

CUR Focus

Promoting Undergraduate Research through Revising Tenure and Promotion Policy

Undergraduate research, scholarship, and creative activity (abbreviated here as *undergraduate research*) are increasing in frequency and prominence in undergraduate programs, especially as evidence accumulates regarding the high impact of such pedagogical practices on student learning (Kuh 2008) and on the advancement of knowledge (e.g., Laursen, Hunter, Seymour, Thiry, and Melton 2010; Lopatto 2010; Russell *et al.* 2007). The emerging prominence of undergraduate research should prompt significant discussion of the faculty role, to reflect the integration of mentored research as a normative role component, rather than as an “invisible extra” as has typically been the case (Osborn and Paul 2010). Participation in undergraduate research should be integrated into tenure and promotion policy so that faculty reward and recognition are consistent with the emerging revised definition of the faculty role.

Few institutions, however, have explicitly addressed undergraduate research in tenure and promotion policies. Below we discuss several impediments to recognizing and valuing undergraduate research in the faculty reward system. We then provide suggestions for surmounting these obstacles and describe specific examples of how some of these recommendations were incorporated into a recent revision of tenure and promotion policy at Stetson University, a regional comprehensive institution. Although the example we use is from a primarily undergraduate institution (PUI), many of the suggestions are applicable to a variety of institutional classifications.

Disconnect Between Institutional Mission and Culture and the Faculty Reward System

Ambiguity and conflict regarding the place of undergraduate research in faculty evaluation can stem from lack of reflection on and clarity regarding the value and place of research/ scholarship/creative activity *in general* in the institutional mission and culture. Institutional missions vary considerably on this point, ranging from avowedly

teaching-centric to research-dominant. Undergraduate research is consistent with a variety of institutional missions. However, failure to recognize this link can lead to devaluing undergraduate research for the purpose of evaluating faculty members.

The Three-Legged Stool and the Invisible Workload

Traditionally, tenure and promotion policies parse faculty activity into three mutually exclusive categories: teaching, scholarship/creative activity, and service. This sometimes creates a tendency for review committees to view any faculty activity that crosses or intersects categories as suspect or “double-dipping.” Even worse, it may lead to ignoring category-crossing activities, thereby overlooking faculty involvement in undergraduate research altogether. This is especially likely when undergraduate research activity occurs outside of formal definitions of teaching/work load.

Disciplinary Diversity

The growing practice of undergraduate research, scholarship, and creative activity has stimulated development and innovation of different models of undergraduate research (e.g., Young 2008; Grobman 2007). However, undergraduate research has historically been more strongly associated with the natural sciences and, at many institutions, other disciplines still lag behind or use different models of mentoring undergraduate research (Gesink 2010). These disciplinary differences can negatively impact perceptions of the degree of faculty involvement in undergraduate research and therefore how it should be categorized for evaluation of faculty members.

Evidence of Effectiveness in Mentoring UR

Institutions that recognize the importance of undergraduate research in their definition of faculty roles may still diminish the importance of undergraduate

research by having no strong, quantitative assessment of the mentoring aspect of undergraduate research. While student evaluation of course-based teaching has become standard, student evaluation of undergraduate research experiences is much less common. If mentoring of undergraduate research is not formally evaluated it will continue to be marginalized in the tenure and promotion process. Tenure and promotion review relies upon clear evidence of effectiveness, beyond brief anecdotal reports.

Putative reasons for the lack of formal student evaluation of undergraduate research experiences include:

- Many undergraduate research experiences have been outside of the formal curriculum, either not earning academic credit at all or earning elective credit, and therefore have been excluded from the formal course evaluation processes.
- Mentored independent study projects and small senior research courses yield low sample sizes for student evaluations, thereby threatening the anonymity associated with student evaluation processes.
- The course evaluation instrument may not adequately reflect the institution's progressive stance on undergraduate research and other forms of high-impact learning.

Promoting Undergraduate Research through Improved Tenure and Promotion Policy

Tenure and promotion policies define, set expectations for, and motivate faculty members' priorities for engagement and development (O'Meara and Rice 2005). As such, tenure and promotion policies are an important means of promoting undergraduate research as a vital component of the faculty role. We assert that the very work of revising tenure and promotion policy to recognize and reward undergraduate research is an important opportunity to advance the significance, quality, and extent of undergraduate research on campus. Such conversations are important catalysts in many ways for clarifying the faculty role and defining priorities for faculty support/development. Thus they are a key to effective revision of tenure and promotion documents. We provide below several strategies for addressing the challenge

of incorporating undergraduate research in tenure and promotion policies.

Defining Excellence in Scholarship, Teaching, and Service

Development of academic policy, by definition a faculty-centric initiative, is an important mechanism for building and advancing cultural change in an organization, which is required for institutionalizing undergraduate research. An important first step in revising tenure and promotion policy is to define in greater detail the different components that define excellence and effectiveness in teaching, scholarship, and service. These definitions will necessarily vary by institution and should reflect the institution's mission, as proposed by Ernest Boyer (1997). More and more institutions have adopted an expanded definition of scholarship to include scholarship of discovery, integration, application, and teaching (O'Meara and Rice 2005). For many institutions, increased emphasis on undergraduate research will be a natural outgrowth of this effort to align the institutional mission and the faculty reward system.

For example, Stetson University's recent revision of its tenure and promotion policy and the associated reflection, conversation, and implementation ensured that the faculty reward system acknowledges and properly values faculty activities related to undergraduate research. New standards for excellence were defined for each category of the three-legged stool (see Table 1 below), and candidates must provide evidence that each standard has been met or exceeded.

Because Stetson has a long history of undergraduate research, with a requirement for all students to complete a substantial senior research project, the elaboration of these new standards includes explicit reference to faculty-student collaborative research and creative activity. For example, in the Standards of Excellence in teaching and scholarship/creative activity, "engagement" is (in part) described as follows:

Table 1. Stetson University’s Standards for Excellence in Teaching, Scholarship, and Service

	Tenure and Promotion to Associate Professor	Promotion to Full Professor
Teaching/ Librarianship	Command of Subject Matter Organization Rigor Evolution/ Development Engagement	Command of Subject Matter Organization Rigor Evolution/Growth Engagement Maturity Impact
Scholarly and Creative Activities	Rigor Engagement Evolution/ Development Consistency	Rigor Engagement Evolution/ Development Consistency Maturity Development of Expertise Recognition
Service (Associate Professor) / Leadership (Full Professor)	Campus Engagement Civic Engagement	Campus Engagement Civic Engagement Impact Maturity

http://www.stetson.edu/academicaffairs/media/tp_policy_8-27-10.pdf

Teaching Effectiveness: “The candidate must be an involved teacher both in the classroom and beyond, encouraging the intellectual engagement and development of each student. As teacher-scholar, *the candidate must involve students in scholarly and/or creative activities* and/or participate in teaching-related student activities.”

Effectiveness in Scholarship and Creative Activities: “As a teacher-scholar, the candidate must demonstrate the influence of scholarship on classroom instruction/curriculum development/librarianship and/or the *involvement of students in research/creative activities.*”

Improved Definition of the Faculty Role

Defining and evaluating mentored research as either teaching *or* scholarship *or* service can be difficult and limiting. Nonetheless, the three-component approach remains dominant in tenure and promotion policies, so

placing faculty activity into the different role categories typically becomes necessary. One strategy for addressing this structural limitation is to provide an opportunity for tenure and promotion candidates to describe and address any activity that crosses categories of faculty roles. Many tenure and promotion policies require a candidate to provide an essay or “narrative” that can allow for this articulation.

Some activities truly fit into multiple categories, and this can be accommodated by careful crafting of standards for tenure and promotion. The standards should explicitly address which aspects of the category-crossing activities fall under each “leg” (or legs) of the stool. For example, an important component of the faculty role in undergraduate research is mentoring and facilitating students’ learning through the research process. At Stetson, *mentoring* undergraduate research may be classified as both a form of teaching *and* as scholarly engagement, but since neither is sufficient to demonstrate that either standard has been fully met, concerns about “double-dipping” are lessened.

Another important component of faculty-student collaborative research is contribution to disciplinary or interdisciplinary expertise and advancement of knowledge. When *tangible scholarly outcomes* result from a faculty member's participation in undergraduate research, they should be evaluated as effectiveness in *scholarship* in tenure and promotion reviews. Traditionally, contributions to knowledge advancement have been made through presentations in scholarly or professional venues and peer-reviewed publications, but campuses that have embraced the Boyer model may choose to include more varied forms of tangible scholarly outcomes (e.g., technical reports, Web pages, software, etc.) that are outgrowths of undergraduate research.

Participation in some undergraduate research activities may also be considered a meritorious form of *service*. Examples of these types of activities include acquiring resources for support of undergraduate research (e.g., REU supplements) and/or service in organizations that support undergraduate research (e.g., serving as a CUR councilor).

Embracing Disciplinary Diversity

While disciplinary diversity can pose challenges to achieving general definitions and standards for the faculty role, it is also an opportunity for deepening campus understanding of undergraduate research in its many possibilities, potentially even spawning innovations in undergraduate research. A powerful mechanism for achieving this goal is incorporating into the tenure and promotion policy the development of disciplinary interpretations of the institutional standards for "scholarship." The *process* of developing such disciplinary interpretations is a key opportunity because it draws together faculty for discussion about this vital component of the faculty role, and it can prompt specific discussion of the role of undergraduate research in faculty members' work as teacher-scholars.

The disciplinary interpretations can also provide a mechanism for embracing the diverse forms of mentoring undergraduate research across an institution and for informing candidates about the types of tangible scholarly outcomes that may be used to demonstrate

that a particular standard has been met. Finally, in developing disciplinary documents, it is important to build in a process for vetting the disciplinary interpretations institution-wide to ensure adherence to the institutional standard.

There will be some disciplinary variation in forms of undergraduate research and therefore in how these relate to evidence of faculty scholarly engagement and production. While the natural and some social sciences may share some mentoring models and types of tangible scholarly outcomes that result from undergraduate research, disciplinary interpretation documents for arts and humanities disciplines (see, for example, Gesink 2010; Grobman 2007; Schantz 2008) may include creative works (e.g., plays; see Blackmer 2008) in addition to, or instead of, co-authored publications, and these disciplines have much different criteria for what is recognized as faculty scholarship. The arts and humanities will also likely include significant mentorship of student-produced art and scholarship, which can be recognized as evidence of faculty scholarly engagement. For performance faculty, performances with a student or a co-authored paper detailing the research behind performance of a new piece may be recognized as faculty scholarship. In some professional programs, practica or community-based projects that involve undergraduate researchers may be recognized as faculty scholarship (Boyer 1997; Gesink 2010). Institutions should ensure that such disciplinary interpretations are not too restrictive and that they allow for major innovation and interdisciplinary forays (Blackmer 2008).

Disciplinary interpretation documents can also provide important contextual information for understanding how undergraduate research works as a component of the faculty member's program of scholarship. Disciplinary standards should reflect the departmental or divisional mission statements in a manner analogous to that of the institutional mission and institution-wide standards for excellence. The following excerpt from the mission statement of the Division of Natural Sciences at Stetson University underscores the value placed on undergraduate research and sets the stage for a disciplinary inter-

Table 2. Excerpt from disciplinary interpretation document, Stetson University Division of Natural Sciences

Category	Standards for Excellence	Evidence Related to Undergraduate Research
Scholarship	Rigor	Peer-reviewed publications, computer programs, technical reports, textbooks, articles in the popular press with student co-authors
Scholarship	Engagement, Consistency	Conference presentations with student co-authors (including those by students with faculty co-authors) Record of mentoring Summer Undergraduate Research Experience (SURE) grant recipients, senior projects, and/or independent study projects
Teaching	Engagement, Consistency	Mentoring students (independent studies or tutorials, SURE grant recipients, etc.)

pretation document that recognizes and rewards faculty efforts in mentoring undergraduate research:

The Division believes that the methods of the natural sciences are best learned by science majors through extensive hands-on participation in undergraduate research ...

Thus, the following statement from the disciplinary interpretation document from Stetson’s Division of Natural Sciences, which describes how student involvement in a faculty member’s research should be viewed for the purposes of evaluation, is a natural outgrowth of the division’s mission:

The Division highly values and strongly encourages the involvement of undergraduates in the scholarly process to the extent possible given a faculty member’s area of expertise and senior research mentoring workload. As practiced in the Division, engagement of students in the scholarly process has unique effects on scholarly output and can impact the quality and frequency of publication. However, because student involvement in research is central to our mission, a high degree of student involvement is desirable, and should be considered meritorious when evaluating a candidate’s scholarly work during the tenure and promotion or promotion process.

Although all the divisions at Stetson did not include the same emphasis on undergraduate research, the process of developing disciplinary interpretations of university standards for tenure and promotion made undergraduate research the subject of widespread discussion within and among divisions and formalized recognition of undergraduate research in the faculty reward system. Prior to this effort, the significant component of faculty time involved in mentoring undergraduate research (including senior projects) was recognized within, but not outside, the Division; therefore, its role in the tenure and promotion process was unclear.

An example from a disciplinary interpretation document from the Division of Natural Sciences at Stetson is excerpted in Table 2. This excerpt lists evidence related to mentoring undergraduate research that can be used to demonstrate excellence in “scholarship” and “teaching” in the tenure and promotion portfolio. (The policy also includes many additional types of evidence not related to mentoring undergraduate research.) Also indicated are the pertinent Stetson Standards for Excellence (e.g., rigor, consistency, engagement) that must be achieved in the different components of the faculty role.

In the spirit of Boyer (1997), the types of evidence that could be used to meet the criteria of rigor were expanded

to include tangible scholarly outcomes from the scholarship of discovery, engagement, teaching, and integration. To be considered scholarship, the divisional interpretation document requires that evidence "... involve a high level of disciplinary expertise, be public, subject to critical review, and in a form that allows use/exchange by other members of the scholarly community."

Recognition and Evaluation of Mentoring

Valuing the mentoring aspect of undergraduate research in the faculty reward system is important because of the faculty time involved in mentoring. Acknowledging these efforts as part of the teaching load may also encourage broader faculty participation. Where undergraduate research falls outside the normal teaching load, faculty should encourage students to enroll in independent study courses to document this important teaching effort. Whether or not the students are formally enrolled in such a course, faculty members' mentoring of undergraduate research should be evaluated formally as teaching, including student evaluations of teaching effectiveness. Many institutions could use their current methods of course evaluation to do this. The more global questions found on these instruments such as "Overall, was the instructor of this course effective?" or "Was this course intellectually challenging?" can be applied with equal success to standard classes and mentored undergraduate research experiences. Concerns about anonymity could be addressed by increasing sample sizes by pooling mentored students across several semesters, cautioning students not to include potentially identifying remarks, and refraining from communicating results of the evaluation to the mentor until after students have graduated.

The explicit inclusion of undergraduate research and other high-impact learning experiences in a revised tenure and promotion policy may also prompt the revision of the course evaluation form and process, more deliberately incorporating questions and methods for evaluating students' experiences in these important learning opportunities. Assessments of the learning outcomes of these experiences, student essays, and faculty interviews

of small student groups could also provide important evidence of mentoring effectiveness.

Most institutions use peer evaluation of teaching in the tenure and promotion process, often by having senior faculty visit classes, compose a written evaluation of the session detailing their critical observations, and have a formative discussion with the colleague about their observations, including suggestions for continued development. Peer evaluations could also be used effectively to evaluate undergraduate research mentoring. The evaluator could attend a group research meeting, observe a critical reading session, visit a lab when a mentor is guiding one or two students through the use of a new technique, accompany a mentor and student to a field site, or observe a collaborative rehearsal session. The evaluation of activities involved in mentoring undergraduate research could parallel those used to evaluate regular classroom teaching.

If the faculty member has a rubric for assessing student performance in the undergraduate research experience, that rubric may also be a helpful framework for guiding the peer observation. It is important that the assessment tool provides evidence of the quality of mentoring and reflects critical thinking about the faculty member's ability to enhance student learning through undergraduate research. Inclusion of standardized instruments and defined approaches for assessing undergraduate research will ensure that mentoring-related activities are recognized during the tenure and promotion process and help to clearly define the faculty role in mentoring as an important form of teaching.

Conclusion

Revising the tenure and promotion policy is a powerful opportunity for advancing a culture that supports and celebrates undergraduate research. Although the strategies described here stemmed from a tenure and promotion policy at a principally undergraduate institution, many of these suggestions, especially the disciplinary documents and formal evaluation of mentoring UR as teaching, can be incorporated at a variety of institutional settings. Also, institutions with graduate programs that

tend to privilege mentorship of graduate students with respect to faculty evaluation can extend that to undergraduates. At any institution, revision of tenure and promotion policy should stimulate the critical dialogue among faculty necessary for a consistent valuation of undergraduate research in the institutional mission statement and the faculty reward system.

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