty member who teaches, whether it is in the classroom or in the community through outreach and extension. Scholarship in teaching and SoTL are not expected, nor should they be, of all faculty.

Figure 1. Three teaching domains.
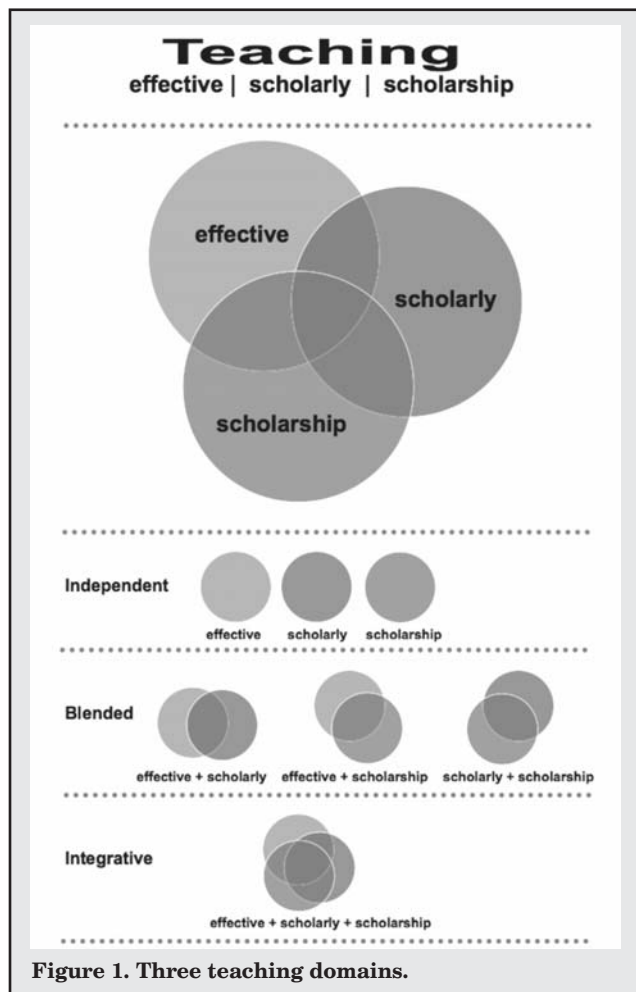
Effective Teaching Domain

Effective teaching advances student learning and is demonstrated through measurable student achievement of desired outcomes. The teaching is developmentally appropriate for the learners' intellectual ability, skill level, personal development and capacity for growth (Ramsden, 2003). Effective teaching is suitable for disciplinary content, methods, skills, ways of knowing, and subcultures (Marsick and Watkins, 2001; Selden, 2006). It is aligned with the unit's curriculum, building on previous learning to expand the students' learning and prepares students for advancement in the curriculum (Diamond, 2008; Huber and Breer, 2007). Indicators of effective teaching include preparedness, organiza-

tion, comprehensive subject knowledge, interest in the subject matter, confidence with pedagogy, fairness in the classroom, appropriate assessment techniques, and accessibility to students (Jackson et al., 1999; Markley, 2004; Sullivan, 2001). Effective teaching may or may not always be liked, appreciated or valued by students.

Scholarly Teaching Domain

Scholarly teaching involves application of knowledge about teaching and learning to instructional activities and testing new knowledge in teaching practices (Hutchings and Shulman, 1999). Scholarly teaching also includes the infusion of current and evolving literature, and practices of the discipline(s) appropriate to the learning setting. Scholarly teachers view teaching as a profession with standards of practice, identifiable methods and pedagogies, and a knowledge base within which to develop expertise (McKinney, 2007). This kind of instruction involves prior thought, mindfulness, purpose, reflection, and is grounded in the literature on teaching and student learning (Boyer, 1990; McKinney, 2007). Techniques include reflective practice, student assessment, sharing with colleagues, and the application of literature on teaching and learning within the disciplinary context (Brookfield, 1995; Palmer, 1997; Schon, 1983). The impact of scholarly teaching can also be exhibited outside the classroom in course or curriculum development, peer mentoring, or other standards developed at the unit, departmental or college level (Seldin, 2006).

SoTL Domain

SoTL is work that includes the essential scholarship elements of original work, peer review, validation and dissemination (McKinney, 2007). SoTL meets the standards of scholarship by including clear goals, adequate preparation, appropriate methods, significant results, effective presentation and reflective critique (Boyer, 1990). It should be original work that is grounded in current knowledge, is in the public realm and open to critique, is valued by the intended audience, demonstrates significance beyond the immediate setting or community, expands the knowledge base, and can be built upon by others (Boyer, 1996; Diamond, 2004; Hutchings and Shulman, 1999; Prosser and Trigwell, 1999).

Independent, Blended and Integrative Approaches to Teaching Excellence

Effective teaching, scholarly teaching, and SoTL can each exist independent of each other, with effective teaching being considered a minimum standard. Scholarly teaching and SoTL do not necessarily require a faculty member to be in a classroom or engaged in actual teaching activity. Both can be achieved through activities such as curriculum development, pedagogical development, or research

projects, which may take place outside of a typical classroom context.

A blended approach of two domains is possible. Effective teaching can blend with scholarly practices that reflect information that is well crafted, timely, appropriate, and contextual for the student population. Effective teaching can blend with SoTL to create original works that validate and communicate effective teaching techniques. Scholarly teaching can blend with SoTL to create works about pedagogy, student learning, or instructional content. (Figure 1).

Integration brings all three domains together with interplay of effective teaching, scholarly teaching and SoTL. An integrative approach can cross courses, disciplines, and research and service activities. A faculty member may engage in effective and scholarly teaching in a particular class and demonstrate SoTL through a service or committee assignment. Regardless of how much blending and/or integration occurs, effective teaching, scholarly teaching and SoTL should be recognized, valued and considered meritorious by the academic unit faculty members, college and university.

Evaluating Teaching: Sources of Evidence (Criteria, Indicators and Descriptors)

A range of substantiation and sources can inform the evaluation of teaching. Each type of evidence has strengths and limitations and each source has a unique perspective and bias. Berk (2006) identifies 13 sources of evidence including student ratings, peer ratings, external expert ratings, self-ratings, videos, student interviews, exit/alumni ratings, employer ratings, administrator ratings, teaching scholarship, teaching awards, learning outcome measures, and teaching portfolios. Multiple sources should be used to build a solid foundation for decision making. Traditional perspectives for evaluative input include self, students, peers, administrators, multidisciplinary review committees, and external reviewers. Who "validates" or provides the assessment is an important consideration in designing an evaluation tool.

Self-evaluation is a valuable reflective tool, but can be time intensive to develop and review, and is self-limiting based on what a person knows. Student ratings provide a unique experiential perspective, are traditionally focused on written perceptions or surveys of satisfaction, can be influenced by a host of factors such as class size, gender, elective or required course, and often are not analyzed in conjunction with important contextual information such as student attitudes and study habits. Peers can evaluate depth of disciplinary knowledge and pedagogical techniques within the disciplinary norm or an area of expertise. However, there is potential for bias when evaluating new or non-traditional teaching approaches. In-class observation can give a real sense of how a person teaches, but it is time intensive to have multiple observation sessions, develop evaluation criteria, and train peer reviewers and evaluators.

To bring consistency and balance to the process observers should be trained and have a well-developed evaluation instrument. This type of observation may be best done by outside evaluators to minimize bias and personal opinion of a peer evaluator. Administrative and multidisciplinary review committees are able to compare and contrast evaluative materials across faculty groups. However, comparison across disciplines may not always be appropriate, and can lead to a tendency to minimize information to quantitative expressions. External reviewers are able to compare and contrast

Table 1. Effective Teaching Evaluation Tool

	Criteria	Indicators	Descriptor
	Effective Teaching		
1.	Sets clear goals	- Syllabus, Handouts, Assignments, and/or Projects	- Goal Statement - Connection with course organization
	Reflective Comments:		
	Evaluation: ___ Exceptional ___ Satisfactory ___ Unsatisfactory Comments:		
2.	Indicates adequate preparation, comprehensive subject knowledge, and competent with appropriate pedagogy	- Assessment aligns with goals	- Syllabus - Teaching Strategies - Exams
	Reflective Comments:		
	Evaluation: ___ Exceptional ___ Satisfactory ___ Unsatisfactory Comments:		
3.	Uses appropriate methods	- Method/Activity matches goals - Yields results that can be duplicated with multiple cohorts	- Examples of connection of activity with lesson - Assignments with outcomes
	Reflective Comments:		
	Evaluation: ___ Exceptional ___ Satisfactory ___ Unsatisfactory Comments:		
4.	Advances student learning	- Progression in comprehension & application - Maturity of thoughts	- Pre- and post-testing - Bloom's Taxonomy - Student journals
	Reflective Comments:		
	Evaluation: ___ Exceptional ___ Satisfactory ___ Unsatisfactory Comments:		
5.	Appropriate student assessment techniques	- Assessment - Course Exams	- Appropriate measurements; Oral presentations; Lab Write-up; Projects
	Reflective Comments:		
	Evaluation: ___ Exceptional ___ Satisfactory ___ Unsatisfactory Comments:		
6.	Developmentally appropriate for the learner	- Addresses diverse learning styles; Academic skills include reflection and application	- Appropriate source materials and/or projects; Reflective Statement
	Reflective Comments:		
	Evaluation: ___ Exceptional ___ Satisfactory ___ Unsatisfactory Comments:		
7.	Appropriate for the discipline	- Problem-based; Authentic lessons and connections with certification/ accreditation organization (where applicable)	-Syllabus assignments that meet the stated criteria
	Reflective Comments:		
	Evaluation: ___ Exceptional ___ Satisfactory ___ Unsatisfactory Comments:		
8.	Aligns with the unit's curriculum	- Correlates with unit mission and/or objectives	- Syllabus; Appropriate assignments and measurements
	Reflective Comments:		
	Evaluation: ___ Exceptional ___ Satisfactory ___ Unsatisfactory Comments:		
9.	Student satisfaction	- SIRs (Student Instructional Review)	- SIRs (Student Instructional Review) - Course Evaluation
	Reflective Comments:		
	Evaluation: ___ Exceptional ___ Satisfactory ___ Unsatisfactory Comments:		

Table 2. Scholarly Teaching Evaluation Tool

Scholarly Teaching			
	Criteria	Indicators	Descriptor
1.	Exhibits mindful application and reflection of knowledge about teaching and learning	- Citation of pedagogy models - Development of assessment models	- Attendance and application of Lily seminars & FLC's - Statement of Teaching Philosophy
Reflective Comments:			
Evaluation: _____ Exceptional _____ Satisfactory _____ Unsatisfactory Comments:			
2.	Infuses current and evolving literature, methods, and practices of the discipline	- Use of journal articles – cutting edge and classic - Use of guest speakers with discipline expertise	- Reading List - Cases Studies - Internship - Real world validation - Fieldwork - Syllabus
Reflective Comments:			
Evaluation: _____ Exceptional _____ Satisfactory _____ Unsatisfactory Comments:			
3.	Views teaching as a profession (standards, methods, pedagogies)	- Seeks professional development	- Statement of Teaching Philosophy & Application - Membership in: Professional organization; Subgroup of disciplinary organization
Reflective Comments:			
Evaluation: _____ Exceptional _____ Satisfactory _____ Unsatisfactory Comments:			
4.	Shares knowledge of teaching and learning with colleagues and others	- Formal and/or informal presentations - Blogs - Web site development	- Presentation - Blogs - Web site
Reflective Comments:			
Evaluation: _____ Exceptional _____ Satisfactory _____ Unsatisfactory Comments:			
Evaluation: _____ Exceptional _____ Satisfactory _____ Unsatisfactory Comments:			
5.	Impacts--course or curriculum development; peer mentoring to improve teaching; policy; standards; or other developments at the unit, department or college level; changes in enrollment	- Modification of course content, procedures, and/or assessment - Recipient of an award - Program changes - Committee & FLC work	- Evidence of pre- & post-modifications - Outcomes & Recommendations
Reflective Comments:			
Evaluation: _____ Exceptional _____ Satisfactory _____ Unsatisfactory Comments:			

Table 3. Scholarship of Teaching and Learning Evaluation Tool

Scholarship of Teaching and Learning			
	Criteria	Indicators	Descriptor
1.	Indicates scholarship through original work – creates something new	- Is grounded in current knowledge - Is valued by the intended audience - Has impact or significance beyond the immediate setting or community - Expands knowledge	- Use, adaptation or implementation by others - Citation by others - Publication & presentation - Awards - Grants
Reflective Comments:			
Evaluation: _____ Exceptional _____ Satisfactory _____ Unsatisfactory Comments:			
2.	Meets essential scholarship elements	- Peer Review - Validation - Communication	- Use, adaptation or implementation by others - Citation by others - Publication & presentation - Awards - Grants
Reflective Comments:			
Evaluation: _____ Exceptional _____ Satisfactory _____ Unsatisfactory Comments:			
3.	Meets advanced standards of scholarship	- Significant results - Effective presentation - Reflective critique	- Use, adaptation or implementation by others - Citation by others - Publication & presentation - Awards - Grants
Reflective Comments:			
Evaluation: _____ Exceptional _____ Satisfactory _____ Unsatisfactory Comments:			

evaluative materials within a discipline or expertise across different institutions and settings, allow for expression of institutional variation in what is valued or considered norms of practice, and are time intensive with minimal institutional rewards for doing a thorough review (Berk, 2006; Peterson et al., 2001; Jackson et al., 1999; Richardson, 2001; Scriven, 1995).

Evaluating Teaching Excellence Framework

The three teaching domains provide the framework for a multi-evidence and multi-source evaluation tool. The framework includes a tool for each of the teaching domains to evaluate teaching performance in a manner flexible enough to accommodate a range of goals, values and assignments (Tables 1 to 3). Each domain includes criteria, indicators and descriptors. The criteria are derived from the definitions and unique characteristics of each teaching domain. Indicators provide evidence for the achievement of the criteria. Descriptors are specific examples of how the criteria have been addressed. After each criteria room is provided within the tool for inclusion of reflective statements by the evaluator and the individual to be evaluated; ranking of performance in meeting the criteria; and comments to explain the efficacy of the criteria for the individual's appointment.

College faculties need to both examine and conduct a pilot test on the domains, indicators, and descriptors. Not all criteria will be appropriate for all teaching environments or individual instructors. It is the intent of the FLC that these tools are flexible, yet powerful enough to help each individual recognize approaches in their own teaching that can be modified/improved, while allowing them to be recognized and rewarded in areas where they already excel.

Conclusion

Evaluation of teaching is not a uniform proposition, thus several facets of teaching and learning need to be included. Each facet must be recognized, valued, and considered meritorious by unit faculty members, their college and their university in order for teaching and learning to meet the standards we strive to provide to college of agriculture students across the U.S.

Teaching excellence and student learning are essential qualities of higher education and must continue to be a hallmark of agriculture colleges. It will take dedication and sustained effort to bring the evaluation of teaching excellence to fruition in a way that recognizes individual achievement and improved student learning. The primary purpose of this work is to engage those within MSU-CANR and

other agriculture colleges in a process that will ultimately enhance student learning through a thoughtful, consistent, and fair evaluation of teaching. Additionally, the process should provide the means to recognize and reward excellence in teaching. The authors do not envision a "one size fits all" instrument or process. Rather, we seek to encourage different agriculture units and the individuals who teach in them to use these instruments to develop the processes that will serve their mission in the most constructive way possible.

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