



VCU

Virginia Commonwealth University
VCU Scholars Compass

Periodontics Publications

Dept. of Periodontics

2014

The Status of the Scholarship of Teaching and Learning in Dental Education

Sharon K. Lanning

Virginia Commonwealth University, sklanning@vcu.edu

Michelle McGregor

Virginia Commonwealth University, mrmcgregor@vcu.edu

Geralyn Crain

East Carolina University

See next page for additional authors

Follow this and additional works at: http://scholarscompass.vcu.edu/peri_pubs

 Part of the [Periodontics and Periodontology Commons](#), and the [Scholarship of Teaching and Learning Commons](#)

Reprinted by permission of Journal of Dental Education, Volume 78, 10 (October 2014). Copyright 2014 by the American Dental Education Association.

Downloaded from

http://scholarscompass.vcu.edu/peri_pubs/11

This Article is brought to you for free and open access by the Dept. of Periodontics at VCU Scholars Compass. It has been accepted for inclusion in Periodontics Publications by an authorized administrator of VCU Scholars Compass. For more information, please contact libcompass@vcu.edu.

Authors

Sharon K. Lanning, Michelle McGregor, Geralyn Crain, Christopher J. Van Ness, Nancy T. Keselyak, and John W. Killip

The Status of the Scholarship of Teaching and Learning in Dental Education

Sharon K. Lanning, D.D.S.; Michelle McGregor, R.D.H., B.S., M.Ed.;
Geraldyn Crain, D.D.S., Ph.D.; Christopher J. Van Ness, Ph.D.;
Nancy T. Keselyak, R.D.H.; John W. Killip, D.D.S.

Abstract: The purpose of this study was to determine the current status of the Scholarship of Teaching and Learning (SoTL) within academic dentistry. A twenty-two-item survey was distributed to faculty members of American Dental Education Association (ADEA) member schools asking about their awareness of SoTL practices, perceived barriers to SoTL application, and ways to enhance SoTL activity. Four hundred thirty surveys with equal distribution of assistant, associate, and full professors were received (this may be considered a response rate of 5.4 percent out of roughly 8,000 ADEA faculty members). Almost 70 percent of the respondents indicated that they highly valued SoTL; only 2.1 percent indicated they did not. The extent to which the respondents valued SoTL was positively correlated with their perception of SoTL's value among other faculty members in their program ($r(322)=0.374$, $p<0.001$), school ($r(299)=0.204$, $p<0.001$), and institution ($r(233)=0.296$, $p<0.002$). However, the respondents were generally unsure how SoTL was applied at their institutions. Respondents from private institutions reported making more SoTL presentations at conferences than did those from public institutions ($t(303)=-2.761$, $p=0.006$) and stronger promotion of SoTL in their institutional policies ($t(330)=-3.004$, $p=0.003$). Barriers to changing the perception and application of SoTL appeared to exist at both organizational and individual levels, and ADEA was perceived to be well positioned to assist with both.

Dr. Lanning is Associate Professor, Department of Periodontics, Virginia Commonwealth University School of Dentistry; Prof. McGregor is Assistant Professor and Director of Dental Hygiene Program, Department of Oral Health Promotion and Community Outreach, Virginia Commonwealth University School of Dentistry; Dr. Crain is Assistant Dean for Educational Support and Faculty Development, East Carolina University School of Dental Medicine; Dr. Van Ness is Research Assistant Professor, Office of Assessment, University of Missouri-Kansas City School of Dentistry; Prof. Keselyak is Associate Professor, Division of Dental Hygiene, University of Missouri-Kansas City School of Dentistry; and Dr. Killip is Associate Dean Emeritus, University of Missouri-Kansas City School of Dentistry. Direct correspondence and requests for reprints to Dr. Sharon K. Lanning, Department of Periodontics, Virginia Commonwealth University School of Dentistry, 521 N. 11th Street, P.O. Box 980566, Richmond, VA 23298-0566; sklanning@vcu.edu.

Keywords: scholarship of teaching and learning, dental education, dental hygiene education, faculty evaluation, faculty development, promotion and tenure

Submitted for publication 1/31/14; accepted 4/1/14

The Scholarship of Teaching and Learning (SoTL), the purposeful analysis of and reflection on the processes and outcomes that enable effective teaching and student learning, continues to evolve.¹⁻⁸ Ernest Boyer's 1990 *Scholarship Reconsidered: Priorities of the Professoriate* is often referred to as the catalyst that advanced SoTL by expanding the meaning of scholarship to include not only discovery but also integration, application, and teaching.¹ Building on Boyer's work, Charles Glassick, Mary Taylor Huber, and Gene Maeroft further promoted teaching as scholarly work in their 1997 book, *Scholarship Assessed*.³ Soon afterwards, the Carnegie Foundation launched a program called the Carnegie Academy for the Scholarship of Teaching and Learning (CASTL) to examine and foster the

development of improved teaching methods. The aim of the CASTL program is to promote the exchange of ideas and teaching methods among faculty members for the benefit of student learning outcomes and to better reward faculty members for scholarly activity in this area.⁶

Although the number of journal articles pertaining to SoTL is increasing and the concept is gaining momentum in higher education,⁹⁻¹³ both nationally and internationally,¹⁴ it may not be universally accepted or well understood and not valued equally with that of discipline-specific research. Connolly notes that faculty rewards in the hard sciences tend to be geared more toward traditional forms of research.⁸ Likewise, Shapiro indicates that SoTL activities are typically considered "add-ons" but not replacements

for more traditional scholarly activity such as competitive grant-funded, peer-reviewed publications.¹⁵ Furthermore, Beattie acknowledges that the scholarship of discovery has been the primary focus of medical school faculty members' promotion and tenure processes, yet it does not reflect their actual daily clinical work.¹⁶ To add to this disconnect, Gurung et al. and Secret et al. report policies supporting SoTL activity may not be fully institutionalized.^{5,7} That is, faculty members perceive policies at the department level to be inconsistent with those of their parent institution, and policies appear to be interpreted differently across academic units at the same institution. Some of the debate about the value of SoTL may be attributed to lack of consensus about what constitutes SoTL and the importance accorded to it for the purposes of faculty evaluation: hiring, merit consideration, and promotion and tenure. Healey suggests that since the nature of research and teaching methods tends to differ between disciplines, it is no wonder that so does the associated value of SoTL activity, making it difficult for a single institution to apply universal standards.¹⁷ Nevertheless, SoTL advocates point out that what a university values will be reflected in its reward structure.^{18,19} Gurung et al. noted that, in U.S. departments of psychology, most faculty members reported that SoTL was not referred to in their university's promotion and tenure guidelines.⁵

There has been some movement in health professions education towards promoting SoTL.²⁰⁻²³ A report by a subcommittee of the Group on Educational Affairs of the Association of American Medical Colleges (AAMC) outlined a conceptual and strategic framework for advancing the art and science of teaching in medical education.²¹ Fincher et al. and Masella and Thompson point out that clinicians, as patient care providers, are accustomed to consulting the literature to develop standards of care and best practices as determined through scientific inquiry.^{20,22} In a similar way, these authors recommend that health sciences faculty consult the educational literature to develop best practices in teaching and learning. Masella and Thompson argue for a change in dental education toward a culture that deeply values teaching excellence, evidence-based education, and faculty scholarship in which educational theories are tested and practiced.²² To bring about such change, it seems SoTL criteria need to be operationalized by developing infrastructure that fosters and rewards that form of scholarship.²⁰

Furthermore, current accreditation standards for dental and dental hygiene programs emphasize

the importance of evidence-based education, student assessment, and quality program improvement.^{24,25} Commission on Dental Accreditation (CODA) Standard 1-2 requires dental education programs to have "ongoing planning for, assessment of, and improvement of educational quality and program effectiveness."²⁴ The same requirement appears in accreditation Standard 1-2 for dental hygiene programs, which reads: "The program must demonstrate its effectiveness using a formal and ongoing planning and assessment process that is systematically documented by developing a plan addressing teaching, patient care, research, and service which are consistent with the goals of the sponsoring institution and appropriate to dental hygiene education."²⁵ In addition, predoctoral CODA Standards 6-1 and 6-2 emphasize research or other forms of scholarly activity that supports the school's purpose/mission, goals, objectives, and overall educational program, including research-driven changes in the curriculum and/or clinical training. Hence, academic dentistry has the obligation to determine educational outcomes for the purpose of continued educational and program improvement. SoTL, as the purposeful analysis of educational processes and outcomes, has the potential to maximize teaching effectiveness and student learning as well as to serve as a vehicle for promoting evidence-based education and demonstrating quality program improvements mandated by CODA.

The American Dental Education Association (ADEA) Special Interest Group on Scholarship of Teaching and Learning (SoTL SIG) was initially launched as the first ADEA Community of Interest in 2006 and was approved as a SIG by the ADEA Board of Directors in 2010. ADEA's strategic directions for 2011-14 include a priority to "promote the scholarship of teaching and learning as an integral part of institutional culture."²⁶ In support of that priority, the SoTL SIG is committed to aiding in the development of the necessary infrastructure to promote SoTL in dental and dental hygiene education. One of its primary initiatives has been to better recognize the current status of SoTL in academic dentistry. As a result, the SoTL SIG sponsored a survey-based study, the aim of which was to assess faculty members' perceptions of how SoTL is understood and applied in U.S. and Canadian dental education settings. Faculty members were asked about their knowledge of specific SoTL activity and the perceived barriers and elements that would enhance SoTL activity in their programs, schools, and institutions. Recommendations for how ADEA might promote SoTL in dental

education settings were also solicited. This article reports the results of that survey.

Methods

This descriptive study employed a mixed quantitative/qualitative survey method to evaluate data gathered from a self-completed questionnaire. After the study received University of Missouri-Kansas City Institutional Review Board approval (SSIRB Protocol #: SS12-53X), a recruitment letter containing the survey link was emailed to administrative faculty and directors of ADEA member dental schools, dental hygiene programs, and postdoctoral programs, who were asked to distribute the link to the faculty in their programs. The recruitment letter described the survey's purpose, potential risks and benefits of participation, and steps to ensure participant anonymity. SurveyMonkey, a secure web-based online survey and data management program, was used to disseminate the survey and gather responses. Three email messages were sent to administrative faculty and directors as a reminder to encourage their faculties to complete the survey. The survey remained open for six weeks in order to accommodate fluctuations in schedules and semester breaks among the various programs.

Survey Instrument

The survey was developed by the authors using Huber and Hutchings,⁶ Gurung et al.,⁵ and Secret et al.⁷ as references for general survey characteristics of style, format, length, and individual items related to perceptions and application of SoTL in a professional education setting. Most noteworthy were items that asked faculty members about their awareness of SoTL practices in their own environment and barriers that, if addressed, would enhance SoTL activity in their programs, schools, and institutions.

The instrument presented a contextual definition of SoTL to which participants could refer while completing survey items. The definition, based on Glassick et al.,³ McKinney,¹⁸ and Shulman,¹⁹ was as follows:

SoTL involves systematic, literature-based inquiry into processes and outcomes involved with teaching and learning:

- (1) When appropriate, the activity follows the standards and practices delineated by the scientific method (e.g., systematic observations, well-developed

operations, accurate data analyses, evidence-based conclusions).

- (2) The activity generates a product that is peer-reviewed on the basis of whether it contributes new knowledge to the field and/or invites conceptual replication.
- (3) The activity provides an opportunity for personal/professional reflection.
- (4) The product of and/or the activity is presented publicly for others to build upon.

Prior to dissemination, the twenty-two-item survey was piloted in a review for clarity by twelve faculty members in dental hygiene, predoctoral, and postdoctoral dental programs at three U.S. dental schools. The survey contained items related to faculty demographics including the participants' type of institution, academic rank, nature of academic work, and tenure/non-tenure status. Using a five-point Likert scale, faculty members were asked to indicate their level of agreement with the provided definition of SoTL, whether they themselves value it, and the role SoTL plays in specific aspects of their institution's reward structure such as hiring decisions, annual faculty evaluations, promotion and tenure decisions, and awards. Participants were also asked to rate their level of agreement with the assertion that their program or institution encourages SoTL activity in such ways as specific policies and release time. Other survey items inquired about what was needed to promote SoTL activity and the specific types of SoTL activity the respondents had conducted in the last year. Text boxes were offered for several of the survey items, allowing respondents to add comments.

Data Analysis

Data were analyzed using SPSS 20 for Windows. Responses to demographic questions such as professional group, tenure status, and institution type were used as grouping variables. Pearson correlations and t-tests were utilized to investigate group differences between categorical grouping variables and Likert responses.

The qualitative responses were systematically and concurrently analyzed using the process of qualitative data reduction described by Miles and Huberman²⁷ to tease out common themes from written responses to open-ended questions. The qualitative responses were analyzed by three researchers, first for broad categories of thematic content and second for emerging themes in each category. Each of these responses was reviewed by all three investigators simultaneously. If disagree-

ments arose about the nature of the comment or into which category data should be assigned, discussions ensued, bringing in the richness of each investigator's experience. Initial disagreements were rare, and in all cases, agreement was reached.

Results

In total, 430 faculty members responded to the survey: 100 in dental hygiene programs (23.8 percent) and 321 in dental programs (76.2 percent). This number was a response rate of 5.4 percent of ADEA's reported 8,000 faculty members.²⁸ Respondents indicated their academic rank, nature and focus of their professional responsibilities, and the type of institution with which they were affiliated (Table 1).

The respondents were similarly distributed across academic rank with 29.6 percent assistant professor, 31.0 percent associate professor, and 29.4 percent full professor. A greater proportion of

dental faculty than dental hygiene faculty indicated assistant professor rank (32.9 percent and 19.0 percent, respectively). In contrast, a greater proportion of dental hygiene faculty selected "other" (possibly instructor or lecturer) as their rank than did dental faculty (27.0 percent and 4.7 percent, respectively). A similar proportion of dental (83.1 percent) and dental hygiene (84.0 percent) respondents reported being in full-time versus part-time positions. Eight percent of the respondents indicated they were on the tenure track, 35.7 percent reported being tenured, 38.9 percent indicated not being on the tenure track, and 17.3 percent reported there was no tenure option at their school (14.2 percent of dental and 24.2 percent of dental hygiene respondents).

While most dental faculty reported an affiliation with a dental school (93.8 percent), most dental hygiene faculty reported an affiliation with a community college or dental school (37.4 percent and 33.3 percent, respectively). Although the majority of the respondents reported being affiliated with a public institution, a greater proportion of dental hygiene faculty reported an affiliation at a public institution as compared to dental faculty (86.7 percent and 61.5 percent, respectively).

Overall, 54.3 percent of the respondents ranked clinical teaching as their first priority (59.3 percent of dental and 41.1 percent of dental hygiene). Almost half (46.4 percent) ranked didactic teaching as their second priority (45.4 percent of dental and 49.5 percent of dental hygiene). About a third of the respondents (28.1 percent) ranked administrative duties their third priority. However, administrative duty ranking was most varied with 29.0 percent indicating it as their first priority (45.6 percent of dental hygiene faculty) and 28.1 percent as third overall (27.7 percent of dental faculty). Less than a third overall (28.3 percent) ranked research as fourth (26.2 percent of dental and 36.4 percent of dental hygiene).

Respondents were asked to indicate the level of their agreement with the definition of SoTL provided on the survey. Overall, 78.1 percent agreed with that definition of SoTL. Less than 10 percent (6.3 percent) disagreed, and 15.7 percent neither agreed nor disagreed.

Perceived Value of and Engagement in SoTL

The respondents were asked to rank their own value of SoTL as well as the value given to it in their programs, schools, and institutions. The majority

Table 1. Demographics of survey respondents

Characteristic	N	Percent
Years as faculty member		
<5	64	15.1%
5-8	65	15.3%
9-15	87	20.5%
16-20	69	16.3%
>20	139	32.8%
Faculty rank		
Professor	96	29.4%
Associate professor	103	31.0%
Assistant professor	104	29.6%
Other	31	9.2%
Tenure status		
Tenured	142	35.7%
On tenure track	32	8.0%
Not on a tenure track	155	38.9%
No tenure option	69	17.3%
Educational setting		
Predoctoral	234	73.6%
Postdoctoral	85	26.7%
Public	194	63.0%
Private	71	23.1%
Private nonprofit	31	10.1%
Private for-profit	12	3.9%
Dental hygiene undergraduate	81	19.2%
Dental hygiene advanced education	19	4.5%

Note: Total number of respondents to characteristic categories varies. Items in educational setting category are not exclusive. Percentages in other categories may not total 100% because of rounding.

(69.3 percent) indicated that they themselves highly valued SoTL, but a third (28.6 percent) indicated that they moderately valued it and 2.1 percent did not value it at all. About 40 percent (37.2 percent) perceived SoTL to be highly valued by other faculty members, 35.2 percent perceived it to be valued by their school, and 44.1 percent perceived it to be valued by their parent institution. The extent to which the respondents valued SoTL was positively correlated with their perception of how SoTL was valued among faculty within their program ($r(322)=0.374, p<0.001$), among faculty at their school ($r(299)=0.204, p<0.001$), and among others at their campus or parent institution ($r(233)=0.296, p<0.001$). Overall, dental hygiene respondents reported valuing SoTL significantly more than did the dental respondents. These dental hygiene faculty members perceived that SoTL was more highly valued by their program ($t(342)=3.071, p=0.002$), their school ($t(319)=2.503, p=0.013$), and their campus or parent institution ($t(249)=2.122, p=0.035$) than did the dental faculty.

The respondents were asked about their participation in SoTL activity. About 40 percent (41.7 percent) reported conducting a SoTL activity. Nearly 20 percent (19.7 percent) reported participating in a funded SoTL activity, while 43.6 percent reported participating in a non-funded activity. Dental hygiene respondents reported participating in more funded SoTL activity during the past year than did dental respondents ($t(351)=2.287, p=0.023$). Additionally, dental hygiene respondents agreed more strongly than did dental respondents that their institution provides adequate funding for SoTL endeavors ($t(391)=2.051, p=0.041$).

Seventy-five percent of the respondents reported making a SoTL presentation to their campus community, while 24.9 percent reported making a SoTL presentation at a professional conference. Less than 4.0 percent indicated having made four or more presentations in the past year. About 20.0 percent (16.2 percent) reported no SoTL publications. Generally, respondents from private institutions reported a more encouraging environment with regard to SoTL activity. Faculty members from private institutions indicated more policies encouraging reflective practice of their teaching than did those from public institutions ($t(330)=-3.004, p=0.003$). Likewise, faculty from private institutions reported making significantly more presentations at professional conferences than did faculty from public institutions ($t(304)=-2.761, p=0.006$).

Application of, Barriers to, and Promotion of SoTL

Given the definition of SoTL provided on the survey, the respondents were asked to evaluate the role SoTL plays in hiring decisions and faculty recognition as well as SoTL's perceived value and activity (Figure 1). While only 24.8 percent indicated that SoTL strengthens the case for hiring, nearly half (44.9 percent) were unsure what role SoTL might play in hiring decisions. While 34.8 percent of the respondents were unsure about the role SoTL plays in merit pay decisions, 26.4 percent indicated that it strengthens the case. Twenty percent indicated that no evidence of SoTL activity is submitted for review in merit pay decisions. While 41.0 percent indicated that SoTL evidence strengthens the case for faculty promotion, over a third (33.8 percent) were unsure of the role that SoTL plays in promotion decisions. Forty percent indicated that evidence of SoTL strengthens the case for receipt of teaching awards, and 32.8 percent were unsure of the role of SoTL on that question.

The respondents' perceptions of barriers to SoTL activity are shown in Figure 2. Inadequate training or mentorship for SoTL activity (74.8 percent of respondents) was the highest agreed upon barrier. Other perceived barriers to engaging in SoTL activity were SoTL as something in addition to the existing workload (67.8 percent), confusion about what constitutes SoTL (67.5 percent), unclear institutional directives (65.8 percent), the role of SoTL in promotion and tenure decisions (57.7 percent), and the demand for traditional research productivity (54.8 percent). Interestingly, 21.8 percent agreed that a significant barrier to SoTL activity is the fear of making teaching practices public and undermining academic freedom.

Differences in perceptions of barriers existed between these dental and dental hygiene faculty members. Dental respondents reported significantly higher agreement than did dental hygiene respondents that the lack of clear guidelines regarding SoTL activity and the promotion and tenure process represents an obstacle to involvement ($t(369)=-2.417, p=0.016$). Additionally, dental faculty agreed more strongly than dental hygiene faculty that tension between demands for research productivity and SoTL involvement represents a significant barrier to involvement ($t(368)=-2.795, p=0.005$).

These respondents identified a number of ways in which SoTL activity could be promoted (Figure

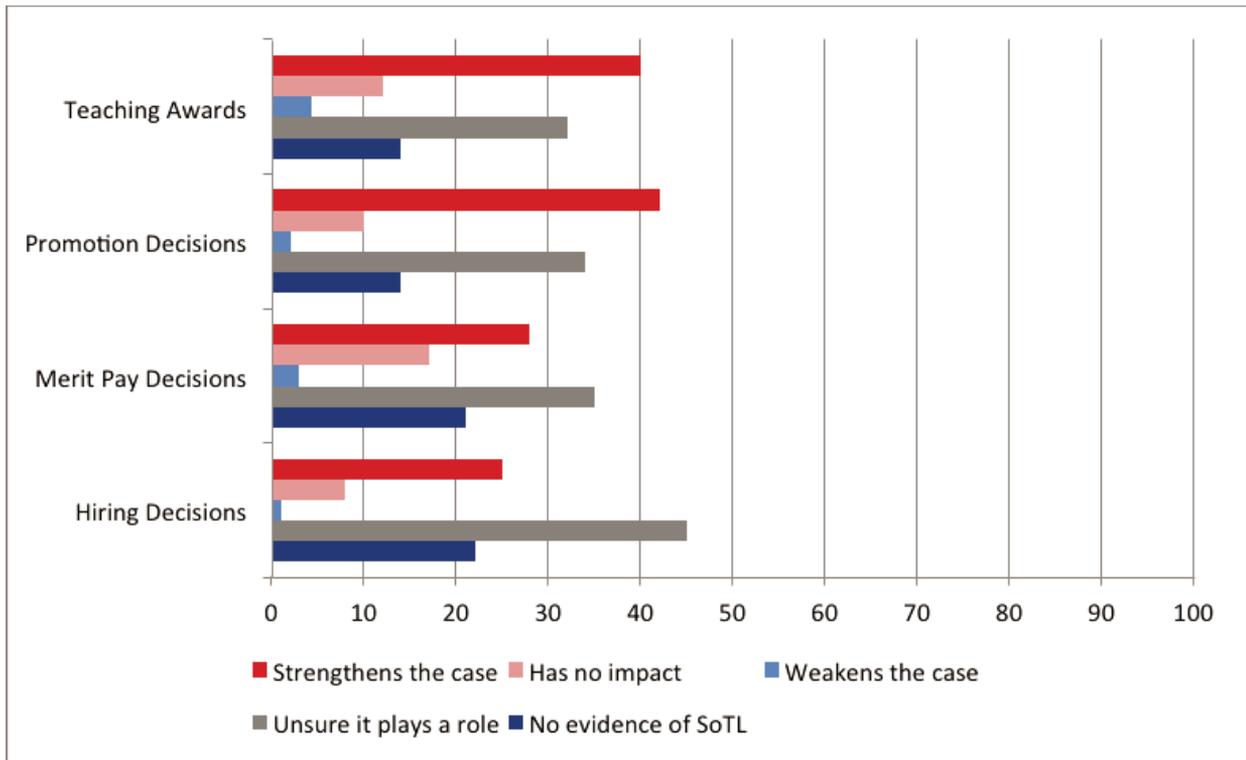


Figure 1. Respondents' perceived Scholarship of Teaching and Learning (SoTL) application in four areas

3). Nearly 80 percent suggested that SoTL could be better promoted through clear promotion and tenure policies encouraging SoTL involvement (80.3 percent), opportunities to share and disseminate SoTL findings (82.1 percent), funding of SoTL projects (76.8 percent), and release time from regular duties (76.8 percent). Dental hygiene faculty agreed more strongly than did dental faculty that opportunities to share and disseminate SoTL findings are needed to promote SoTL involvement ($t(360)=2.031$, $p=0.043$). Most respondents (87.9 percent) agreed that professional development activity is necessary for the promotion of SoTL, and 83.4 percent agreed that professional organizations should provide these opportunities.

Thematic Analysis

Of the twenty-two items on the survey, ten provided space for optional qualitative responses related to perceptions or application of SoTL. A total of 128 qualitative responses were received and analyzed. Three overlapping main themes emerged from the

qualitative analysis of these responses (Table 2). The comments selected for inclusion in this table are representative of a consistent sentiment in each theme.

The three themes build upon those seen in the quantitative responses: there is a need to better define what constitutes SoTL, to understand its barriers, and to promote SoTL activity. The quantitative responses indicated that approximately 58 percent of the respondents highly valued SoTL and 2.5 percent did not value it at all. The qualitative responses bring to light a lack of understanding or consensus about what defines SoTL activity. Of particular interest was the perceived distinction between clinical and academic faculty roles with regard to who should engage in SoTL activity, namely, that SoTL is for the latter but not the former. This response suggests the need for better understanding of what constitutes SoTL and of the role all faculty members can play with regard to SoTL activity.

Among the perceived barriers to engaging in SoTL were comments that ranged from apathy, to not considering SoTL to be a priority, to competing priorities between SoTL and other professional

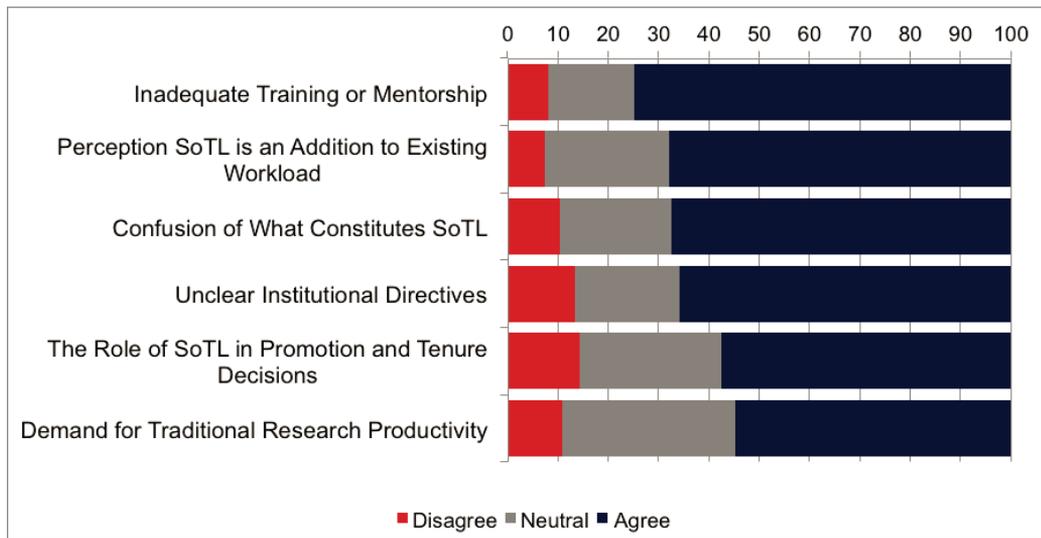


Figure 2. Barriers respondents perceived to Scholarship of Teaching and Learning (SoTL) activities

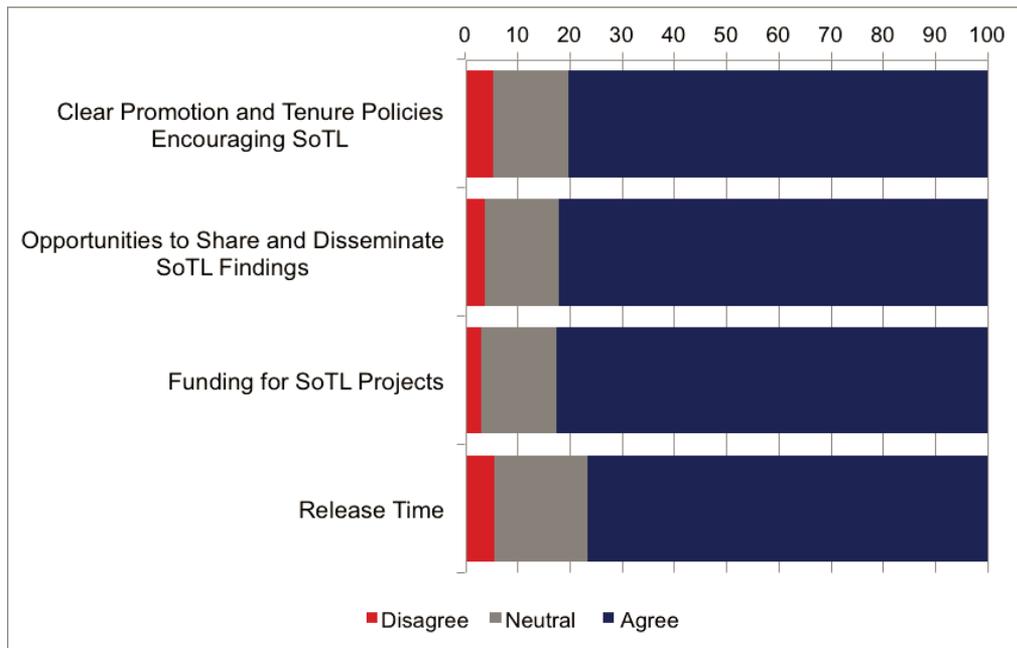


Figure 3. Respondents' recommendations for promoting Scholarship of Teaching and Learning (SoTL) activity

responsibilities. More specifically, comments about barriers yielded topics related to a lack of understanding (need for faculty development surrounding SoTL), a lack of resources (need for adequate time, funding, and workforce), and a perceived lack of

or inconsistent level of value that the department, school, and institution place on SoTL as it relates to faculty evaluation, tenure, and promotion decisions. There was an overall perception that SoTL is valued and promoted in some settings. Recommended

Table 2. Three main themes in responses to open-ended questions regarding Scholarship of Teaching and Learning (SoTL) and representative quotations

Themes	Quotations
Defining what constitutes SoTL (15 comments)	<p>“The activity is unclear and should be defined. As a result, I think that most people are confused by what SoTL means. That does not mean that we do not value the concept of evidence-based teaching, learning, and practice. I do value those concepts, but not necessarily the concept of ill-defined SoTL.”</p> <p>“I think that the faculty as a whole at our institution have a better idea of what SoTL is about versus the dental school, where the majority of our faculty are clinical educators and don’t always attend to those things they perceive as ‘purely academic’ and outside the realm of their responsibilities as clinical faculty.”</p>
Understanding SoTL barriers (15 comments)	<p>“Research is certainly the golden key for being appreciated. . . . Teaching? Not so much.”</p> <p>“I do not think anyone would oppose scholarly teaching. The problem is that many faculty members are not equipped to do it. They do not have either skills or passion/desire/motivation to do it. In addition, we do not have mentorship and have other responsibilities (work overload) in direct contact time.”</p>
Promoting SoTL activity (29 comments)	<p>“The awareness and encouragement of SoTL are essential at the larger university level before the departments start speaking the language!”</p> <p>“Increase awareness among faculty and administrators; provide scholarship/funding to attend meetings; and follow up on progress/projects.”</p> <p>“Give value to the clinical aspects of SoTL.”</p> <p>“Much more exposure of the concept and its development and implementation.”</p>

elements to promote SoTL included mentorship, financial support, and institutional value of SoTL as a legitimate form of research.

The largest number of written comments (n=40) were in response to the following question: “What could be done by ADEA to advance SoTL in dental and dental hygiene education?” The responses ranged from no involvement, to increased faculty development to support SoTL, to an advocacy role that ADEA could play in advancing SoTL as a legitimate and encouraged form of scholarly activity.

Discussion

The ADEA SoTL SIG is committed to promoting SoTL as a legitimate scholarly pursuit in dental and dental hygiene education. This study helps to benchmark faculty perceptions of SoTL and inform efforts towards supporting a cultural change in which best teaching practices would be determined through systematic analysis and public dissemination. Massella and Thompson argued for such change and promoted evidence-based education as a way to ensure optimal student learning.²² At a time when accreditation standards emphasize student learning outcomes and ongoing quality improvements in programs, SoTL activity has the potential to support dental and dental hygiene programs’ curricular innovations and help them meet CODA standards.^{24,25} However, in order to operationalize such goals, it is essential

to promote change at both the organizational level (within schools and programs) and the individual level (in individual faculty members’ practice) by setting criteria for what constitutes SoTL, developing supportive policies and faculty reward structures, and promoting opportunities for training, funding, and public dissemination.

Our findings suggest that although the majority of the faculty respondents valued SoTL and agreed with the definition of SoTL provided, agreement decreased slightly as respondents considered how others in their program, school, and institution would define SoTL. Additionally, between 44.9 percent and 33.8 percent of the respondents were unsure of the role SoTL played in hiring decisions, merit pay decisions, and promotion decisions. It is interesting that almost half perceived SoTL to be beneficial in faculty evaluations, while at the same time fewer respondents perceived SoTL activity would strengthen the case for teaching awards. Most of the respondents’ comments addressed the need to clarify SoTL practice and activity. Thus, there appears to be confusion and poor communication about what actually qualifies as SoTL within dental education, especially when it comes to decisions about promotion and tenure. Discrepancies in faculty opinion about what constitutes SoTL have been reported elsewhere.^{5,7,8,16,17} As Gurung et al. and Secret et al. surmise, this confusion will continue until consensus is developed and promoted regarding the nature and scope of SoTL activity.^{5,7} The AAMC Group on Educational Affairs developed a

consensus report on educational scholarship to help guide educators and educational policy.²¹ Likewise, a foreseeable next action of the ADEA SoTL SIG is to advocate for such work in dental education for the purpose of both encouraging faculty practice of SoTL and shaping faculty evaluation criteria that could serve as an impetus for modifying faculty reward structures at the organizational level.

Additional barriers to the promotion of SoTL activity recognized by the respondents in our study include inadequate training or mentorship, the perception that SoTL is an “add-on” to existing workload, and the demand for traditional research productivity. Furthermore, the respondents felt SoTL activity could be better promoted through adequate funding and greater opportunities for release time to conduct research and disseminate it publicly. Such challenges for the application of SoTL across higher education have been reported previously.^{5,7,8,21,23} One of the points made in the AAMC report and by Gurung et al. was the need for greater training and mentoring efforts to help the next generation of faculty members become knowledgeable and skilled at educational scholarship.^{5,21} Examples of formal training that supports SoTL in dental education include the ADEA Education Scholar online professional development resource, the ADEA/AAL Institute for Teaching and Learning, and the M.A. in Dental Education program, a partnership with the University of the Pacific, AAL, and ADEA. The ADEA SoTL SIG continues to engage in faculty training by sponsoring programming at ADEA’s Annual Session & Exhibition. These programs also serve as forums for public dissemination of SoTL activity in addition to the *Journal of Dental Education* and other scholarly journals. Additional next steps could include advocating for greater opportunities for faculty training and funding and distributing such work through ADEA and the various academies of organized dentistry.

In general, our results showed that the responding dental hygiene faculty members were more likely to engage in SoTL activity, perceived greater support from all levels at their institutions, and were more likely to receive funding for SoTL activity than were the dental faculty members. The dental faculty respondents perceived greater tension between the demands for research productivity and SoTL and less clear guidelines on the role of SoTL in tenure and promotion decisions than the dental hygiene faculty members. It is difficult to know if this is related to a specific institution’s policies, differences in accredi-

tation standards, or some other characteristic related to dental and dental hygiene practice or education. However, it is interesting to note that CODA Standard 3-7 for dental hygiene states that all dental hygiene faculty must have knowledge in educational theory, instructional methodologies, and evaluation consistent with teaching assignments (clinical or didactic).²⁵ Examples of acceptable evidence to meet the standard include professional development activity, attending or participating in meetings, workshops, and training that address education, scholarly productivity, and mentorship of new faculty. CODA’s expectations could thus account for the more favorable perceptions of SoTL among dental hygiene educators. The requirement for dental hygiene faculty expertise of educational practice gives the ADEA SoTL SIG the opportunity to promote SoTL activity not only for program compliance, but faculty development and improved student-learning outcomes. More generally, the ADEA SoTL SIG will advocate for scholarship in this area that transcends all dental education disciplines and will promote change at the individual and organizational levels.

Differences in faculty perceptions among those affiliated with a private versus public institution were also reported in our survey results. Generally, responding faculty members from private institutions perceived more policies supporting the analysis of teaching methodologies and made more SoTL presentations at professional meetings than did respondents from public institutions. Again, it is hard to determine the exact reason for such differences, but it appears that setting expectations for reflective teaching practices results in the completion of SoTL activity worthy of public dissemination.

This study has several limitations. Survey research is influenced by the respondent pool. Efforts were made to promote participation through direct contact and three emails to administrative faculty and directors of the ADEA member dental schools, dental hygiene programs, and institutions with post-doctoral programs. The first communication regarding the survey happened to coincide with the end of spring semester for many dental hygiene education programs. As such, the survey remained open for six weeks to foster participation. Despite these efforts, our response pool was relatively small compared to ADEA’s reported 8,000 faculty members.²⁸ Thus, it should be noted that our findings may represent the attitudes of a limited cohort of dental and dental hygiene faculty. Also, regarding the respondent pool for any survey study, the most likely to respond are

those individuals with the most polarized perspectives about the topic at hand. Additionally, the interpretation and meaning of survey items may influence survey study results, especially when terminology and faculty appointments vary across institutions. To reduce that risk, previously reported survey items and those adapted for our purposes were vetted for clarity and common understanding among a small group of peers.

Conclusion

This study aimed to determine the current status of SoTL in U.S. dental and dental hygiene education. Our findings suggest that most faculty respondents valued SoTL and agreed with the definition provided. However, they perceived that faculty colleagues within their programs, schools, and institutions may not agree with the definition. Respondents at private institutions appeared to be more productive in terms of SoTL activity than those at public institutions. The respondents were generally unsure of how SoTL was applied at their institutions and perceived a need to clarify SoTL practices for the purpose of faculty evaluation. Although this study has limitations, its results are consistent with findings across higher education, and it has identified feasible next steps for programming and prioritizing efforts of the ADEA SoTL SIG to inform immediate and long-term approaches at the organizational and individual levels to promote SoTL as a legitimate scholarly pursuit in dental education.

Acknowledgments

This study was supported by the American Dental Education Association's Special Interest Group on Scholarship of Teaching and Learning. The authors would like to acknowledge the group's past and current leadership for their contributions to this work.

REFERENCES

1. Boyer E. *Scholarship reconsidered: priorities of the professoriate*. Princeton, NJ: Carnegie Foundation for the Advancement of Teaching, 1990.
2. Diamond R, Adam B. *The disciplines speak II: more statements on rewarding the scholarly, professional, and creative work of faculty*. Washington, DC: American Association for Higher Education, 2000.
3. Glassick C, Huber M, Maeroff G. *Scholarship assessed: evaluation of the professoriate*. San Francisco: Jossey-Bass, 1997.
4. Gray P, Froh R, Diamond R. *A national study of research universities: on the balance between research and undergraduate teaching*. Syracuse: Syracuse University Center for Instructional Development, 1992.
5. Gurung R, Ansborg P, Alexander P, et al. State of the scholarship of teaching and learning in psychology. *Teach Psychol* 2008;35:249-61.
6. Huber M, Hutchings P. *The advancement of learning: building the teaching commons*. San Francisco: Jossey-Bass, 2005.
7. Secret M, Leisey M, Lanning S, et al. Faculty perceptions of the scholarship of teaching and learning: definition, activity level, and merit considerations at one university. *J Scholarship Teach Learn* 2011;11(3):1-20.
8. Connolly M. The birth of a notion: the windfalls and pitfalls of tailoring a SoTL-like concept to scientists, mathematicians, and engineers. *Higher Educ* 2007;32(1):19-34.
9. Bernstein D, Bass R. The scholarship of teaching and learning. *Academe* 2005;91(4):37-43.
10. Brew A. Transforming academic practice through scholarship. *Int J Acad Dev* 2010;15(2):105-16.
11. Jurkowski O, Kerr S. Development of an educational innovation incubator. *TechTrends Link Res Pract Imp Learn* 2010;54(2):72-6.
12. Hubball H, Clarke A, Poole G. Ten-year reflections on mentoring SoTL research in a research-intensive university. *Int J Acad Dev* 2010;15(2):117-29.
13. Persellin D, Goodrick T. Faculty development in higher education: long-term impact of a summer teaching and learning workshop. *J Scholarship Teach Learn* 2010;10(1):1-13.
14. O'Meara K, Rice RE. *Faculty priorities reconsidered: rewarding multiple forms of scholarship*. San Francisco: Jossey-Bass, 2000.
15. Shapiro HN. Promotion and tenure and the scholarship of teaching and learning. *Change* 2006;3(2):39-43.
16. Beattie DS. Expanding the view of scholarship: introduction. *Acad Med* 2000;75(9):871-6.
17. Healey MM. Developing the scholarship of teaching in higher education: a discipline-based approach. *Higher Educ Res Dev* 2000;19(2):169-89.
18. McKinney K. *The scholarship of teaching and learning: past lessons, current challenges, and future visions*. *Imp Acad* 2004;22:3-19.
19. Shulman LS. Course anatomy: the dissection and analysis of knowledge through teaching. In: Hutchings P, ed. *The course portfolio: how faculty can examine their teaching to advance practice and improve student learning*. Washington, DC: American Association for Higher Education, 1999:5-10.
20. Fincher RME, Simpson DE, Mennin SP, et al. Scholarship in teaching: an imperative for the 21st century. *Acad Med* 2000;75:887-94.
21. *Summary report and findings from the AAMC Group on Educational Affairs consensus conference and educational scholarship*. Washington, DC: Association of American Medical Colleges, 2007.
22. Masella RS, Thompson TJ. Dental education and evidence-based educational best practices: bridging the great divide. *J Dent Educ* 2004;68(12):1266-71.

23. Smesny AL, Williams JS, Brazeau GA, et al. Barriers to scholarship in dentistry, medicine, nursing, and pharmacy practice faculty. *Am J Pharm Educ* 2007;71(5):1-9.
24. Commission on Dental Accreditation. Accreditation standards for dental education programs. Chicago: American Dental Association, 2010.
25. Commission on Dental Accreditation. Accreditation standards for dental hygiene education programs. Chicago: American Dental Association, 2007.
26. ADEA mission statement and strategic directions, 2011-14. *J Dent Educ* 2014;78(7):1002-3.
27. Miles M, Huberman A. *Qualitative data analysis*. 2nd ed. Thousand Oaks, CA: Sage, 1994.
28. Personal communication with Sean Carter, Senior Manager for Membership, American Dental Education Association, March 24, 2014.