

# **SoTL in Perspective: An Inventory of the Scholarship of Teaching Literature with Recommendations for Prospective Authors**

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**Abstract:** *Nearly 30 years have passed since Boyer's (1990) publication *Scholarship Reconsidered: Priorities for the Professoriate*, which gave rise to the term scholarship of teaching. Since then, a body of work titled the scholarship of teaching and learning (SoTL) has proliferated. Works that fall into the SoTL field include many different types of articles with many different methodological approaches. College and university instructors who wish to publish SoTL works could benefit from guidelines related to the various types of articles to assist them with the publication of their work. We offer such guidance through extending a previously published review of the SoTL literature (Braxton et al., 2018) that reported article and analytic types of 425 teaching articles. In our extension of this work, we re-examined their data set and further examined and shared key features of the different types of articles. We also provided examples of articles published in SoTL journals in*

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*biology, chemistry, history, and sociology. We offer further guidance by indicating the particular types of articles being published by these SoTL journals.*

## Introduction

Higher education research is an interesting phenomenon, particularly when it focuses on teaching and learning. Teaching and learning by nature are interdisciplinary endeavors, and thus those who research them are driven by both content and theoretical and methodological ideas derived from many different disciplines and fields. Some higher education scholars have begun to examine faculty direct involvement in research; some of these scholars have focused on the nexus between teaching and research (Tight, 2016; 2018). Others have examined faculty who do research on teaching and learning broadly conceived (Tight, 2018).

Faculty who choose to do research on teaching and learning, particularly research focused on their own courses, often find that the work has many advantages, such as the ability to tie research and teaching together; the opportunity to do research that allows them to make direct improvements to their teaching practice; and the potential to be rewarded in promotion and tenure or merit evaluations for in-depth focus on their own teaching. It is, in short, efficient and meaningful work (Marcketti & Freeman, 2016). However, these educator-scholars also face some challenges. For example, there is little guidance on how to write up such studies or on where this kind of scholarly work may be published.

In this article, we describe the current state of faculty-driven pedagogical research, also known as scholarship of teaching and learning (SoTL), across four journals based in four different disciplines. We offer guidance to potential SoTL scholars about where their work might be published as well as what kinds of publications might be targeted to the different journals.

## Background

In his landmark work titled *Scholarship Reconsidered: Priorities of the Professoriate*, Boyer (1990) posed some interesting challenges to higher education. He suggested that faculty reward systems did not

match the range of academic activities. He also noted that faculty work life involved a host of competing obligations. Boyer suggested that we redefine scholarship in ways that reflect the new realities of faculty work and challenged educators to reconsider the meaning of scholarship in higher education, contending “The time has come to move beyond the tired old ‘teaching versus research’ debate” and “honor the full scope of academic work” (p. xii). Boyer ultimately believed that we need a more inclusive view of scholarship, driven by the "recognition that knowledge is acquired through research, synthesis, practice, and teaching" (p. 24).

Boyer proposed that the work of academics, then, should combine four separate yet overlapping scholarly functions: discovery, integration, application, and teaching. The scholarship of discovery, which is how we have historically conceptualized scholarship, involves the search for new knowledge. The scholarship of integration means integrating knowledge from different sources and bringing together findings from discovery research in different disciplines to identify convergence. The scholarship of application involves discovering ways that knowledge can be used to solve real-world problems of the larger community. The scholarship of teaching involves the search for innovative approaches and best practices to develop skills.

Implicit in Boyer’s categories is the notion of dissemination of information gleaned from these forms of scholarship. This notion is further clarified in Scholarship Assessed (Glassick et al., 1997), in which the authors explicitly stated that effective presentation of scholarship is critical. The questions are follows: Does the scholar “use a suitable style and effective organization to present his or her work,” “use appropriate forums for communicating work to its intended audiences,” and “present his or her message with clarity and integrity” (p. 32). While communication of discovery knowledge has always been deemed critical, the idea of dissemination of the other forms is a relatively new one.

Since the publication of Boyer’s work, of the four domains, we have seen the greatest increase of communication/dissemination from faculty publishing in the domain of the scholarship of teaching. Faculty have begun publishing articles in the genre of SoTL based on sustained scholarly attention and data gathering in their own courses. Because of the dramatic increase in these types of publications and apparent interest

by faculty in this form of communication of scholarly work, we need to understand more about the forms they take. This information can provide us with a starting place for understanding the genre and can guide faculty who wish to engage in publishing SoTL work in the future.

## **Review of SoTL Research**

### **The Goals of SoTL**

The question of why to engage in scholarship of teaching has occupied educator attention since the publication of Boyer's book. Scholars such as Rice (1991), Hutchings and Shulman (1999), Kreber (2002a, 2002b), Braxton et al. (2002), Chick and Poole (2013), and Shaffer et al. (2019) have provided perspectives on both the goals and objectives of the scholarship of teaching. For example, Braxton et al. (2002) suggested that the goal of SoTL is to develop and improve pedagogical practice. Similarly, Hutchings and Shulman (1999) described the scholarship of teaching as a process for the advancement of the profession of teaching, as its focus is on improvement of one's own teaching and improvement of the practice of teaching.

Hutchings and Shulman (1999) further proposed that the scholarship of teaching is for the purpose of advancing student learning by seeking to address questions such as how learning occurs and under what conditions students learn best. Like much of the scholarly literature, these questions directly link teaching to learning, which has given rise to the term scholarship of teaching and learning, or SoTL. Chick and Poole (2013) argued that SoTL offers a model for teacher development as well as opportunities for continuous improvement of teaching by providing instructors with a more systematic and informed way to think about their work as teachers and students' work as learners. Shaffer et al. (2019) suggested that the goal of SoTL is to improve student learning.

### **The Practice of SoTL**

Scholars have proposed many frameworks, models, schema, and other tools designed to describe SoTL (e.g., Felton, 2013; Gayle et al., 2013; Glassick et al., 1997; Gurung & Wilson, 2013; Huber & Hutchings, 2005; Hutchings et al., 2011; Kern et al., 2015; Kreber 2001; Huber & Morreale, 2002; McKinney, 2013; Miller-Young & Yeo, 2015; Murray 2008; Trigwell et al., 2000; Wilson-Doenges & Gurung, 2013; Healey et al., 2019; Simmons, 2020). Huber and Hutchings (2005)

suggested that SoTL means “. . . viewing the work of the classroom as a site for inquiry, asking and answering questions about students’ learning in ways that can improve one’s own classroom and also advance the larger profession of teaching” (p. 1). Hutchings et al. (2011) stated:

The scholarship of teaching and learning encompasses a broad set of practices that engage teachers in looking closely and critically at student learning for the purpose of improving their own courses and programs. It is perhaps best understood as an approach that marries scholarly inquiry to any of the intellectual tasks that comprise the work of teaching – designing a course, facilitating classroom activities, trying out new pedagogical ideas, advising, writing student learning outcomes, evaluating programs. When activities like these are undertaken with serious questions about student learning in mind, one enters the territory of the scholarship of teaching and learning. (p. 7)

SoTL then involves intellectual inquiry into the processes of teaching and learning.

Beyond the goals and questions of SoTL, however, there is an added dimension of sharing the work and making improvements based on findings. As Chick (n.d.) explained, SoTL involves not only asking meaningful questions and answering them by making relevant student learning visible as evidence and then systematically analyzing this evidence but also [s]haring the results of that analysis publicly to invite review and to contribute to the body of knowledge on student learning in a variety of contexts, and aiming to improve student learning by strengthening the practice of teaching (one’s own and others’). (para 2).

Similarly, Trigwell and Shale (2004) emphasized the importance of dissemination and peer review in making teaching and learning a scholarly process:

We see scholarship as being about making scholarly processes transparent and publicly available for peer scrutiny. . . . We see teaching as a scholarly process aimed at making learning possible. It, therefore, follows that we see the scholarship of teaching as about making transparent, for public scrutiny, how learning has been made possible. (p. 525)

Likewise, Healey (2000) articulated the importance of the dissemination of SoTL as follows:

Developing the scholarship of teaching is more than striving to be an excellent teacher or being scholarly. Whereas striving for excellence involves a high level of proficiency in stimulating students and fostering their learning in a variety of appropriate ways, a scholarly approach to teaching entails being familiar with the latest ideas in one's subject and also being informed by current ideas for teaching that subject. A scholarly approach also involves evaluating and reflecting on one's teaching practice and the student learning which follows. The scholarship of teaching shares these characteristics of excellent and scholarly teaching, but, in addition, involves communicating and disseminating about the teaching and learning practices of one's subject. It also entails investigating questions related to how students learn within a discipline. (p. 172)

Thus SoTL, while different from the scholarship of discovery in its singular focus on course-level teaching and learning, is similar to discovery in that it does require developing a concrete research question, completing a review of the best and most relevant scholarship on the subject, undertaking a methodical investigation, completing systematic data analysis, and going public with findings from the work, in formats such as conference presentations and scholarly publication. Moreover, the latter requires a critical review and evaluation by peers. Finally, SoTL, like scholarship of discovery, requires the use of findings as a foundation for further work in the SoTL field.

## The Rise of SoTL Publications

As Tight (2018) noted, articles focused on SoTL have been published throughout the English-speaking world; for example, consider work from the following countries: Australia (Bennett et al., 2016; Greaves, 2015); Canada (Simmons & Poole, 2016); Ireland (O'Sullivan, 2011); Malaysia (Harland et al., 2014); New Zealand (Haigh et al., 2011); Singapore (Geertsema, 2016); South Africa (Leibowitz & Bozalek 2016; Mtawa et al., 2016); Sweden (Lindberg-Sand & Sonesson, 2008; Martensson et al., 2011); Trinidad and Tobago (Blair, 2014), the United Kingdom (Craig, 2014); and the United States (Burns 2017; Willingham-McLain 2015). SoTL then is not place-based; rather, it is a worldwide movement to share the scholarly work of teaching.

The interest in developing and publishing SoTL-focused articles does not seem to be abating and, indeed, appears to be on the rise. In a Google

Scholar search of articles containing the phrase Scholarship of Teaching, the number of published articles has increased in each of the past 10 years. In addition, in these 10 years, scholars have written over 40,000 articles focused on SoTL. We present these numbers in Table 1.

**Table 1.** Number of Articles with the Term Scholarship of Teaching for the Past 10 Years

Year	Number of Articles
2019	6030
2018	5690
2017	5330
2016	4630
2015	4180
2014	3630
2013	3390
2012	3010
2011	2660
2010	2220
Total	40770

## Reviews of SoTL

While many scholars have published SoTL articles, few reviews or syntheses of this body of literature exist. There are, however, a few notable exceptions. Reporting on the Society for the Teaching of Psychology (APA, Division 2) task force's national survey, Gurung et al. (2008) reported on the state of SoTL with a specific focus on the discipline of psychology. The authors found indications that SoTL is beginning to take root in psychology. Fenghanel et al. (2016) provided definitions, characteristics, and purposes of SoTL in the United Kingdom. Tight (2018) offered a review of articles found in Scopus and Google Scholar, but these focused only on descriptions of SoTL rather than articles that presented SoTL research.

Divan et al. (2017) reviewed research within a two-year time span and in studies published in three SoTL-focused journals. Booth and Woollacott (2018) examined SoTL studies focused on articles in Google Scholar between 2010 and 2016. While these reviews have much to offer regarding a scholarly understanding of the current state of SoTL, all have limitations. In particular, these works do not offer much about what SoTL looks like in practice.

## Review of the Inventory of SoTL Scholarship

Braxton et al. (2018) engaged in a review of the SoTL literature focused specifically on the type of article and analytic approaches employed rather than a synthesis of key findings from this literature. Their review of published articles in the field of SoTL spanned the years of 2012 to 2016 in four teaching-focused journals for a total of 425 articles. The four journals reviewed included *Bioscience: Journal of College Biology Teaching* (biology), *The Journal of Chemical Education* (chemistry), *Teaching History* (history), and *Teaching Sociology* (sociology). The authors reviewed only articles focused on undergraduate instruction in higher education in the United States. The authors did not review editorials, letters, news items, or other similar types of writings. The four academic disciplines represented by these four journals corresponded to the four academic disciplines used by Braxton et al. (2002) in their research on faculty engagement in Boyer's four domains of scholarship, including the scholarship of teaching. Braxton et al. (2002) selected these four disciplines because of the scope of their research. Their research entailed the random selection of a national sample of 4,000 faculty members at five types of colleges and universities. They limited the faculty members selected to the four disciplines to control both the costs and feasibility of conducting their study. Because of the importance of consistency among research studies focused on a particular topic, Braxton et al. (2018) selected a teaching focused journal of each these four academic disciplines. Moreover, Braxton et al. (2018) selected these teaching-focused journals because research on differences between academic disciplines suggested that articles may differ in their approach to SoTL.

To elaborate, academic disciplines vary in terms of their level of consensus on such matters as theoretical orientation, research methods, and the importance of various research questions to the advancement of the discipline (Biglan, 1973; Kuhn, 1962, 1970; Lodahl & Gordon, 1972;). Biology and chemistry are high consensus disciplines whereas history and sociology constitute low consensus disciplines, with all four of these disciplines considered pure disciplines (Biglan, 1973). Based on their review of literature on academic disciplines, Braxton and Hargens (1996) concluded that low consensus disciplines such as history and sociology are more oriented toward teaching than their counterparts in high consensus disciplines such as biology and chemistry. Moreover, low consensus disciplines exhibit an affinity for teaching activities and practices designed to improve undergraduate education (Braxton, 1995;

Braxton & Hargens, 1996; Braxton et al., 1998). Thus, Braxton et al. (2018) chose teaching-focused journals of low consensus disciplines (i.e., history and sociology) and high consensus disciplines (i.e., biology and chemistry). The rationale for these four disciplines served as the basis of our decisions, particularly since our goal was to extend the work of Braxton et al. (2018).

Braxton et al. (2018) applied a classification framework to each of the 425 articles. The researchers began their work with Weimer's (2006) classification system that delineates four different approaches to wisdom of practice SoTL— personal accounts of change, recommended-practices reports, recommended-content reports, and personal narratives. Weimer also suggested that research SoTL entails the use of “established research protocols” (p. 42). to study teaching and learning. After developing an initial template based on the wisdom of practice and research scholarship approaches, Braxton et al. (2018) calculated inter-coder reliability estimates for individually coded articles across the journals. Initial reliability was not up to standard, so the authors adapted the template to allow for standardized review and classification of the article and analysis types. The researchers then reviewed and classified all 425 articles according to the inventory. Drawing from Weimer (2006), we used the categories Braxton et al. (2018) chose, including Personal Account of Change, Recommended-Practices Report, Recommended-Content Report, and Personal Narrative.

## Problem

Although Braxton et al. (2018) offered useful insight into the types of articles published and the analytic approaches used, the researchers neglected to describe the key features and elements of the different types of publication or to offer practical suggestions for faculty members interested in the publication of the outcomes of their SoTL scholarship. Indeed, while there is a clear interest in public dissemination of SoTL research, there is little guidance on the process of sharing scholarly work on teaching. Much of the current literature, including the reviews of SoTL scholarship, is focused on how to do SoTL. Very little of it, however, addresses what faculty can or should do to publish SoTL work. Moreover, faculty typically have not had training on how to publish education research articles. Faculty who wish to publish in the field of SoTL, then, would do well to have guidance about where to

publish and the forms such publications might take. This is the question that our work takes up: What can faculty learn from existing SoTL scholarship that can help them present their own SoTL work for publication? The significance of this question emanates from the finding regarding SoTL scholarship that an “overwhelming of faculty members exhibit some level of activity in the creation of unpublished scholarly outcomes” (Braxton, 2002, p. 66).

## Review Approach

Our work for the current study is an extension, or continuation, of the review of the SoTL literature published by Braxton et al. (2018). To maintain consistency with their research as well as to limit the scope of our current study, our work also focuses on the four SoTL journals selected by Braxton et al. (2018): *Bioscene*, *The Journal of Chemical Education*, *Teaching History*, and *Teaching Sociology*. Moreover, we present our work herein as a demonstration of an approach other scholars can use to guide faculty members in academic disciplines other than the ones we selected in their efforts to prepare their own SoTL work for publication.

For this study, we obtained and reanalyzed the data (i.e., 425 articles) collected by Braxton et al. (2018). To be clear, we did not collect additional data or conduct a new study but rather extended the one from Braxton et al. (2018). Our analysis proceeded in three steps. First, we ensured that all articles were correctly categorized into types; we found, on the whole, that articles had been categorized correctly and made only minor adjustments to categorizations. Next, we analyzed articles in each section for salient features, based on article and analytic type. To accomplish our goal, we used a constant comparison qualitative approach (Savin-Baden & Major, 2013). What this meant in practice was comparing the component parts of each article to one another to find the common elements across articles in a given type. Finally, we chose exemplars for each of the publication types. To do so, we asked a series of questions about each article based on article and analytic type, and we selected the ones that most fully met the criteria. From this extended analysis, we chose exemplars from each article and analytic type in combination using maximum variation sampling. That is, we found the best examples with the most salient features of each article and analytic type.

## Purpose

The purpose of this secondary analysis of the work of Braxton et al. (2018) was to analyze key features and elements of the different article and analytic types of published SoTL work. A second purpose was to offer guidance to faculty members interested in the publication of the outcomes of their SoTL scholarship.

## Findings

### General Findings Regarding Key Features and Elements

In the following table (Table 2), we present descriptions (adapted from Weimer, 2006) and key characteristics of each type identified. In Table 2, we share the different types of articles identified by Weimer, the number of articles associated with this type that we found in our database, a description of the type, and key features of the particular article type. In Table 3, we present details about the Analytic Type. The type of analysis was adapted from Weimer (2006). In the second column, we present the number of articles from our database that fit within each category. We also present a description and key features of each analytic type.

**Table 2.** Article Type

Type	# of Articles	Description	Key Features
Personal Accounts of Change	8 of 425	In this form of SoTL, instructors describe their experiences after having used new instructional techniques, methods, or strategies in their own courses.	First person account Instructional strategy intervention Detailed description of the changes
Recommended Practice	271 of 425	This form of SoTL typically involves instructors offering advice about a teaching technique, method, or strategy. It may be general advice or advice tailored to a specific course or discipline. The advice may be based on experience, research, or a combination of the two.	First person account Focus on particular instructional technique Call to action to use the approach
Recommended Content Report	124 of 425	This form of SoTL recommends particular content to teach or particular ways to teach one's subject. The focus of these works is less on pedagogy and more on the concepts, skills, or perspectives needed to deliver the content or the sequence that may be used to deliver it.	Detailed description of content to be taught Thesis that argues for a way to teach the content in question.
Personal Narratives	10 of 425	This form of SoTL is a diverse category. Instructors do not typically offer advice; instead the work is a reflective or critical analysis in which the author/instructor reflects on personal growth as a professional.	First person account. Personal perspective (no call to action) Format typically: teaching philosophies, articles advocating for a position, or any teaching-related topic that involves expressing a personal point of view.

*Note.* Twelve of the 425 articles did not fit any of the four categories.

**Table 3.** Analytic Approach

Type	# of Articles	Description	Key features
Descriptive Research	269 of 425	When using this type of analytic approach, authors collect and analyze either quantitative or qualitative data that describe an innovation or approach. These works are not experimental or quasi-experimental but rather attempt to sum up the state of something, rather than trying to find causation.	Research paper format (introduction, literature review, methods, findings, conclusion) Data typically in the form of surveys or questionnaires
Quantitative Investigations	45 of 425	In this analytic approach, scholars use experimental designs with treatment and control groups. Scholars also manipulate variables across or between the groups.	Research paper format (introduction, literature review, methods, findings, conclusion) Control and experimental groups Variables controlled
Qualitative Study	31 of 425	Qualitative research is a broad category that differs in approach according to the discipline or field. It is an inductive approach, often relying upon interviews or analysis of written documents. The goal is to study a phenomenon in a natural setting and analyze results from an interpretive perspective.	Research paper format (introduction, literature review, methods, findings, conclusion) Conducted in a “natural” setting Thick description of data, in the form of quotations.
Personal reflection	36 of 425	This analytic approach involves a type of reflective writing. The reflection is often written by an individual for the purpose of exploring personal experiences, events, or even thoughts or feelings related to teaching and learning in a college or university setting.	Scholar uses self-reflection and writing to explore anecdotal and personal experience Author attempts to connect this personal story to wider cultural, political, and social meanings and understandings.

## Findings Regarding Article and Analytic Types: Question Protocol and Examples

In the following tables, one for article type (Table 4) and one for analytic type (Table 5), we present the protocols we used when reviewing the articles to choose exemplars. In particular, we used a set of protocols to guide our selection of articles we present in Table 6. In the following table (Table 6), we provide an overview of the 17 articles we selected. We offer additional detail

about selected articles in the following section to best illustrate article and analytic type.

**Table 4.** Article Type Protocol

Type	Questions
Personal Accounts of Change	Did the scholar apply a new teaching method in a course? Did the scholar describe the results from the change from a personal perspective?
Recommended Practice	Did the scholar recommend an instructional approach? Did the scholar offer advice on implementing the approach?
Recommended Content Report	Did the scholar focus on the content to be taught? Did the scholar offer advice about the best ways to teach the particular unit of content?
Personal Narratives	Did the scholar provide a first-person account of teaching? Did the scholar describe personal change or growth that resulted from their experiences?

**Table 5.** Analytic Approach Protocol

Type	Questions
Descriptive Research	Did the scholar offer descriptive data, such as surveys? Did these data capture the student experience?
Quantitative Investigations	Did the scholar use an experimental or quasi-experimental research approach? Did the scholar examine learning outcomes? Were there controls?
Qualitative Study	Was the research conducted in a naturalistic setting (e.g. the classroom)? Did the scholar capture faculty or student lived experiences related to teaching and learning?
Literature Review	Did the author have a thesis statement? Did the author draw upon existing literature to support the research?
Personal Reflection	Did the scholar engage in reflective writing? Did the scholar use this writing to explore personal experiences?

**Table 6.** Matrix of Article Examples

	Personal Account of Change	Recommended Practice	Recommended Content	Personal Narrative
Quantitative	Lyon & Guppy (2016)	Eichler & Peebles (2013)	Carmel et al. (2015)	None identified
Qualitative	Neville et al. (2012)	Picca et al. (2013)	Olsen (2016)	None identified
Mixed Methods	None identified	Arjoon et al. (2013)	McKinney & Day (2012)	None identified
Descriptive	Miller (2016)	Auster (2016)	Griep & Reimer (2016)	Gillie & Bizub (2012)
Literature Review/ Scholarly Essay	None identified	Wynn (2015)	André (2014)	None identified
Personal Reflection	Stallbaumer-Beishline (2012)	Hourigan (2013)	Duis et al. (2013)	Yeh (2014)

Following, we share examples of each study type (Note: All institutional affiliations reported here were the affiliations authors listed

at the time of publication). For each type, we selected a different analytic type to illustrate the various approaches authors used.

### **Study Type: Personal Account of Change and Descriptive Analysis Analytic Type**

Miller (2016), a chemistry professor at Gustavus Adolphus College, described a personal account of change related to fundamental changes that the chemistry department undertook to help improve student learning as it moved to a two-course sequence. The author undertook a descriptive analytic approach to the work, reporting changes before and after the curriculum. The study was not deemed quantitative because although it does have an intervention (the change to the curriculum), the results the author shared are descriptive statistics (mean scores) rather than inferential statistics that could determine whether the intervention was the cause of the change.

### ***Study Type: Recommended Practice and Quantitative Analytic Type***

Eichler and Peeples (2013), both at University of California-Riverside, published a recommended practice article. Eichler taught two sections of a chemistry course with 889 students. Four hundred and ninety-eight of these students completed online homework assignments. The authors used quantitative research with two treatment groups and used multiple regression, which allowed them to predict values and thus determine the cause of the differences in student scores in the different treatment groups. The authors found that students who participated in online homework activities outperformed students who did not participate in online homework activities on exam scores. In particular, the authors found that students who completed a pre-course assignment on an adaptive-responsive homework system had better exam scores than those who completed traditional online activities, and both treatment groups had better scores than students who did not complete the homework assignments. Students who completed the online homework for the full academic term, from either group, saw even greater gains in their final exam scores than those who did not.

**Example 3. Study Type: Recommended Content. Analytic Type: Qualitative**

At the University of California, San Diego, Olsen (2016) examined the perceptions of pre-medical students about a new course on general sociology for pre-med students. The author's focus was the course content and whether pre-medical students would find value in taking a sociology course. Olsen conducted a qualitative study, collecting journals from 120 students about their experiences in the course. The author analyzed journal content for student perceptions of the course content. Olsen found that students valued the course content and expressed a belief that it would help them become more socially minded as well as critically engaged as physicians.

**Example 4. Study Type: Personal Narrative. Analytic Type: Personal Reflection.**

Yeh (2014) of California Polytechnic State University wrote a personal narrative, describing her teaching. Yeh's work is also reflective writing, as she shares her own experiences in teaching about race in the United States. For example, Yeh wrote:

As a teacher, I am always asking: How can I create for students a more intimate understanding of our multiethnic history by having them explore the continuing relevance of these histories in our present and immediate social landscape? How can we not only nostalgically celebrate the contributions of America's diverse peoples but also recognize and engage with the lasting legacy of race and racism in the United States? (p. 78)

Yeh used the term bicycle as a metaphor for mobility and power. The author described a particular assignment in which students participated in a bicycle tour and were tasked with uncovering hidden histories of different places in the tour. While the author shared some student comments, the writing is largely reflective and descriptive.

**Summary of Findings Regarding Article and Analytic Type**

In addition to the information presented in the previous sections, two key considerations for faculty members considering submitting a manuscript that reports SoTL work to a SoTL journal are (1) the types of articles, and (2) the types of analyses. Although these two key factors do not indicate the likelihood of a given manuscript being accepted for publication, the factors do offer to potential authors an indication of the articles typically published by the four SoTL journals. We used the findings of Braxton et al (2018) regarding the type of articles and types of analyses most frequently published in the four SoTL journals to provide potential authors with information to guide their decision to submit their SoTL scholarship to a SoTL journal for publication consideration. To be clear, these frequencies do not take into account the lack of submissions of these types of manuscripts or the rejection of such manuscripts being accepted for publication. We further consider these findings regarding the type of articles and types of analyses most frequently published in the four SoTL journals present implications for potential authors in the following sections.

## **Implications**

### **Implications for Potential SoTL Authors Related to Type of Article**

Braxton et al. (2018) reported that Recommended Practices reports stand as the most frequently published type of article in three of the four SoTL journals. More specifically, the authors indicated that 60% of the coded articles published in Bioscene (61.00%), the Journal of Chemical Education (65.00%) and Teaching Sociology (64.00%) stand as Recommended Practices Reports. Moreover, the Recommended Content reports constitute the second most frequent type of article (29.00%, or 124 of 425 articles) (Braxton et al., 2018). However, the authors noted that the types of articles published in Teaching History differed from the other three SoTL journals, given that 36.00% of coded articles are Recommended Practices reports and 36.00% are Recommended Content reports. In contrast, Recommended Content reports occurred very rarely in Bioscene (11.00%). Moreover, Personal Narratives (10 of 425) and Personal Accounts of Change (8 of 425 articles) appeared very infrequently in print in the aggregate and in each of the four SoTL journals.

The percentages of articles classified by article type published by the four SoTL journals offer potential authors information to guide their decision to submit their SoTL scholarship to a SoTL journal for publication consideration. First, the above percentages provide potential authors with a knowledge of the types of articles typically received by the four SoTL journals for review. These percentages also afford potential authors with an indication of the types of articles that manuscript reviewers and editors regard as suitable for publication in their journals. Accordingly, if the pedagogical scholarship of a faculty member focused on instructional methods for a course or discipline, then a manuscript based on such work would likely be a good fit for publication consideration by the four focal SoTL journals. However, might be a good fit pertains to pedagogical scholarship that recommends the content for a course or an academic discipline. A faculty member whose SoTL scholarship fits the category of Recommended Content reports should consider making an inquiry to the editor of the SoTL journal to gauge the likelihood of a good fit for their manuscript.

We also offer a suggestion to faculty members whose SoTL scholarship fits either Personal Account of Change or Personal Narrative categories. The pedagogical scholarship of a faculty member that describes their own change in policy or practice (e.g., Personal Account of Change) or makes a critical account of their own growth or evolution in their own teaching (e.g., Personal Narrative) will most likely be a poor fit for publication consideration. However, should a faculty member receive some interest from an editor, the faculty member should consider submitting a manuscript that describes a personal narrative or a personal account of change.

## **Implications for potential SoTL authors Related to Type of Analyses**

A conclusion advanced by Braxton et al. (2018) incisively depicts the types of analysis used in SoTL articles. The researchers concluded, “pedagogical scholarship literature springs mostly from research using ‘established research protocols’ (Weimer, 2006, p. 43) rather than from the personal experiences of practitioners” (p. 111). To elaborate, Braxton et al. (2018) reported that 81% of the coded articles used a type of analysis that fits into the broad category of research scholarship (descriptive research, quantitative investigations, and

qualitative investigations). Specifically, the authors noted that descriptive research occurred most frequently (63%, or 269 of 425), followed by quantitative analyses that used experimental or quasi-experimental (11%, or 45 of 425) and by qualitative methods (7%, or 31 of 425). These percentages varied by SoTL journal.

For example, 77% of coded articles in the Journal of Chemical Education fit the category of descriptive research (Braxton et al., 2018). In the case of Bioscene, one-third of coded articles fit into either the categories of quantitative or descriptive while another 22% of coded articles used mixed methods (Braxton et al., 2018). Descriptive research constituted the most frequently occurring type of analysis in Teaching Sociology with 38% of articles using this type of analysis. Nevertheless, a small percentage (11%) of articles in this journal employed quantitative analyses.

In stark contrast, personal reflections or the personal experiences of journal authors were infrequently used given that 36 of the 425 coded articles (8%) used this type of analysis (Braxton et al., 2018). However, some variations across the four SoTL journals transpired. Personal reflections rarely occurred in Bioscene (2 of 18) or The Journal of Chemical Education (9 of 295) but dominated as the type of analysis used in the coded articles published in Teaching History, given that 57.00% of these articles fit this category (Braxton et al., 2018).

Like the types of articles, the types of analyses also provide potential authors with information about manuscripts submitted to the four SoTL journals for review as well as indications of the types of analyses preferred by editors and manuscript reviewers. If a faculty member's type of analysis fits the category of descriptive research, then their work would be a good fit for publication consideration by Bioscene, The Journal of Chemical Education or Teaching Sociology. However, if personal reflection constitutes the type of analysis used by a faculty member in their SoTL scholarship, then Teaching History would be a good fit, but it likely would be a poor fit for the other three SoTL journals.

## Conclusion

### Implications for Potential SoTL Authors Related to Type of Article

We have extended the work of Braxton et al. (2018) by sharing key features and elements of the different publication types and by offering guidance to faculty members interested in publishing the outcomes of their SoTL scholarship. The significance of our work stems from it as a demonstration of an approach scholars have used in an effort to guide faculty members in academic disciplines, those included and, by extension, those beyond the scope of this work, to prepare their own SoTL work for publication. We provide such guidelines through the use of examples of articles published in four SoTL journals: Bioscene, The Journal of Chemical Education, Teaching History, and Teaching Sociology. We derived these examples from the dataset of 425 teaching articles developed by Braxton et al. (2018). Moreover, we offer further guidance to faculty members interested in the publication of the outcomes of their SoTL scholarship by indicating the types of articles being published by the four SoTL journals based on the findings of the classification of articles conducted by Braxton et al. (2018).

Future researchers could extend this work by broadening the sample of articles to include additional disciplines as well as professional and health profession fields. Like Braxton et al. (2018) demonstrated, such reviews should focus on the types of articles and analytic approaches used in articles published in the SoTL-focused journals of the selected academic disciplines. For example, Biglan (1973) identified engineering, accounting, and finance as examples of applied academic disciplines. We echo the recommendation of Braxton et al. (2018) that inventoried articles published in such teaching-focused journals for these disciplines including Issues in Accounting Education, the Journal of Accounting Education, The Journal of Financial Education, and the Journal of Engineering Education. Future work could also involve examining articles that were not published; scholars could request anonymous copies of rejected manuscripts from the editors and authors of these four SoTL journals in order to identify common reasons for their rejections as well as to identify patterns in article and analytic types rejected. In addition, researchers invested in other forms of scholarships

could undertake a similar study focused on publications focused on scholarship of application and scholarship of integration.

Guidance for practice has been the focus of this article. Faculty members in the disciplines we selected as well as in academic disciplines or fields of study other than biology, chemistry, history, and sociology who are interested in publishing the outcomes of their SoTL work could also benefit from the guidance we offered herein.

In closing, faculty who have been trained to write and publish according to certain disciplinary or field-based norms and expectations may find writing and publishing the scholarship of teaching “a brave new world.” Potential SoTL scholars may find it a brave new world because training in college teaching or pedagogy rarely occurs in doctoral education in the academic disciplines (Anderson, 2012; Austin, 2002; Bess, 1977; Gooblar, 2019; Jencks & Reisman, 1977). As a consequence, faculty may find it challenging to identify topics suitable for publication in a SoTL journal. Faculty may also find it challenging to prepare manuscripts for publication consideration based on their SoTL work. We can learn from those who have successfully published in this area and examine SoTL articles for clues about what might be published in the future. There is no guarantee that an author who follows the most common path will get an acceptance, just as it is not necessarily a dead end to try a new direction. We can simply observe and make our best judgments about how to proceed based on what we already know.

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