

## **Faculty perceptions of the scholarship of teaching and learning: Definition, activity level and merit considerations at one university**

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*Abstract: This study investigated the status of the Scholarship of Teaching and Learning (SoTL), the amount and types of pedagogical scholarship, and the merit accorded SoTL within academic units for purposes of faculty assessment (i.e. hiring, promotion, and tenure decisions) at a research/doctoral granting institution. Responding to an electronic survey were 159 tenured and tenure track faculty (30% assistant professor, 31% associate, 31% full professors; 6% collateral/clinical/administrative) from all colleges and schools. The data analyzed showed a disconnect between the perceptions of tenured and non-tenured faculty on what qualifies as SoTL and the place of scholarly works within promotion and tenure. More specially, non-tenured faculty tended to judge teaching activities as SoTL regardless of their likelihood for publication, whereas tenured faculty more often recognized only published works as SoTL. Results also indicated that a limited number of faculty were engaged in SoTL; possible reasons could include lack of external funding and nebulous promotion and tenure guidelines as they concern SoTL.*

*Keywords: educational research, scholarship of teaching and learning, promotion and tenure, faculty attitudes, faculty perceptions, college faculty*

### **I. Introduction.**

Investigating the processes and products of teaching in higher education has emerged as a noteworthy activity across all disciplines in the academy. Increasingly referred to as the scholarship of teaching and learning (SoTL), the importance of this category of scholarship, as well as what counts as the scholarship of teaching and learning, remains unclear and debatable in many universities and colleges. While there are a growing number of SoTL articles in both general education journals and journals specific to disciplinary pedagogy (Bernstein & Bass, 2005; Brew, 2010; Burke, Johnson, & Kemp, 2010; Gurung, Weidert, & Jeske, 2010; Hubball, Clark, & Poole, 2010; Jurkowski & Kerr, 2010; Osborne, et. al., 2009; Persellin & Goodrick, 2010; Sharmaa & McShaneb, 2008), the value of these activities, particularly within the evaluation process for full-time faculty, is often contested. The study reported in this article was undertaken to further develop this literature by investigating faculty perceptions about the types of scholarly or teaching activities that could be categorized as SoTL, the amounts and type of

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pedagogical scholarship conducted by faculty at a research/doctoral granting institution and the merit accorded SoTL within different academic units of this institution for purposes of faculty assessment (i.e., hiring, promotion, and tenure decisions). The significance of this type of scholarship on the enhancement of teaching practices and pedagogy is discussed in the conclusion.

## II. Review of the Current Literature.

Traditionally, scholarship has been demonstrated through a peer-reviewed, publicly disseminated product (Fincher & Work, 2006). However, in the early 1990s Boyer (1990) suggested a recognition of scholarship that went beyond discipline specific research to include research that advances knowledge about teaching. And, in an attempt to bring SoTL further in alignment with traditional disciplinary scholarship, the *Journal of the Scholarship of Teaching and Learning* (as cited by Shulman (1999) suggested that knowledge about teaching and learning be considered scholarship if it manifested the following three characteristics: “It should be *public*, susceptible to *critical review and evaluation*, and accessible for *exchange and use* by other members of one’s scholarly community” (p. 5).

However, a lack of consensus about what is meant by SoTL persists. McKinney (2006) offers two areas of contention as reasons for the lack of clarity: the confusion between what is scholarly and what is scholarship, and the debate about the overlap or relationship between SoTL and the assessment of student achievement within a course. McKinney suggests that these two areas of contention are barriers to the advancement of SoTL within academia. SoTL, she suggests, is scholarship that overlaps with the more traditional discipline specific scholarship of discovery, integration, and application and further argues that SoTL should be considered to be as important as disciplinary specific research. We integrated McKinney’s (2004) approach to SoTL with the characteristics set forth above by the *Journal of Scholarship of Teaching and Learning* and articulated a working definition of SoTL—“the systematic, literature-based study of processes and outcomes involved in teaching and learning intended for peer-reviewed publication and dissemination”—for use as a beginning frame of reference for this study.

How has scholarship of teaching and learning been explored in other studies? Gurung, Gurung, Ansbarg, Alexander, Lawrence, and Johnson (2008) surveyed members of North American psychology departments regarding SoTL. Participants were asked to rank SoTL products by the product’s importance in personnel decision making. Of the 142 participants, over half of the participants endorsed peer-reviewed publications (54.9%) and leading faculty workshops (55.6%) as important to personnel decision making. Over one-third of participants identified attending faculty workshops (44.3%). Professional presentations (40.0%), evidence of teaching impact (45.3%), receipt of a grant (35.5%), and development of a portfolio (32.6%) were also identified as being important. Clearly, not all of these products are comparable to more traditional disciplinary scholarship products, heightening the confusion about what is SoTL and what is not.

A number of articles suggest that while SoTL is acceptable within higher education, it has not yet been acknowledged as equal to discipline specific research (McKinney, 2006; Walker, Baepler, & Cohen, 2008). Gurung, et. al. (2008) posit that although formal policies regarding SoTL in psychology departments were reported by participants, it seemed that these policies had not yet been fully institutionalized; departmental policies encouraged SoTL activities while institutional policies did not include such encouragement. Participants’

perceptions of support for SoTL were higher at the department level than at the institutional level. Shapiro (2006) asserts that SoTL activities are considered “add-ons” (p. 42) to the expectations that faculty will get competitive funding, publish refereed articles, and develop national reputations all within their specific discipline. He states that SoTL contributions do not change or replace the traditional productivity demands.

While the argument has been made that SoTL should be valued and rewarded in the same way as traditional scholarship (Fincher & Work, 2006), many proponents of SoTL are concerned that such productivity is not as positively recognized nor as highly rewarded. McKinney (2006) posits that older faculty members have a narrower view of scholarship and hold stereotypical views of SoTL work. Included in these stereotypes are the beliefs that SoTL work is of lower quality, cannot be generalized, and involves questionable peer review processes. Gurung, et. al. (2006) state that SoTL activities were not perceived as being relevant criteria in the reward structure that includes merit pay and hiring decisions. Although some participants in this study did believe that SoTL had some influence in tenure and promotion decisions, more of them reported that SoTL was not mentioned in evaluation guidelines.

It has been suggested that although the traditional reward structure includes teaching, research, and service equally, good teaching is actually expected but not privileged (Walker, Baepler, & Cohen, 2008). Supporting this position, Terpstra and Honoree (2009) suggest that the emphasis of a university can be assessed by the nature of its reward structure. Their study indicated that the most effective teachers, those with better ratings of student knowledge and competency and student satisfaction, worked in systems that emphasized research and teaching equally. These faculty members were also significantly more satisfied in terms of both their jobs and compensation. University emphasis on research produced more productive faculty, measured in both research quality and quantity, but these faculty members had lower satisfaction ratings as well as lower effective teaching ratings. These findings suggest that though teaching may be identified as an important activity, in actuality, the reward structure is still heavily based on research.

In order to help define SoTL and advance it as legitimate scholarship toward promotion and tenure in our own institution, members of a multidisciplinary faculty learning community (FLC) agreed to pursue a project which would provide some insight about SoTL derived from the faculty at our large urban university. The FLC developed a survey and disseminated it university-wide to investigate 1) the activities and products that faculty considered to be SoTL, 2) the amount and types of pedagogical scholarship, and 3) the merit accorded SoTL within academic units for purposes of faculty assessment (i.e. hiring, promotion, and tenure decisions) within their school or college. We report here the outcomes of this survey and offer implications as to the impact of SoTL on higher education.

### **III. Methodology.**

#### *A. Participants and Data Collection Procedures.*

A list of all tenured (n= 737), tenure-track (n=274), and collateral/clinical faculty (n= 913) of this one large Carnegie-designated research/doctoral granting institution in the southeastern United States was obtained from the institution’s human resource department. Those on the list received an e-mail request to complete this IRB-approved electronic survey via a secure Internet server. No incentives were given to complete the survey. The survey remained open for three weeks.

Faculty members who did not complete the survey were sent reminders after the first and second weeks. This scheme and time frames were described by Bailey (1991).

Seventeen percent (17%) of 274 tenure track faculty, 13% of 737 tenured faculty, and 2% of 913 collateral/clinical faculty responded to the survey to yield a convenience sample of 159 study participants. Although low, our overall response rate for tenure and tenure-track faculty (15%) was within the range of other university faculty surveys, such as 22% for a National Faculty Survey, APLU Sloan National Commission on Online Learning (Seaman, 2009), and 15.8% (Maurer, et. al., 2009). Further limitations of the study are addressed in the Conclusion section of this article.

### *B. Instrument.*

As noted above, we articulated a definition of SoTL for use as a frame of reference from which to generate lists of scholarly activities and vignettes and other questions for the survey. We included this same definition "the systematic, literature-based study of processes and outcomes involved in teaching and learning intended for peer-reviewed publication and dissemination" at the beginning of the survey to provide a common definition of SoTL for the respondents. The survey was piloted on faculty members recently retired from the university where the survey was administered. Revisions were made based on the suggestions from the survey pilot. The final survey questions generated from our FLC's overall research questions were: (1) What activities and scholarly products are considered as SoTL? (2) What is the amount and type of pedagogical scholarship generated by faculty in the institution? (3) What merit is accorded SoTL for purposes of faculty assessment?

In order to answer the first of our FLC's research questions about the types of activities and scholarly products considered as scholarship of teaching and learning at the university, we developed a list of 16 scholarship related activities that could be interpreted as SoTL according to the McKinney definition (McKinney, 2006). Respondents were asked: "From the following list, indicate the extent to which you would consider each to be part of the Scholarship of Teaching and Learning (SoTL)?" (1 = Definitely a part of SoTL; 2 = Probably a part of SoTL; 3 = Probably NOT a part of SoTL; 4 = Definitely NOT a part of SoTL). Examples of the types of activities were: Data-driven, classroom-based studies; Reviews of the pedagogic literature; Authoring textbook or textbook chapters; and Developing a new course (see Appendix I for complete list of activities). Subsequently at the data analysis stage, the value categories were collapsed into definitely or probably a part of SoTL (1) and probably not or definitely not (3) in order to maximize variation between activities considered or not considered as SoTL for subsequent data analysis.

The second research question concerning the amount and types of SoTL across the various disciplines at the university was answered by asking respondents three questions: 1) How many publications (published or accepted for publication) they authored that met the given definition of SoTL; 2) The nature of their SoTL publications (1 = Mostly empirical; 2 = About evenly divided between empirical and conceptual; 3 = Mostly conceptual; 4 = Other); and 3) Whether they had ever received external funding for SoTL (1 = Yes or 2 = No). The number of publications was subsequently collapsed into none = 0, 1 to 5 = 1, and more than 5 = 2 based on the distribution of the responses generated by the respondents.

For the third research question about the merit accorded the scholarship of teaching and learning for promotion and tenure and other award decisions, we developed five vignettes

describing different types of intellectual property: 1) Publication of a data-driven classroom-based study in a peer-reviewed journal; 2) Publication of an article, conceptual in nature, about academic leadership in a peer-reviewed journal; 3) Presentation of a data-driven classroom-based study in at a prestigious national conference; 4) A series of case studies published in a peer-reviewed online database; and 5) Faculty to Student Social Media. Following from the McKinney definition of SoTL noted above, these vignettes represented the five most commonly noted events recognized for promotion and tenure at this institution (See Appendix 2 for descriptions of the full vignettes). Respondents were asked to indicate if they thought each of the intellectual properties should be used for making decisions about 1) Promotion and tenure; 2) Annual review for merit-based pay raises; and 3) Award consideration, including academic unit, university, or external awards. Response categories for each of these questions were: 1 = Definitely consider; 2 = Probably consider; 3 = Probably not consider; 4 = Definitely not consider .

We developed scales for overall merit consideration for each of the five intellectual property vignettes. A scale for each of the intellectual property items was developed by summing the responses of the three decision items (promotion and tenure, annual merit, and award) for each of intellectual property vignettes. Scaled scores ranged from 3 to 12 for each vignette, with lower scores indicating more overall merit for that particular intellectual property vignette. Univariate statistics for each the scales are shown in Table 1. The intellectual property item “Publication of a data-driven classroom-based study in a peer-reviewed journal” was considered to have the most overall merit ( $m = 4.13$ ) for faculty promotion and tenure, raises, and awards, while social media had the least merit ( $m = 8.81$ ).

**Table 1. Merit Consideration for Intellectual Property Vignettes.**

Intellectual Property Item	Mean	Median	SD
Publication of a data-driven classroom-based study in a peer-reviewed journal:	4.13	3.00	1.59
Publication of an article, conceptual in nature, about academic leadership in a peer-reviewed journal:	5.00	4.00	2.05
Presentation of a data-driven classroom-based study in at a prestigious national conference:	4.65	4.00	2.04
A series of case studies published in a peer-reviewed online database:	4.88	4.00	2.09
Faculty to Student Social Media:	8.81	9.00	2.62

We also asked if respondents thought that the specific intellectual property belonged in either or all of the sections of faculty dossier or vitae – teaching, research, or service. Response categories for each of these sections were: 1 = Definitely belongs; 2 = Probably belongs; 3 = Probably does not belong; 4 = Definitely does not belong. Respondents also provided

information about their university rank (assistant, associate, full professor, other), department or unit affiliation<sup>6</sup>, and number of years of employment as a full-time faculty member at this particular university. However, in order to protect the anonymity of the respondents, additional identifying information such as sex, race, ethnicity or age was not asked.

### *C. Data Analysis.*

Univariate statistics were used for pre-analysis data screening to check for missing data, outliers and keying errors and to explore the distribution and characteristics of the variables (Mertler & Venetta, 2002). Not surprisingly, data from this non-probability sample did not meet the assumptions necessary for parametric tests; thus non-parametric statistical tests were chosen to analyze the data (Mertler & Vannatta, 2005; Moore, McCabe, & Craig, 2009). The Chi square test of independence, the most commonly used non-parametric test statistic (Vogt, 2007) was used to examine the relationship between the nominal variable of SoTL activities and the ordinal variables of faculty rank and discipline. Spearman's rho, a non-parametric measure of rank orderings between two interval level variables, was used to examine the relationship between the interval level variables; Mann-Whitney *U*, a non-parametric test for a difference between two groups and Kruskal-Wallis, a non-parametric test for the difference between three or more groups, were used to examine relationships between nominal and interval level variables (Rosenthal, 2001).

We grouped the respondents by colleges/schools; if there were fewer than five respondents from a particular school/college, we further grouped those respondents with associated colleges/schools in order to ensure anonymity of the respondents. For example, respondents from schools/colleges with fewer than five participants and who were associated with the medical campus were grouped as Allied Health, Dentistry, Pharmacy and Nursing; those associated with professional programs on the academic campus and with fewer than five respondents were grouped with Professional Schools; and, those associated with the undergraduate arts and sciences programs on the academic campus were grouped as Arts and University College. Our final school/college grouping was: Humanities and Science; Arts and University College; Allied Health, Dentistry, Pharmacy and Nursing; Professional Schools (Education, Business, Engineering, and Social Work); and School of Medicine.

## **IV. Findings.**

### *A. Faculty Characteristics.*

Based on the college/school grouping noted above, the distribution of the 159 respondents was: Humanities and Science (n = 50, 33% of respondents); Allied Health, Dentistry, Pharmacy and Nursing (n = 23, 15% of respondents); Arts and General Education (n = 26, 17% of respondents); Professional Schools of Education, Business, Engineering, and Social Work (n = 23, 17% of respondents); and the School of Medicine (n = 28, 18% of respondents). Respondents varied greatly in the number of years as full time faculty at the institution—from less than 1 to 38, with 8 years being the median and a mean of 12 years (SD 10.31). Of the 159 faculty

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<sup>6</sup> The administrative structure of this University is divided into a medical campus and an academic campus and further organized into 12 identifiable colleges/schools across both campuses. The majority of colleges/schools are further divided into various departments or organizational units with some departments having fewer than five faculty members while some have over 100.

members who responded to the survey, 49 (31%) identified as full professors; 50 (31%) identified at the associate level; 46 (29%) identified at the assistant professor level; and 14 (9 %) identified as collateral/clinical or administrative that we labeled “other.” Because the small number of faculty in the “other” rank yielded too small a cell size to be usable for the chi-square test analysis, only full, associate, and assistant level professors were included in the bivariate analysis for the faculty rank variable.

### *B. Question 1: What Activities are Considered as Scholarship Of Teaching And Learning?*

We answered this question by examining differences of opinion about SoTL activities based on faculty rank, years as full-time faculty, and disciplinary division.

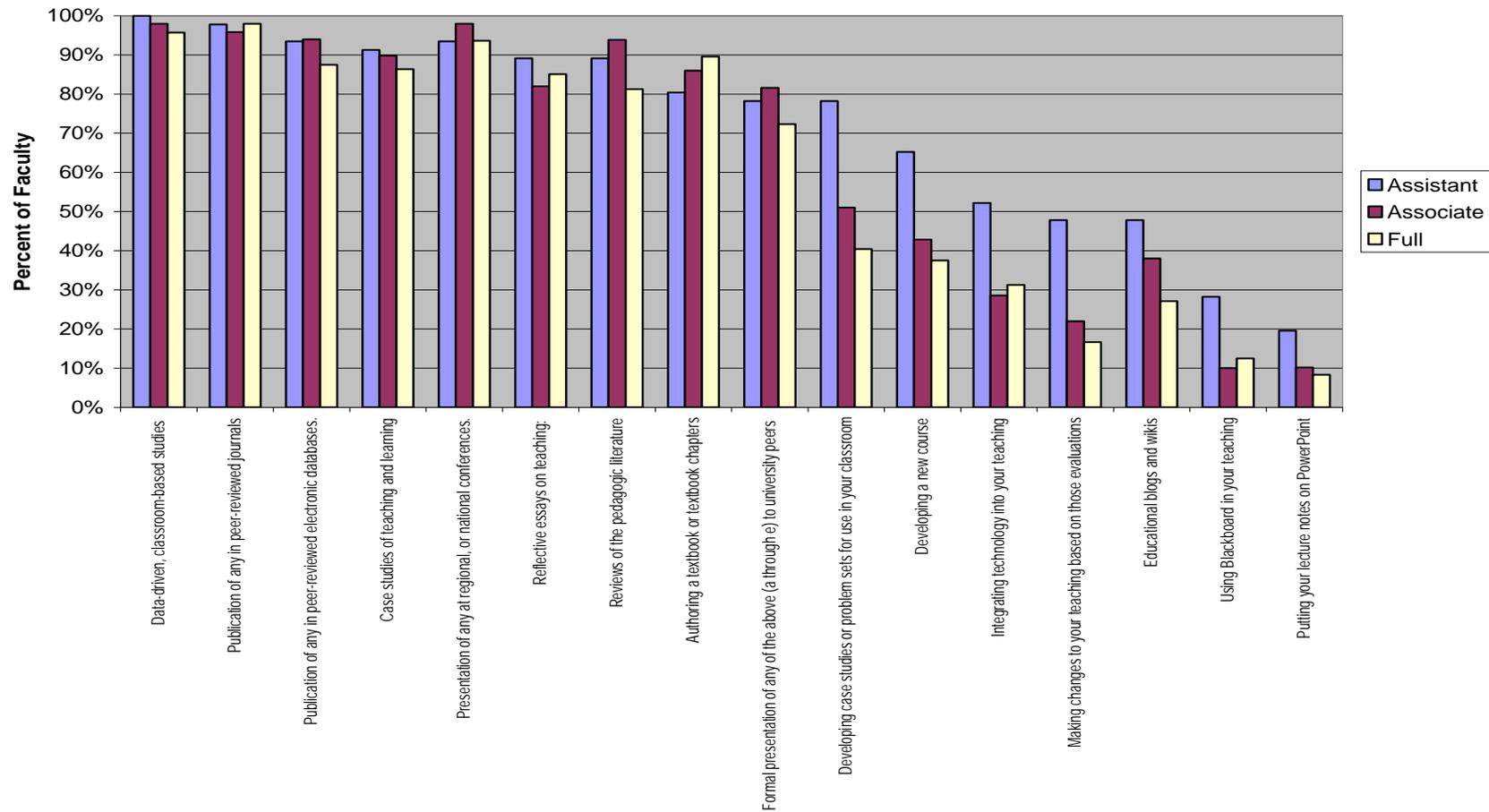
Figure 1 shows the percentage of faculty, by faculty rank, who reported definitely or probably be considered as SoTL for each of the 16 activities. A great majority of respondents across all ranks considered dissemination of knowledge activities to be SoTL: Data-driven, classroom-based studies (98%) ; Publication of any in peer-reviewed journals (97%); Publication of any in peer-reviewed electronic databases (92%); Case studies of teaching and learning (89%); Presentation of any at regional, or national conferences (95%). On the other hand, the following activities, not generally associated with knowledge dissemination, were considered SoTL by fewer number of faculty: Making changes to your teaching based on those evaluations (23%); Educational blogs and wikis (38%); Using Blackboard in your teaching (17%); Putting your lecture notes on PowerPoint (12%).

A Chi square test of independence was used to examine the relationship between activities considered as SoTL and faculty rank. Statistically significant differences by rank were found for the following five out of 16 activities:

- Developing case studies for use in the classroom ( $\chi^2 = 14.38; p = 0.001$ )
- Developing a new course ( $\chi^2 = 8.09; p = 0.017$ )
- Integrating technology into your teaching ( $\chi^2 = 6.71; p = 0.035$ )
- Making changes to teaching based on student evaluations ( $\chi^2 = 12.77; p = 0.002$ )
- Using Blackboard ( $\chi^2 = 6.65; p = 0.036$ )

Interestingly, SoTL activities that were differentiated by rank were those not generally associated with publication or knowledge dissemination. For example, only 40% of tenured full professors believed that “Developing case studies for use in the classroom” was SoTL while 78% of tenure-track assistant professors thought so. Similarly, only 18% of tenured, full professors believed that “Making changes to teaching based on student evaluations” was SoTL while 48% of tenure-track assistant professors thought the same.

Given the differences in what activities were considered to be SoTL based on faculty rankings, it was not surprising that there were differences based on years as a full time faculty at the university. Mann-Whitney  $U$  test of differences between two groups (1 = activity is considered SoTL; 2 = activity is considered not SoTL) revealed that respondents with fewer years of teaching were more likely to consider the following activities as SoTL: Developing case studies for use in teaching (Mann-Whitney  $U = 1715.500; p = 0.007$ ); Putting lectures on PowerPoint (Mann-Whitney  $U = 724.500; p = 0.044$ ); and Making changes to teaching based on student evaluations (Mann-Whitney  $U = 1188.500; p = 0.000$ ).



**Figure 1. Activities Considered as Scholarship of Teaching and Learning by Rank.**

Opinions of faculty in the colleges/schools differed in only one of the 16 activities, “Integrating technology into your classroom” ( $\chi^2 = 9.39$   $p = 0.05$ ) with respondents from the Professional Schools division least likely to report this activity as SoTL.

*C. Question 2: What is the Amount and Type of Pedagogical Scholarship generated by faculty in this institution?*

Faculty members’ response to the number of SoTL publications they had produced, the extent to which these publications were empirical or conceptual in nature, and whether or not they received external funding to support their SoTL publications follows. Note that we asked respondents to refer to the definition of SoTL provided in the survey instrument, that the designation of empirical or conceptual was left to the interpretation of the respondent, and that external funding varied by yes or no rather than by amount of funding.

The distribution of the responses to the question about number of SoTL publications ranged from 0 to 130 and was severely skewed ( $m = 6.18$ ,  $med = 1.00$ ,  $mode = 00$ ,  $sd = 19.43$ ). Thus, we collapsed this variable into the following categories (0 = 0 publications; 1 = 1 - 5 publications; and 2 = more than 6 publications). The majority of respondents (43%) reported having no SoTL activity, 39% reported 1 - 5 publications and 14% reported having more than 6 publications. About a third (37%) of respondents reported that their SoTL publications were about evenly divided between being empirical and conceptual in nature, while 28% reported that their SoTL publications were primarily empirical, and 17% reported their publications being primarily conceptual in nature. Only 23% of respondents reported receiving external funding to support their SoTL work.

Kruskal-Willis tests were used to analyze number of publications by college/unit and by faculty rank, and chi-square tests were used to examine the relationships between external funding, type of SoTL article published, unit/college, and faculty rank. None of these relationships reached statistical significance except for the relationship between external funding and faculty rank ( $\chi^2 = 6.187$  ;  $p = 0.045$ ). Associate and full professors were more likely to receive external funding for their SoTL efforts than were assistant professors.

*D. Question 3: What Merit is Accorded SoTL for Purposes of Faculty Assessment?*

We answered this question in two ways. First, we reported the percentage of faculty who considered each of the vignettes for promotion and tenure, annual raises and for award decisions (Figure 2) and the percentage of faculty who would place the various intellectual properties in the various sections of their vita (Figure 3). The majority of respondents reported that the following intellectual properties probably or definitely should be considered in the faculty assessment for annual review, for promotion and tenure, and for awards; and also that these same intellectual properties belong in the “Research” section of the dossier:

- a) Publication of a data-driven classroom-based study in a peer-reviewed journal: 87% annual review; 95% promotion and tenure; 99% awards
- b) Publication of an article, conceptual in nature, about academic leadership in a peer-reviewed journal: 82% annual review; 93% promotion and tenure; 95% awards
- c) Presentation of a data-driven classroom-based study in at a prestigious national conference: 78% annual review; 91% promotion and tenure; 93% awards

- d) A series of case studies published in a peer-reviewed online database: 75% annual review; 90% promotion and tenure; 93% awards.

Faculty to student social media was considered appropriate by the majority of faculty (66%) only for placement in the “Teaching Section” of the vita. The majority of respondents would not place any of the five activities in the “Service” section of the dossier. However, 26% would place the “Publication of an article, conceptual in nature, about academic leadership in a peer-reviewed journal” and 18% would place “A series of case studies published in a peer-reviewed online database” in the Service section of the vita.

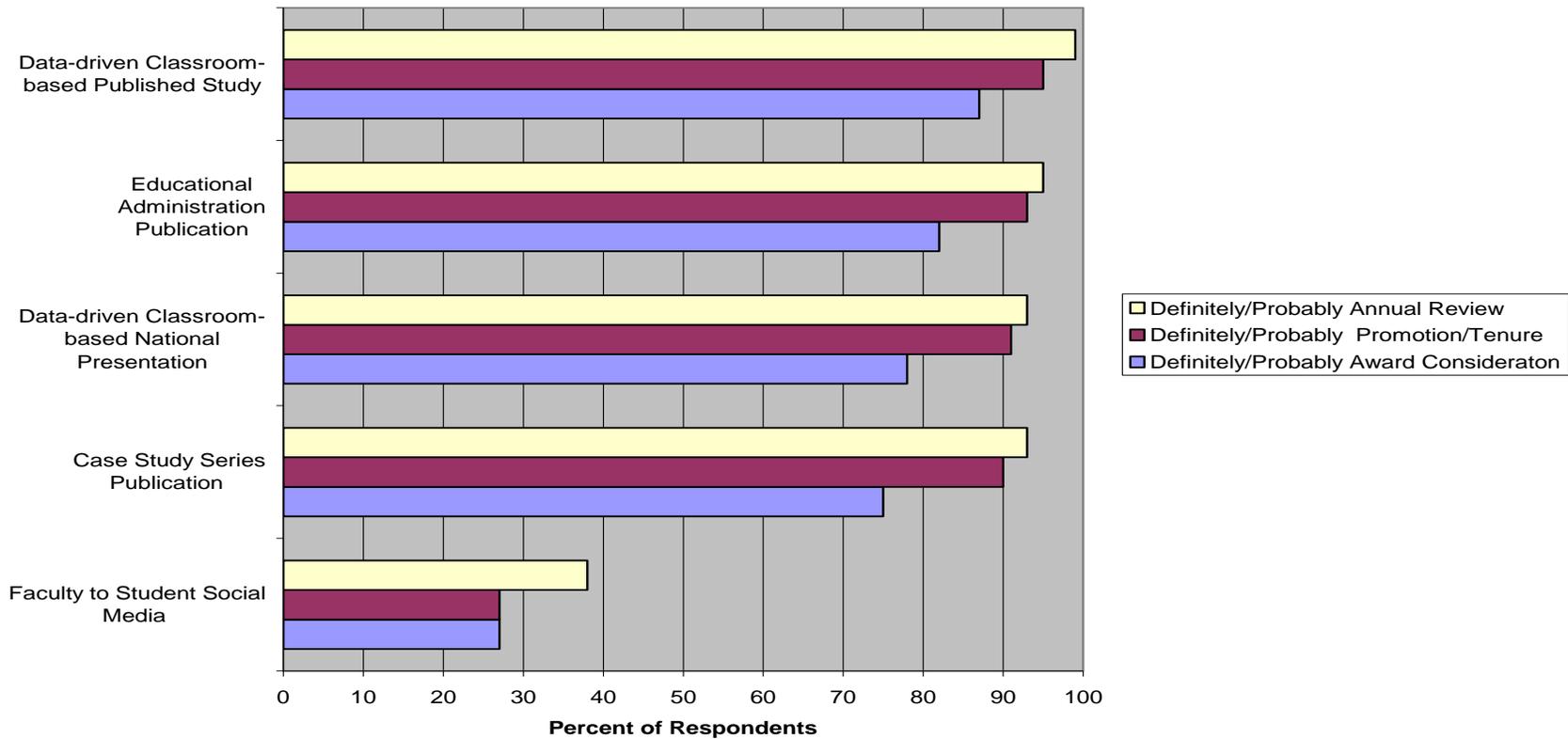
The second way we answered this question was to explore differences in the overall merit intellectual property scales (described in methodology section above) across schools/colleges and faculty rank. Kruskal-Wallis test of difference between means indicated no statistically significant differences across schools/colleges. However, full time faculty considered the intellectual property item ‘faculty to student social media’ to have less overall merit ( $m = 9.74$ ) than did assistant professors ( $m = 8.29$ ) (K-W chi square = 8.55;  $p = 0.01$ ).

#### **IV. Conclusion.**

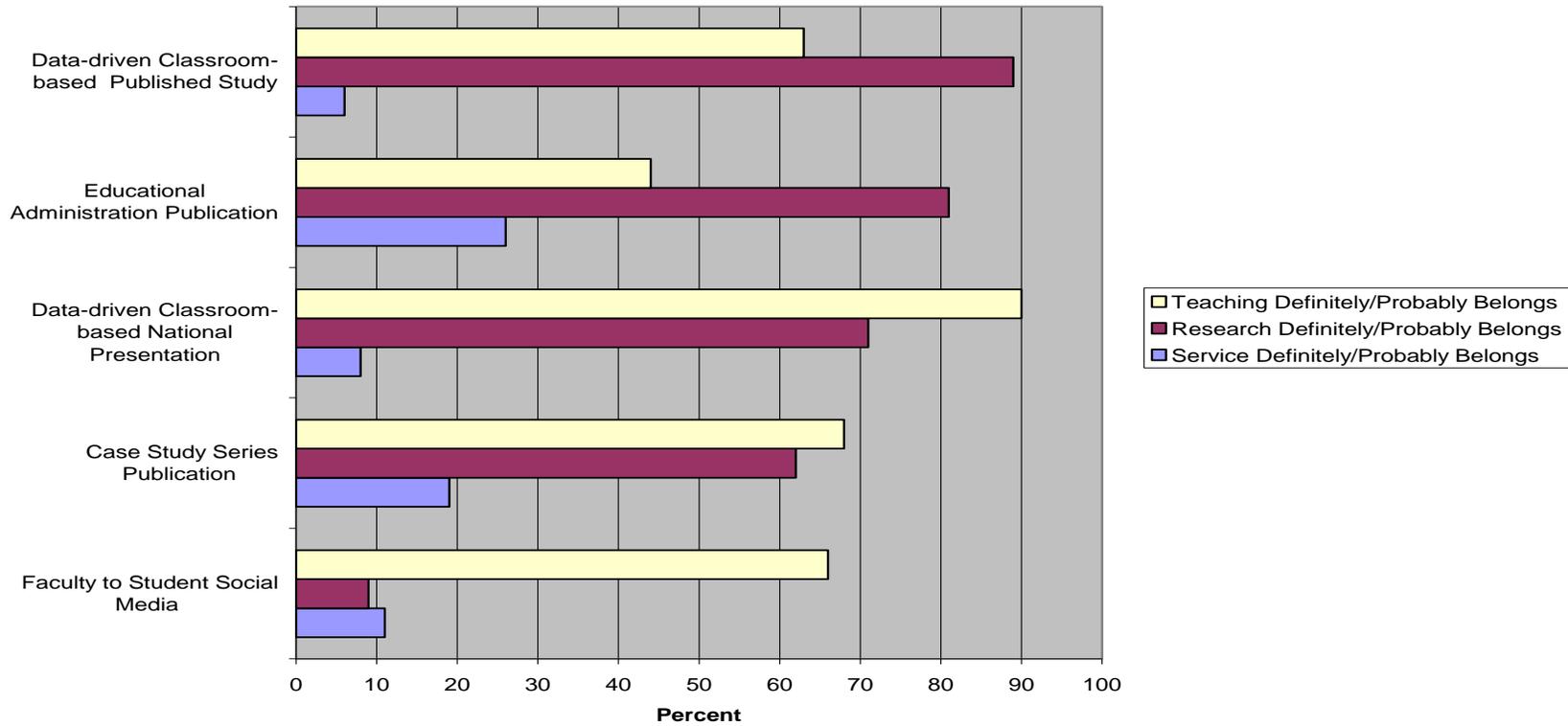
##### *A. Interpretation of Results.*

This investigation was performed to add to the rather limited empirical data on faculty perceptions of SoTL. Our study gathered information about faculty opinions of SoTL, the amount and types of scholarship it represented, and the value given to SoTL within the context of faculty evaluation. Critical to establishing faculty evaluation criteria is defining what constitutes SoTL and the merit accorded to it. Our faculty, regardless of rank, considered the following activities as SoTL: Data-driven classroom-based published study, educational administration publication, data-driven classroom-based national presentation, and case study series publication. These activities were also given merit consideration for promotion and tenure and placed within the research component of the dossier. Thus, these activities help define what our faculty considered SoTL.

-A commonality of the activities considered as SoTL by a great majority of faculty across ranks is that they are generally reviewed, evaluated, and made accessible to others. We can say then, at least at this institution, the same characteristics that define traditional discipline-based research also apply to SoTL. However, five of the 16 teaching activities that are less likely to be publishable scholarly products (Developing case studies or problem sets for use in your classroom; Developing a new course; Integrating technology into your teaching; Making changes to your teaching based on those evaluations; Educational blogs and wikis) were considered to be SoTL by approximately half of the junior faculty whereas only a fraction of senior faculty considered these same activities as SoTL. This is an important disconnect found between the perceptions of tenured faculty and their non-tenured colleagues. It appears that our junior faculty do not see a key distinction between good, initiative, or scholarly teaching and SoTL as described by Glassick, Huber and Maeroff (1997) and supported by others (Cambridge, 1999; Hutchings & Shulman, 1999; Shulman, 1999). Glassick and colleagues promoted scholarly teaching as the investigation of teaching and learning by a variety of systematic analytical methods. Results are used to refine teaching methods and improve student learning. The scholarship of teaching and learning contains all of the elements of scholarly teaching but further



**Figure 2. Intellectual Property Merit Considerations.**



**Figure 3. Placement of Intellectual Property in Vita.**

extends the process by making public the results of the investigation. Our faculty may benefit from having these similarities and distinctions clarified.

Our findings suggest that socialization as described by McKinney (2006) is not the reason for varying perceptions of SoTL activities among tenured and non-tenured faculty. She offered that socialization of new and junior faculty results in scholarship being understood only as traditional disciplinary research; this sends the message that SoTL is a component of teaching and is less important than discovery scholarship in the discipline. It appears that the majority of our faculty do not discount the merit of SoTL as compared to disciplinary-based research, as long as the scholarly product is critically reviewed and made available to others.

Nearly half of faculty (43%) responding to our survey reported no SoTL experience. Even though not completely engaged in SoTL, this faculty population judged sample productivity activities resulting in dissemination of information through peer reviewed journals or online databases appropriate for annual review and/or promotion and tenure consideration. This is consistent with our thoughts above on what is traditionally thought of as scholarship (Fincher & Work, 2006). Gurung, et. al. (2008) reported that the majority of faculty respondents also agreed that any peer reviewed work was worthy of consideration for promotion and tenure. For example, his psychology faculty and ours indicated presentation at professional conference and reflective essay on teaching as SoTL.

Our study investigated faculty experience by the number and types of SoTL publications, (either empirical or conceptual in nature), amount of external funding, and differences with SoTL activity among divisions. Anecdotal evidence at our university suggests that there are varying interpretations of promotion and tenure guidelines among colleges/schools where the amount and type of SoTL publication and obtainment of external funding may be the criteria used to judge whether activities are worthy in the faculty assessment process. We found differences between colleges/schools. Humanities had the least number of publications and Professional schools the most. Professional schools also had the greatest amount of external funding. Healey (2005) states, in regards to divisional or disciplinary approaches towards SoTL, that the "...conduct of research and teaching methods tend to differ between disciplines" because SoTL involves critical reflection of one's own practice, development of subject-based teaching modalities, and discipline specific pedagogic research (Healey, 2000). Thus, our differences among colleges/schools in terms of the number of publications and amount of external funding may reflect varying disciplinary cultures or norms about what is considered valuable and what qualifies as research or scholarship. However, there was only a statistical difference for one of 16 sample SoTL activities among faculty by colleges/schools, which could have been by chance. Our results suggest that faculty perceptions of what constitutes SoTL were similar across colleges/schools, yet faculty within Professional schools appear to be more actively engaged in SoTL as measured by number of publications and external funding.

Overall, only a quarter of surveyed faculty who indicated that they engaged in SoTL reported receiving external funding. Gurung, et. al. (2008) reported that almost 75% of faculty respondents indicated that neither departments nor institutions were providing adequate financial support for SoTL activities. Sixty-two percent of faculty respondents in the study by Pienta (2004) agreed that lack of financial support was a reason for varying rates of publications by chemical education faculty. Funding for academic pursuits offers financial resources for completion of proposed projects and suggests merit as projects are usually peer reviewed and awarded based on their value and potential for new discovery. Funding is generally acknowledged and awarded during faculty assessment. Yet some points for discussion naturally

follow: Does lack of funding preclude the merit of SoTL? It is our impression that there are fewer prestigious and financially rewarding opportunities for SoTL endeavors compared to traditional disciplinary-based research. Would SoTL be looked upon differently if it were highly funded? Is any scholarly pursuit that is not funded highly valued by contemporary institutions? Is this the proverbial “chicken or egg” scenario? That is, are there fewer fundable opportunities because SoTL, in general, is not highly valued, or is SoTL not highly valued because there are fewer fundable opportunities?

The majority of our faculty respondents considered the same examples of SoTL activities for both “research” and “teaching” sections of a promotion and tenure dossier. This again suggests that interpretation of promotion and tenure guidelines at our university are either ill defined, misunderstood, or at the least, open to interpretation. It stands to reason that if our respondents were confused about where SoTL activities best fit, so could department chairs and promotion and tenure committee members. Certainly, there is an historical and negative notion of “double dipping” that is of concern, but we must ask: cannot a work hold more than one facet? For example, developing a new instructional program may fall under the “teaching section,” while publishing a peer-reviewed journal article featuring rigorous analysis of the program’s qualitative outcomes may be part of the “research section.” Terpstra and Honoree (2009) suggest that university outcomes are greater when there is a dual focus on teaching and research. Could it be that academic pursuits such as SoTL are highly complicated and integrated and naturally fall into more than one traditional promotion and tenure section? At the very least, our findings indicate that the faculty members compiling tenure and/or promotion materials should communicate in advance with tenure and promotion decision-makers about the place of said materials in a portfolio. At the same time, faculty would be best served to maintain written reflections on how their teaching informs their research, and vice versa.

### *B. Limitations.*

There were inherent limitations of our study’s design. Although low, our overall response rate of 15% was within the range of other university faculty surveys, such as 22% for National Faculty Survey, APLU Sloan National Commission on Online Learning, (Seaman, 2009) and 15.8% (Maurer, et. al., 2009). A particularly small percentage of collateral and clinical faculty responded to our survey. We speculate that this is due to a lack of motivation by these faculty to respond to a survey on promotion and tenure criteria as this is not relevant to their affiliation with the university. The concern with lower response rates in any investigation is that the findings are not universal but based on the attitudes of a few. It stands to reason that potential respondents with a vested interest in a particular topic are the most likely to respond. However, nearly half of our respondents indicated no SoTL experience. It was also interesting that almost 70% of respondents were non-tenured faculty, which suggests that our study’s results more heavily reflect this group’s opinion than tenured faculty members’ opinion. Finally, pooling of faculty data from various colleges/schools may diminish details or nuances from the specialty areas but was done to protect faculty anonymity and provide a global view of faculty opinion.

### *C. Implications.*

This investigation provides empirical evidence regarding faculty perceptions of the status of SoTL at one large urban university where the workload of many faculty centers on teaching. Our

findings further define SoTL and may serve as an impetus for revising promotion and tenure policies and procedures. Our results suggest that the majority of faculty agreed that scholarly works such as educational administration and case study series publications constituted SoTL. Discouragingly, though, our data indicated a disconnect between tenured and non-tenured faculty where non-tenured faculty more often judged teaching activities that are less likely to be published as SoTL. Our results also show that the majority of faculty considered the same examples of SoTL activities for both “research” and “teaching” sections of a promotion and tenure dossier. With the type and magnitude of variation found with our faculty’s interpretation of promotion and tenure guidelines, it is logical to call for the revision of these criteria so that faculty have consistent and equal opportunity for advancement. In accordance with many of our tenured faculty opinion and other authors (Cambridge, 1999; Glassick, Huber, & Maeroff, 1997; Hutchings & Shulman, 1999; Shulman, 1999) scholarship may only be recognized once a work is critically reviewed and disseminated to others. Guidelines may also offer acceptable venues for making scholarly work public. This could include electronic or paper journals and databases and presentation at a national conference where submissions have been peer reviewed prior to acceptance. Even so, presentation of course outcomes at department meetings or self reflection on one’s teaching practices that remains relatively private may be considered scholarly teaching and included under the “teaching” section of promotion and tenure dossier. Revising evaluation guidelines and making distinctions between what constitutes “teaching” and “research” could give faculty clearer direction and motivation. That is, if teaching faculty know they need to publish in order for their work to be recognized as “research” they may be more motivated towards developing systematic analyses for validating their teaching outcomes and making their work public.

There are many potential benefits to making one’s scholarly work public within higher education. The faculty member engaging in SoTL may enhance his or her own teaching through critical reflection and external review. Raising awareness of an area of study within the academy can stimulate collaborative relationships and growth by bringing people together with like interests and expertise. Making scholarly work public through written essays and oral presentations, for example, can bring notoriety to university programs. Finally, sharing of teaching materials and determining, through systematic analysis, what teaching methodologies are most effective can decrease faculty workload, make curricula more efficient, advance pedagogy, and enhance student learning.

It must be said that in order for faculty at this institution and others to fully engage in SoTL, policy and procedures may need to be modified. At the institutional level, for example, policies and procedures regarding sabbatical leave eligibility, faculty release time, internal grant funding and Institutional Review Boards’ approvals may need revision to support faculty engaged in this type of scholarship (“Policies and Procedures,” retrieved 2011). External accrediting agencies and disciplinary societies can also foster faculty work in this area by writing policies acknowledging and rewarding SoTL and the advancement of pedagogical research (“Policies and Procedures,” retrieved 2011).

Time will tell what impact this investigation has locally and beyond. A logical first step, however, is to revise evaluation criteria to decrease the chance for varied interpretation across all faculty ranks. The point that seems to need the most clarification centers on what constitutes “research.” If faculty understand that “research” is a public event requiring rigorous review, they may be more motivated to design methodical approaches to analyzing their teaching effectiveness and student learning. From there, as described above, there are many potential

benefits within higher education. The focus of future research recognizing SoTL may include increases in the quantity and quality of SoTL publications explicitly documenting advancement of student learning; faculty collaboration within and across disciplines at the local, regional and national level; and educational research with internal and external grant support. Finally, we propose that knowing the attitudes of one faculty toward SoTL might initiate momentum towards institutional reform here and elsewhere, providing equal opportunities for faculty promotion and evidence of pedagogical advancement.

### **Appendix 1. Faculty Related Activities for Consideration in Promotion and/or Tenure.**

(List of scholarship related activities that could be interpreted as SoTL according to the McKinney definition, used in the faculty survey; from section IIIb):

- a) Data-driven, classroom-based studies: i.e., formal research projects with appropriate statistical analysis, formal hypotheses and their testing, etc., employing either quantitative or qualitative methodologies
- b) Reflective essays on teaching: integrative evaluations of other work, essays that challenge current teaching and learning principles and practices, as well as encourage experimentation in the classroom
- c) Reviews of the pedagogic literature
- d) Case studies of teaching and learning
- e) Developing case studies or problem sets
- f) Publication of any of the above (a through e) in peer-reviewed journals
- g) Publication of any of the above (a through e) in peer-reviewed electronic databases
- h) Formal presentation of any of the above (a through e) to peers within your academic unit or institution
- i) Presentation of any of the above (a through e) at disciplinary, multi-disciplinary, regional, or national conferences
- j) Developing a new course
- k) Integrating technology into your teaching
- l) Reflecting on course evaluations and making changes to your teaching based on those evaluations
- m) Authoring a textbook or textbook chapters
- n) Putting your lecture notes on Powerpoint
- o) Using Blackboard

## Appendix 2. Description of Vignettes.

Vignette Title	Description of Vignette as it appeared in survey
p) Publication of a data-driven classroom-based study in a peer-reviewed journal	An article published in <i>Advances in Physiology Education</i> describes the results of a study of undergraduate students in 12 courses at 8 different institutions. The students were surveyed to determine the prevalence of 13 different misconceptions (conceptual difficulties) about cardiovascular function. <i>Advances in Physiology Education</i> is an online, peer-reviewed journal published by the American Physiological Society.
q) Publication of an article, conceptual in nature, about academic leadership in a peer-reviewed journal	A paper published in <i>Academic Leadership</i> provides historical perspective, definition, and implications for intellectual property, copyright, and fair use in education legislation. <i>Academic Leadership</i> is an on-line peer-reviewed journal that published articles by faculty and administrators from all disciplines and units in the academy.
r) Presentation of a data-driven classroom-based study in at a prestigious national conference	A study compared two general chemistry courses taught in the same semester by the same instructor. One section was taught using standard lecture format, while the second section was taught by substituting one lecture with a break-out session involving peer led group work. Student progress in the two sections was compared based on test results. The results of the study were presented at the most prestigious nation chemistry conference.
s) A series of case studies published in a peer-reviewed online database	A series of virtual case studies that focus on obtaining informed consent and patient motivation relative to managing patients with depression. The case studies were published on MedEdPORTAL, a peer-reviewed online inventory of educational materials.
t) Faculty to Student Social Media	Over the course of the semester, a faculty member blogs about their experience using wikis for student collaboration and Facebook to communicate with students.

## References

Bailey, D. M. (1991). *Research for the health professional: A practical guide*. Philadelphia, PA: FA Davis.

Bernstein, D., & Bass, R. (2005). The scholarship of teaching and learning. *Academe*, 91(4), 37-43.

Braxton, J. M., Luckey, W., & Helland, P. (2002). Institutionalizing a broader view of scholarship through Boyer's four domains. *ASHE-ERIC Higher Education Reports*, 29(2), 1-154.

Brew, A. (2010). Transforming academic practice through scholarship. *International Journal for Academic Development*, 15(2), 105-116. doi: 10.1080/13601441003737618.

Boyer, E. (1990). *Scholarship reconsidered: Priorities of the professoriate*. Princeton, NJ: Carnegie Foundation for the Advancement of Teaching.

Burke, D., Johnson, R., & Kemp, D. (2010). The twenty-first century and legal studies in business: Preparing students to perform in a globally competitive environment. *Journal of Legal Studies Education*, 27(1), 1-33. doi: 10.1111/j.1744-1722.2010.01066.x.

Cambridge, B. L. (2000). The scholarship of teaching and learning: A national initiative. In M. Kaplan and D. Leiberian (Eds.), *To Improve the Academy* (Vol 18) (pp. 55-68). San Francisco: Jossey-Bass.

Fincher, R.E., & Work, J.A. (2006). Perspectives on the scholarship of teaching. *Medical Education*, 40(4), 293-295. doi: 10.1111/j.1365-2929.2006.02404.x.

Glassick, C.E., Huber, M.T., & Maeroff, G.I. (1997). *Scholarship Assessed: Evaluation of the Professoriate*. San Francisco: Jossey-Bass.

Gurung, R.A., Ansborg P. I., Alexander, P.A., Lawrence, N.K., & Johnson, D.E., (2008). State of the scholarship of teaching and learning in psychology. *Teaching of Psychology*, 35, 249-261. doi:10.1080/00986280802374203.

Gurung, R.A., Weidert, J., & Jeske, A. (2010). Focusing on how students study. *Journal of the Scholarship of Teaching and Learning*, 10(1), 28-35.

Healey, M.M. (2000). Developing the scholarship of teaching in higher education: A discipline-based approach. *Higher Education Research and Development*, 19 (2),169-189.

Healey, M.M. (2005). Linking research and teaching: exploring disciplinary spaces and the role of inquiry-based learning. In Barnett, R. (Ed.) *Reshaping the University: New Relationships between Research, Scholarship and Teaching*. McGraw-Hill / Open University Press.

Henderson, B.B., & Buchanan, H.E. (2006). The scholarship of teaching and learning: A special niche for faculty at comprehensive universities? *Research in Higher Education*, 48(5), 523-543. doi: 10.1007/s11162-006-9035-2.

Hubball, H., Clarke, A., & Poole, G. (2010). Ten-year reflections on mentoring SoTL research in a research-intensive university. *International Journal for Academic Development*, 15(2), 117-129. doi:10.1080/13601441003737758.

Hutchings, P., & Shulman, L. S. (1999).The scholarship of teaching: New elaborations, new

developments. *Change*, 31(5), 11–15.

JoSoTL Resources. (2008, July). Retrieved January 30, 2011, from <https://www.iupui.edu/~josotl/resources.php>

Jurkowski, O., & Kerr, S. (2010). Development of an educational innovation incubator. *TechTrends: Linking Research & Practice to Improve Learning*, 54(2), 72-76.

Kreber, C. (2003). Challenging the dogma: Towards a more inclusive view of the scholarship of teaching. *Journal on Excellence in College Teaching*, 14(2/3), 27-43.

Maurer, T., Frost, L., Sturges, D., Charles, S., Allen, D., Cawthorn, M., & Brewton, C. (2009). Faculty and student perceptions of post-exam attendance. *Journal of the Scholarship of Teaching and Learning*, 9(3), 38-55.

McKinney, K. (2004). The scholarship of teaching and learning: Past lessons, current challenges, and future visions. *To Improve the Academy*, 22, 3-19.

McKinney, K. (2006). Attitudinal and structural factors contributing to challenges in the work of the scholarship of teaching and learning. In J.M. Braxton (Ed.), *Analyzing Faculty Work and Rewards: Using Boyer's Four Domains of Scholarship- New Directions in Institutional Research*. San Francisco: Jossey Bass.

Mertler, C.A., & Vannatta, R.A. (2005). *Advanced and Multivariate Statistical Methods* (Third Edition). Los Angeles: Pyrczak Publishing.

Moore, D.S., McCabe, G.P., & Craig, B.A. (2009). *Introduction to the Practice of Statistics*. New York: W. H. Freeman.

Osborne, R., Kriese, P., Tobey, H., & Johnson, E. (2009). Putting it all together: Incorporating "SoTL Practices" for teaching interpersonal and critical thinking skills in an online course. *InSight: A Journal of Scholarly Teaching*, 4, 45-55.

Persellin, D., & Goodrick, T. (2010). Faculty development in higher education: Long-term impact of a summer teaching and learning workshop. *Journal of the Scholarship of Teaching and Learning*, 10(1), 1-13.

Pienta, N.J. (2004). Measuring productivity in college-level chemistry education scholarship. *Journal of Chemical Education*, 81(4), 579-583.

Policies and procedures supporting the scholarship of teaching and learning in the research university executive summary Research Universities Consortium for the Advancement of the Scholarship of Teaching and Learning (RUCASTL), Indiana University. Retrieved January 30, 2011, from [http://www.indiana.edu/~sotl/rucastl\\_keep/Policies-SoTL10-10-05.pdf](http://www.indiana.edu/~sotl/rucastl_keep/Policies-SoTL10-10-05.pdf)

Rosenthal, J.A. (2001). *Statistics and data interpretation for the helping professionals*. Belmont, CA: Wadsworth.

Shulman, L. S. (1999). Course anatomy: The dissection and analysis of knowledge through teaching. In P. Hutchings (Ed.), *The course portfolio: How faculty can examine their teaching to advance practice and improve student learning*. (p.5). Washington, DC: AAHE

Seaman, J. (2009). *Online Learning as a Strategic Asset. Volume II: The Paradox of Faculty Voices: Views and Experiences with Online Learning: Results of a National Faculty Survey, Part of the Online Education Benchmarking Study Conducted by the APLU-Sloan National Commission on Online Learning*. Washington, D.C.: Association of Public and Land-grant Universities.

Shapiro, H.N. (2006). Promotion and tenure and the scholarship of teaching and learning. *Change*, 3(2), 39-43.

Sharmaa, M.D., & McShaneb, K. (2008). A methodological framework for understanding and describing discipline-based scholarship of teaching in higher education through design-based research. *Higher Education Research & Development*, 27(3), 257-270.

Terpstra, D.E., & Honoree, A.L. (2009). The effects of different teaching, research, and service emphases on individual and organizational outcomes in higher education institutions. *Journal of Education for Business*, 84(3), 169-176.

Vogt, W.P. (2007). *Quantitative research methods for professionals*. Boston: Pearson.

Walker, J.D., Baepler, P., & Cohen, B. (2008). The scholarship of teaching and learning paradox: Results without rewards. *College Teaching*, 56(3), 183-189.