INSTITUTIONAL PROGRAMS, PRACTICES, AND POLICIES IN PUBLIC HEALTH PEDAGOGY

A Report by the Institutional Programs, Practices, and Policies Working Group of the Scholarship of Teaching and Learning (SoTL) Task Force

June 2021

ASPPH ASSOCIATION OF **SCHOOLS & PROGRAMS** OF PUBLIC HEALTH

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The Association of Schools and Programs of Public Health (ASPPH) is the voice of accredited academic public health, representing **member schools and programs** accredited by the Council on Education for Public Health (CEPH). ASPPH is a 501(c)(3) membership organization headquartered in Washington, DC. ASPPH's mission is to strengthen the capacity of its members by advancing leadership, excellence, and collaboration for academic public health. ASPPH's Strategic Framework calls for the association to provide resources to support and strengthen faculty teaching and practice skills that lead to academic success as well as advance and strengthen education for public health to meet the evolving needs of the field.

For more information on ASPPH, please visit **www.aspph.org**.

Ideas and questions about the scholarship of teaching and learning (SoTL) are welcomed to **academics@aspph.org**.

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FOREWORD

The Association of Schools and Programs of Public Health (ASPPH), under the guidance of its Education Advisory Committee, launched the Scholarship of Teaching and Learning (SoTL) Task Force in 2018 to continue enhancing quality and innovation in education for public health. The aim was to create a locus and mechanism for the CEPH-accredited, ASPPH-member public health community to lead in discovery and reflection on evidence-based methods to research, practice, document, and publish on scholarly teaching and learning.

ASPPH subsequently formed four working groups (WGs) that collaborated to support ASPPH's mission to "strengthen the capacity of members by advancing leadership, excellence, and collaboration for academic public health." This report and the full complement of task force products is intended for ASPPH-member faculty in both baccalaureate and graduate schools and programs to support in assuring strong teaching for optimal student learning outcomes.

On behalf of ASPPH, I would like to commend the WG chair, Dr. Christine Arcari (Nebraska) and the entire working group (see Appendix A for the roster) for their dedicated research and recommendations in the following pages. The field of academic public health stands to benefit from their seminal work to encourage methods and practices for faculty and leaders' consideration to improve institutional resources for pedagogical research and practice in meaningful ways. Special recognition goes out to the faculty who both conducted and participated in telephone surveys that served as the primary data source for this report. Their extraordinary commitment to pedagogical excellence and advancing the scholarship of teaching and learning, particularly during the challenging circumstances of 2020, were vital to the findings and recommendations laid out in the following pages.

A dynamic session at the ASPPH Annual Meeting in March 2021 served as an important opportunity for top institutional leaders, members, and vested partners to vet this report for (see Appendix C for a list of the key informants). Dean Randy Wykoff (East Tennessee) offered the following remark in his response to the document during that session:

> "…quality teaching is what draws students in, especially at the undergraduate level. Students talk, they want to see an ROI, and they want to get a job when they graduate, but they also want to have a good experience, good advisors, and good teachers—all are essential to grow a program."

This effort could not have been accomplished without Dr. Shan Mohammed (Northeastern), chair of the ASPPH Education Advisory Committee and chair of the Scholarship of Teaching and Learning Task Force, for his intellectual leadership, experience, and thoughtful guidance, as well as ensuring connections across working group products. ASPPH's director of education, Ms. Elizabeth Weist, deserves thanks for her expert guidance throughout each of the working groups' processes. Mr. Jonathan Sung, manager of educational initiatives, provided statistical analysis, with guidance from Ms. Emily Burke, director of data analytics, and Ms. Christine Plepys, senior director of data analytics.

ASPPH looks forward to assisting the membership in advancing the scholarship of teaching and learning, continuing with this exciting task force product.

Laura Magaña, PhD, MS
President and CEO
Association of Schools and Programs of Public Health (ASPPH)
June 2021

EXECUTIVE SUMMARY

This report represents the culmination of research by the Programs, Practices, and Policies Working Group of ASPPH's Scholarship of Teaching and Learning Task Force. The working group met from January 2019 through April 2021 to fulfill its charge to produce a data report on programs, practices, and policies on scholarly teaching and learning among the ASPPH membership. They vetted a draft version of the report's preliminary recommendations in a "town-hall type" session at the ASPPH Annual Meeting in March 2021, taking in responses and suggestions to refine and improve the report. Through these efforts, the working group seeks to inform the accredited academic public health community about both the consumption of scholarship in teaching and learning (scholarly teaching) as well as the production of such scholarship (the scholarship of teaching and learning).

The working group anticipates that the research and recommendations yielded in this report will assist in identifying: opportunities and resources, content and skill-building topics, and faculty participation related to scholarly teaching and learning; issues around the institutional culture for this scholarship; the measurement and use of evaluation data on teaching effectiveness; promising model programs, practices, and policies; faculty priority areas for appointments, as well as promotion and/or tenure as they relate to teaching; and research on scholarship in teaching and learning, including dissemination, funding, and time allotted for this work.

The report concludes with a table offering multi-level recommendations derived from the presented evidence. These proposals are organized by key public health actors responsible for accredited education in public health:

- public health deans and public health program directors/leaders
- promotion and tenure committees
- department chairs
- faculty
- the Council on Education for Public Health (CEPH), and
- the Association of Schools and Programs of Public Health (ASPPH).

INTRODUCTION

Background

Under the jurisdiction of ASPPH's Education Committee, the Framing the Future (FTF) initiative achieved its main objective in 2015 to deliver recommendations on the 2nd second 100 years of public health. FTF was explicit in pointing the way to three other "Themes to Address for the Future," one of which was "Technology and Education Innovations." Accordingly, ASPPH launched the Innovations in Pedagogy workgroup in 2016 and produced an environmental scan on teaching innovations and professional development activities that faculty reported using to improve student learning outcomes (report **here**). As a result, the project chairs determined a need for highlighting innovative pedagogy across ASPPH-member institutions and, subsequently, hosted a call for abstracts to populate a journal supplement to publish such work. While the call yielded over 80 abstracts, nearly all lacked outcomes data to substantiate the value of the stated teaching innovations. Consequently, the chairs decided to step back and focus on assessing and building the Scholarship of Teaching and Learning (SoTL) among ASPPH-member schools and programs.

ASPPH launched the Scholarship of Teaching and Learning Task Force in September 2018 and subsequently formed four working groups (WG) to carry the charge forward: Conceptual Framing; Institutional Programs, Practices, and Policies; Teaching; and Course and Teacher Evaluation. Each of these working groups was charged with producing a report evaluating the state of knowledge and practice within each pedagogical topic, with recommendations on how to advance the field on each topical area. This is the second report in the series, developed by the Institutional Programs, Practices, and Policies Working Group.

Target Audience and Fit within the SoTL Framework

Faculty, academic leaders in ASPPH-member institutions, both at the baccalaureate and graduate level, and the key accreditor of academic public health represent the target audience for this report. The Institutional Programs, Practices, and Policies Working Group is seeking to inform the accredited academic public health community in this report about both the consumption of scholarship in teaching and learning (scholarly teaching) as well as the production of such scholarship (the scholarship of teaching and learning) to pave the way for delivering improved and high-impact teaching practices that contribute in measurable ways to strong student learning outcomes. The working group anticipates that the research and results yielded in this report will assist in identifying: opportunities and resources, content and skill-building topics, and faculty participation related to scholarly teaching and learning; issues around the institutional culture for this scholarship; the measurement and use of evaluation data on teaching effectiveness; promising model programs, practices, and policies; faculty priority areas for appointments, as well as promotion and/or tenure as they relate to teaching; and research on scholarship in teaching and learning, including dissemination, funding, and time allotted for this work.

The vision is that these findings and proposals in the report will complement the research, analysis, and recommendations from fellow ASPPH SoTL working groups to support and promote evidence- and consensus-based research on studying, practicing, documenting, and publishing on scholarly teaching and learning.

METHODS

Assumptions

The Institutional Programs, Practices, and Policies WG (see Appendix A for a list of the members), originally called the Institutional Models, Programs, and Policies WG, convened for the first time in January 2019 and proceeded to take up their charge to study, analyze, and report on institutional factors that supporting or detract from the Scholarship of Teaching and Learning. The working group undertook a ThinkTank exercise in 2019 to identify their assumptions by answering three kinds of questions: What do we believe? How do we raise the bar for SoTL? and What would be different if institutional support existed for SoTL?

Responses indicated that the working group operated from the following assumptions:

- institutional support of SoTL is critical to achieve institutional goals for student learning outcomes and to ensure public health graduates are practice-ready
- there is a distinction between conducting SoTL and using SoTL
- faculty examination of pedagogical practices towards achieving optimal student learning and dissemination of the results is legitimate scholarship and should be recognized by the institution
- the use of empirically based SoTL practices by faculty will improve teaching effectiveness
- all faculty should be made aware of the resources available for conducting research in and making decisions about teaching and learning

These assumptions resonate with thinking in the other ASPPH SoTL working groups and helped to guide planning, execution, and fulfillment of the Institutional WG charge.

Survey Development and Response Pool Identification

By early 2020 the WG had come to consensus on an instrument (see Appendix B) consisting of 12 multi-part questions with both quantitative and qualitative measures regarding different aspects of scholarly teaching and learning. The WG conducted telephone surveys of a random sample of 51 member institutions from ASPPH's total membership of 128 schools and programs (40% of ASPPH members). While the distinction between schools and programs was deemed important (and to a lesser extent, other factors such as public v. private, large v. small student body, and geographic distribution), the natural distribution of ASPPH's member institutions along these variables was such that stratification was deemed unnecessary for a representative sample. Respondents were targeted from among ASPPH's Academic Affairs Section, where available. If the institution lacked an Academic Affairs Section representative, staff contacted the institution's dean or program director to nominate the optimal institutional representative.

Data Collection Protocols and Analysis

ASPPH staff assigned the WG members a list of institutions to contact along with model materials for WG members to use in reaching out to their assigned respondents, including a sample email message, introductory phone script, and a protocol for conducting the telephone interviews and inputting data. Eight of the 10 WG members conducted surveys from April 8 to June 22, 2020, notable for taking place during the difficult, early period of the COVID-19 pandemic in higher education. WG members entered results manually from their telephone surveys into an online SurveyMonkey (San Mateo, CA) database. Respondents' answers were not anonymous for purposes of possible follow-up; however, no sensitive information was collected, and results are presented in this report in aggregate format with possible personal identifying information removed. Results were exported to Microsoft Excel for analysis.

Quantitative data from multi-part questions were combined into a single table when relevant for ease of reporting descriptive statistics. Table row entries are ordered from highest to lowest count. All percentages are row percentages and the denominator for each row is listed in the table header, unless otherwise noted in parentheses. Qualitative data was analyzed using grounded theory and manual coding of responses. Where applicable, themes are presented with representative quotes. For each topic, themes are from multiple (i.e., more than one) respondents unless indicated otherwise, and are ordered by frequency from most to least number of respondents. For topics with multiple "single/dual-respondent comments" (i.e., no responses were deleted even if only one respondent expressed a particular sentiment), themes were organized categorically within the topic's thematic flow. Themes were not "quantified" (i.e., number of respondents who contributed to each theme) because of the limited sample size and corresponding applicability of such data. Not all respondents who selected "Other" in response to a question provided comments; thus, they may be reflected in the quantitative but not qualitative data.

After preparing a draft version of this report, ASPPH held a "town hall-type" session on Tuesday, March 23 as part of the 2021 ASPPH Annual Meeting, which was conducted virtually via Zoom (San Jose, CA). This session, entitled "Institutional Findings and Implications from ASPPH's Scholarship of Teaching and Learning Survey" engaged six key informants representing different aspects of institutional leadership (Appendix C) to provide their feedback specifically on the recommendations to their levels of leadership as listed in Table 6. The leadership levels follow: public health deans and public health program directors/leaders, promotion and tenure committees, department chairs, faculty, CEPH, and ASPPH. Key informants were given four minutes each to respond to the following prompt: "Based on your role in your institution with your responsibilities and your level of commitment to SoTL, what is your reaction to the recommendations that apply to your target domain?" The session drew 70 audience members whose questions and comments in the chat were addressed within the session and reviewed afterwards for consideration in making final revisions to this report.

Session attendees were able to submit comments and questions via the live chat, which were directed, as appropriate, to key informants during the discussion periods. The session was recorded to the Zoom cloud (available **here** for meeting registrants) and a live transcript was provided by Verbit Captioning Services (New York, NY). ASPPH staff and the working group drew from themes and representative quotes from the session to bolster and refine the recommendations in this final report.

RESULTS

Sample Characteristics

Overall, a representative from 34 out of 51 (67%) member institutions in the sample responded to the survey. With few exceptions (specifically questions 6, 10, 11, 12b, and 12e), all 34 respondents answered all questions, representing 27% of 128 ASPPH members at the time of sampling. Sixteen respondents (47%) represented schools of public health and 18 (53%) represented programs of public health. In addition, 11 respondents (32%) represented private colleges and/or universities, while 23 (68%) represented public institutions. Both pools of respondents, schools and programs, as well as private and public institutions, are similar in representation to ASPPH-member institutions. The results combine both schools and programs in the aggregate, as stratification of these entities did not indicate substantive differences.

Consumption of Scholarship in Teaching and Learning

Opportunities and Resources that Support Faculty Development of Teaching and Learning

The first survey question addressed institutional opportunities and resources that support faculty development of teaching and learning, whether provided at the university, school (S) or program (P), or both levels (Table 1). Note that percentages are calculated from the number of respondents who answered "yes, provided" for each resource or opportunity (highlighted in gray).

Table 1: Number and percentage of respondents whose institutions provide a particular opportunity or resource supporting the development of teaching and learning, by institutional level (n=34).

Opportunity or resource provided? (n=34 except for "Teaching and Learning Center" and "Other")	Yes, provided		If yes, by both university and S/P		If yes, by university ONLY		If yes, by school or program ONLY	
	n	%	n	%	n	%	n	%
Coaching/mentoring (individual, peer, or group)	34	100%	21	62%	4	12%	9	26%
Workshops	33	97%	24	73%	6	18%	3	9%
Formal entity that develops teaching excellence	32	94%	4	13%	28	88%	0	0%
Access to educational design staff	31	91%	17	55%	10	32%	4	13%
Teaching and Learning Center (n=33)	30	91%	3	10%	27	90%	0	0%
Financial support[1]	29	85%	11	38%	2	7%	15	52%
Faculty self-development time	20	59%	6	30%	4	20%	10	50%
Other (n=25)*[1]	21	84%	6	29%	3	14%	10	48%

*Individual comments from unique and multiple (i.e., more than one and grouped into themes) respondents are listed below.

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[1] The level is indicated as "Unknown" by one respondent for "Financial support" and by two respondents in "Other"

Coaching/mentoring, whether as an individual, in a peer relationship, or as a group, was universally offered by respondents' member institutions (100%). Except for faculty self-development time (59%), more than four-fifths of respondents indicated that their institutions offered that particular opportunity and/or resource. Most respondents indicated that workshops (73%), coaching and/or mentoring (62%), and access to educational design staff (55%) were provided by both their university and school/program. Half of the respondents stated that financial support (52%) and faculty self-development time (50%) were provided by their school or program only, while nine in ten respondents noted that Teaching and Learning Centers (90%) and formal entities that develop teaching excellence (88%) were provided only by the university.

Respondents were given the option of providing "Other" institutional opportunities and resources. These open-ended comments are grouped into salient themes below. Note that the comments indicated by multiple (i.e., more than one) respondents and grouped into themes are ordered by frequency from most to least number of respondents. Again, comments from unique, individual respondents are arranged thematically based on the flow of the data.

Comment	Multiple respondents	Unique respondent
Release time and/or funding for faculty self-development	X	
Online teaching excellence course(s) with modules that can be completed as needed	X	
Regular collaborative faculty meetings on teaching (including remote/hybrid learning)	X	
Regular faculty retreats focused on specific education/teaching issues	X	
Peer evaluation terms (and program peer review process) for (in)formal evaluation	X	
Annual university teaching event with speakers and breakout sessions		X
Regular communication of teaching excellence opportunities across departments, schools, and partner universities		X
On-demand assistance with (electronic) course implementation and technical support		X
Instructional coaching initiative (one-on-one mentoring by a professor of practice in conjunction with relevant administration that includes instructional design, faculty evaluation, adjunct faculty training, teaching tips communication, and regular teaching workshops/roundtables)		X
Faculty-led distance education hub		X
Student assessment center		X
Award for teaching excellence		X

These themes indicate not only the importance of faculty self-development time, but also the value in faculty collaborating (e.g., through meetings, retreats, and peer evaluations) to share teaching research and "promising practices."

This first question also asked respondents to indicate whether a listed opportunity and/or resource was in their "top three" for perceived faculty participation and, separately, for perceived success in improving teaching effectiveness. Note that items placed in the "top three" were not ranked.

Table 2: Highest faculty participation and perceived success of stated opportunity or resource in improving faculty teaching effectiveness (n=34)

Respondents answering YES to "Opportunity or Resource Provided by Institution"	Listed in "top 3" for highest faculty participation		Listed in "top 3" foremost success in improving faculty teaching effectiveness	
	n	%	n	%
Coaching/mentoring (individual, peer, or group) (n=34)	17	50%	18	53%
Access to educational design staff (n=31)	16	52%	17	55%
Workshops (n=33)	14	42%	15	45%
Financial support (n=29)	12	41%	7	24%
Formal entity that develops teaching excellence (n=32)	10	31%	9	28%
Teaching and Learning Center (n=30)	8	27%	10	33%
Faculty self-development time (n=20)	8	40%	3	15%

Coaching/mentoring received the most "top three" designations for both highest faculty participation (n=17, 50%) and success in improving faculty teaching effectiveness (n=18, 53%).

For both categories, the resources receiving the second- and third-highest number of "top three" designations were also the same: access to educational design staff (e.g., instructional designer or technologist, n=16 or 52% for faculty participation and n=17 or 55% for success in improving faculty teaching effectiveness) and workshops (n=14 or 42% and n=15 or 45%, respectively). Again, respondents were not asked to rank each opportunity or resource listed but rather list which ones they would place in their "top three" for the designated category.

Financial support and faculty self-development time were notable for the difference among respondents who noted a particular resource "top three" for highest faculty participation and highest success in improving faculty teaching effectiveness. Financial support and faculty development time had a substantially higher percentage of respondents listed them in their "top three" for faculty participation (41% for financial support and 40% for faculty self-development time) versus teaching effectiveness (24% for financial support and 15% for faculty self-development time).

Content and Skill-Building Topics Addressed by Schools and Programs

Respondents were next asked (Question 2) about specific content and skill-building topics that their schools or programs supported through various faculty development activities related to teaching and learning (Table 2).

Table 2: Number and percentage of respondents whose school or program address (through faculty development activities related to teaching and learning) listed content or skill-building topics (n=34)

Content or skill-building topic (n=34 except "Other")	Addressed by institution	
	n	%
Course development	**31**	**91%**
Use of technology	**31**	**91%**
Course design	28	82%
Assessment of student learning	28	82%
Content delivery	26	76%
Learning theories	21	62%
Teaching for student engagement	21	62%
Integrating practice into teaching	19	56%
IPE for collaborative practice	17	50%
Other (n=18)*	12	66%

*Individual comments from unique and multiple (i.e., more than one and grouped into themes) respondents are listed below.

Each content or skill-building topic had at least half of respondents indicating institutional support, with course development and use of technology tied for the highest (91%).[2]

Responding institutions devote more attention to offering content and skill-building in hard skill areas (e.g., course development and the use of technology) and less to the "art of teaching" (e.g., learning theories and teaching for student engagement).

Respondents were given the option to provide "Other" content or skill-building areas that their institutions addressed through faculty development activities related to teaching and learning. These open-ended comments are grouped into salient themes below, again ordered from most to least frequent for those with multiple respondents.

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[2] There were a few content or skill-building topics, such as integrating practice into teaching (n=2), learning theories (n=1), and teaching for student engagement (n=1), where respondents did not know if their institution supported them through faculty development activities.

Comment	Multiple respondents	Unique respondent
Different teaching modalities (particularly online and hybrid courses) and how to make them more interactive	X	
Incorporating "real-world practice" into the classroom	X	
Techniques for reaching non-engaged students and how to provide quality feedback		X
Classroom management, communications, and accessibility		X
Incorporating social media into the classroom		X
Mentorship and building community partnerships (including service learning)		X
Service learning		X
Teaching efforts for publication		X

Conditions of Faculty Participation in Activities that Improve Teaching and Learning

Question 3 explored the conditions of faculty participation (e.g., required, incentivized, or neither) in activities that improve their teaching for optimal student learning. Note that institutions may have an array of such activities and conditions for their completion; thus, an institution may simultaneously require or incentivize certain activities for some (or all) faculty while not requiring or incentivizing others.

Only four respondents (12%) noted that their institutions neither required nor incentivized faculty participation in any learning activity (i.e., participation is voluntary), such as workshops, lunch and learns, courses, or conferences.

Most respondents indicated that their institutions offered at least one teaching and learning activity in which faculty participation was either required (53%) (e.g., for new or poorly rated faculty) or incentivized (59%) (e.g., to support institution-wide standards for teaching excellence, through annual reviews, benefits for promotion and/or tenure).

Respondents who answered "yes" were asked to provide brief explanations. The following themes emerged, all from multiple respondents and ranked from most to least frequent:

Teaching and learning activities are **required**…

- during onboarding and/or throughout the year for new faculty
- for faculty with poor teaching and/or peer evaluations – next steps could include further peer evaluation, performance improvement plans, mandatory trainings, and/or one-on-one coaching

- to facilitate mentorship between senior and junior faculty whether in groups or one-on-one for promotion for faculty in certain tracks (e.g., teaching and practice), and/or if faculty are struggling with mid-tenure review
- for annual evaluations (e.g., workshops, lunch-and-learns, etc.)

Teaching and learning activities are **incentivized but not required**…

- as part of the annual evaluation process, although there is no financial benefit
- for strengthening faculty cases for promotion and/or tenure
- through funding to attend workshops/meetings, develop online courses, and/or engage in other professional development opportunities
- through other means such as lunch-and-learns, teaching awards, and mentoring opportunities

Teaching and learning activities are **neither incentivized nor required**…

- but self-motivated faculty still do them because they want to become better teachers
- although resources for improving teaching skills are readily available (e.g., lunch-and-learns, trainings, workshops, faculty development centers, showcases, and retreats)
- even though they are encouraged and faculty know they can affect promotion/tenure decisions

Institutional Culture: Facilitators and Barriers to Planning, Implementing, and Participating in Faculty Development of Teaching and Learning

Respondents were asked open-ended questions (Q4 to Q7) about major facilitators and barriers to: (1) planning and implementing faculty development of teaching and learning activities, and (2) faculty participating in these activities at their schools/programs, respectively. All 34 respondents answered these questions. The comments below list the resulting themes ordered from greatest to least number of responses (i.e., all themes are representative of responses from at least two respondents).

Themes for Planning and Implementing Faculty Development of Teaching and Learning Activities	
Facilitators	Institutional culture for teaching excellence
	Institutional support for faculty development
	Teaching and learning centers
	Access to resources, especially instructional designers
	Tangible benefits to faculty
Barriers	Lack of time, funding, and resources
	Prioritization of research
	Lack of institutional culture for teaching excellence
	Lack of tangible benefits to faculty
	Lack of infrastructure to support teaching
	Lack of agreement on teaching goals within institution

Themes for Participating in Faculty Development of Teaching and Learning Activities	
Facilitators	Institutional culture for teaching excellence
	Self-motivation to improve teaching skills
	Institutional support for faculty development
	Tangible benefits to faculty
Barriers	Lack of time, funding, and resources
	Prioritization of research
	Lack of tangible benefits to faculty
	Lack of interest in teaching

The following section expands on the themes above with representative quotes that reflect detail and context regarding the institutional facilitators and barriers to faculty SoTL development. Note that all themes were mentioned by more than one respondent.

Major institutional **facilitators** to respondents planning and implementing faculty development of teaching and learning activities at their institutions:

- institutional culture for teaching excellence
    - "keeping up with current trends [in teaching and learning excellence] at the school and program level [is] part of our educational mission – so… we put a lot of value into the development of teaching and learning of our faculty."
    - "we have a culture of people wanting to be good instructors/good teachers and that is generally encouraged."
    - "we all help each other out (we're very collegial, there is a lot of informal/formal mentoring)."
- institutional support for faculty development
    - "the MPH office provides leadership; sometimes the faculty will lead an initiative (e.g., when concerned about student ratings [or] specific opportunities to address concerns like plagiarism or problems with student work)… faculty have access to whatever is going on at their partner universities… [and there is] lots of collaboration… around issues with educational technology across the… universities."
    - "as Academic Dean, I can go to THE Dean and he will support me (e.g., revamping [the] student evaluation system)."
    - "[our] associate deans for academic and faculty affairs… both monitor faculty progress in teaching and advocate on their behalf."
    - "our [human resources] person is a chief people officer. He helped do a values clarification at the whole institution so that we are a values-based institution. Teaching is not part of the values, but values include kind-heartedness and one team, and he has provided a lot of incentive for faculty development."

- teaching and learning centers
  - "[the] university has established [and expanded] a center for teaching and learning… so they are signaling its importance and providing specific tools for improving teaching effectiveness. They do outreach to deans and department chairs to encourage faculty engagement [and] may even start to mandate instructors… learn how to teach online. So far, [it is just encouraged], and [they] need to assess readiness to go online."
  - "[the university's center for advancement of learning] disseminates activities and faculty are able to attend."
- access to resources, especially instructional designers
  - "faculty development is a major part of our union contract and [the] university buys in."
  - "[the] institution has a newly-renovated faculty development center right in the library. This center offers classes in teaching effectiveness which facilitate good teaching."
  - "there are faculty development opportunities at [the college, health care professions schools, and university levels] that are widely disseminated. There are face-to-face and virtual activities. Faculty also have funding for conferences and are usually funded to any conference they are presenting in, including Teaching and Learning conferences."
  - "we have an instructional designer within the college who is charged with creating and implementing activities."
  - "[we] have [experts that are brought in and financial] resources… on campus… [and] a committee that plans and implements activities."
  - "[having a] budget for faculty development and program control over them [is important]."
- tangible benefits to faculty
  - "[faculty] can be promoted and tenured based on teaching excellence and scholarship (there is a track for teaching). Annual evaluations [also] consider teaching excellence and scholarship. [Faculty are surveyed] about needs for teaching [and there are potential funds] available for faculty development."
  - "[incentives include getting into the prestigious] Academy for Teaching Excellence, teaching awards [with money, and] recognition for teaching and mentoring."
  - "[the] academic affairs committee [rigorously reviews] course syllabi [and teaching excellence is included in] annual faculty reviews between faculty and department chairs… [there is also a] teaching excellence committee [and] university-wide teaching award."
  - "course evaluations are public to the entire community (anyone with a university login) and that helps in getting people to think about teaching."

Major institutional **barriers** to respondents planning and implementing faculty development of teaching and learning activities at their institutions:

- lack of time, funding, and resources
  - "people want to be good teachers; they care about their students, but they have competing priorities [and a] zero-sum game around time [where the] reward structure is not conducive to spending too much time on teaching – got to get the grant or paper out."
  - "even though it's a priority and we have someone at the school level that does this as part of their job, there isn't much budget for this, which limits time and resources for these activities. [This] could be incentivized better (or required for all faculty or for faculty with poor ratings) to improve participation rates."

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- lack of institutional culture for teaching excellence
  - "[there is] not a lot of buy-in for teaching excellence; "this is great, we should do it" – but nobody shows up. It's the same group that show up time and time again. [Even if your] sole mission is teaching, it's hard to carve out extra time. [It's] not necessarily that people aren't supportive, but… we don't have a culture of saying yes [and showing up]."
  - "[there is a culture where faculty think] that they know best when it comes to teaching."
  - "administration culture [with the mindset that faculty need to do this sort of stuff on their own] needs to change to be one where faculty are encouraged to grow."
- prioritization of research
  - "pressure to do research supersedes teaching."
  - "[the] biggest (only) barrier is that we are a R1 university and that (research) is what the culture cares about the most."
- lack of tangible benefits to faculty
  - "teaching is second-level to some faculty in terms of what they feel is important to do [research productivity] for promotion."
  - "criteria for promotion as teaching faculty is similar [to research faculty] (e.g., publishing on teaching, getting grants, national reputation), but it is harder to get these as a teacher so it is perceived to be harder to get promoted."
- lack of an infrastructure to support teaching
  - "faculty may not be aware of all the resources because schools can pick and choose [which resources to offer and/or communicate]."
  - "[the] university has not embraced online teaching and learning, so [there is] minimal support for faculty who teach online, which makes it not as useful for those faculty who teach in the hybrid program."
  - "[being completely virtual], we lack the synergy that sometimes happens when people run into each other. We need to be more purposeful in setting up opportunities for synergy among colleagues because organic opportunities don't occur."
  - "[instructional designers] can be formulaic (e.g., don't do a needs analysis to fully make in-depth recommendations), so faculty development doesn't happen. It is important for [the school, program, and/or department] to have their own instructional designers, because [those at the] university level don't know [the] content, students, field, etc."
- lack of agreement on teaching goals within institution
  - [the] priority of [the medical school] may not align with what the program wants to do [and there is a] lack of centralized resources for teaching and learning."
  - "one of [the] largest barriers is the medical school. They're like the elephant in the room. They… mostly lecture and archive lectures so that students can watch on their own. They're such a big part of [the] institution, so when this comes up at [the] institutional-level, they're not interested, although this is changing a little."

Similarly, the following section expands on the themes in Table 4 (above) with representative quotes that reflect detail and context about major facilitators and barriers to faculty SoTL participation.

Major **facilitators** to respondents participating in teaching and learning activities at their institutions:

- self-motivation to improve teaching skills
  - "[faculty participate out of] genuine interest – [they] want to improve [their] teaching and incorporate new ideas."
  - "faculty love teaching [and] are paid well… they like having their own course. [Help is given] for organization and support for teaching [as well as] handholding for [technology] tools (e.g., Zoom, Brightspace)."
  - "[faculty have an] internal drive to teach well… Even before [COVID-19], faculty realized [the] need to incorporate more technology, including [learning management systems] like Canvas. [We] started requiring faculty to do… additional contact time online with students; this is particularly important with millennials and post-millennials."
- institutional culture for teaching excellence
  - "we have a pretty good culture of wanting to teach well and excel in the classroom. Faculty want to improve and incorporate new styles and keep things fresh – most faculty want to do this. Individual faculty commitment to [the] overall school mission is also a facilitator, as we are training future public health professionals."
  - "[the] collegiality that one derives from being in a session with colleagues [is part of the]…culture of learning and teaching. Typically, activities have a faculty-driven agenda. We're a teaching university, [and] the fact that teaching is the only required focus facilitates truly engaged faculty."
  - "teaching is very independent and faculty appreciate [the camaraderie and] opportunity to talk about teaching and learning, so setting aside space to do that is good. Programs have been good so faculty feel they get something out of them. Faculty input is [also] sought to help set the agenda for these programs."
- institutional support for faculty development
  - "[the] department head [encourages faculty] to take advantage of university-wide resources; our diversity officer will also encourage participation."
  - "individual departmental attitudes toward participating [in teaching and learning activities] have generally been supportive."
  - "lunch-and-learns [centered on teaching are] readily available. People who go out to trainings come back and report at the lunch-and-learns."
  - "we make it relatively painless; [faculty] don't have to worry that it will come out of their pocket. Training courses are free so there's no real hindrance to faculty development, [and there are] discussions at faculty meetings about improvement and best practices related to teaching. For example, this summer we have a series of meetings devoted to best practices in remote teaching."
- tangible benefits to faculty
  - "[incentives include] mini-grants, student mentorship for future faculty roles, [and] teaching awards."
  - "[there are] minor financial incentives, but not enough to appeal to everyone – [participation is done] more [in] self-interest or at [the] behest of [the] chair."
  - "incentives [are not huge] (e.g., $500 to $1000 [in] summer stipends to move a course online)."

Major **barriers** to respondents participating in teaching and learning activities at their institutions:

- lack of time, funding, and resources
    - "depending on the track, with all of the different demands (advising, teaching, research, administration, community engagement/service), it can be difficult to intentionally set aside the time for teaching and learning development."
    - "if [faculty] had more time and money, almost all would want to be better educated about this kind of stuff."
    - "no universally available times [for faculty to meet], but an attempt [is made] to create a nearly universal time slot – all workshops are recorded and made available to faculty."
    - "[there is a] gap in how faculty are trained in that they don't have training in research about pedagogy. Faculty don't feel as confident about writing teaching grants or articles."
- prioritization of research
    - "research dollars are king"
    - "[research is] the primary focus of most faculty, so even if they are interested in teaching, their priority will be to put their effort toward research first."
- lack of tangible benefits to faculty
    - "if I were a research faculty coming up for tenure, I wouldn't want to spend any time on teaching development if I could spend the time on applying for a grant or writing a paper."
    - "effective teaching is an afterthought. There are no incentives for being a good teacher while there are plenty of incentives for research grants."
    - "[there are] no tangible benefits… with increasing quality of teaching. Faculty sometimes think they are really good teachers when in fact they are not."
- lack of interest in teaching
    - "since they are mostly incentivized but not required, some faculty who do need development in teaching and learning may not feel the desire to participate in them."
    - "[there is a] misunderstanding that being a content expert makes you a good teacher; people in the research track may think that they're good at being teachers."

Sources and Purposes of Evidence Collected to Measure Faculty Teaching Effectiveness

Question 8 addressed sources and purposes of evidence used to measure the effectiveness of faculty teaching (Table 3). The average number of sources selected (including "Other") by respondents was seven, with a range of three to 11.

Table 3: Number and percentage of respondents whose institutions use various sources of evidence to measure faculty teaching effectiveness (n=34)

Source of evidence to measure teaching effectiveness (n=34 except for "Other")	Used by institution		Not used by institution		Don't know if used by institution	
	n	%	n	%	n	%
Student evaluation of course	34	100%	0	0%	0	0%
Teaching awards and recognition	28	82%	5	15%	1	3%
Instructor-initiated evaluation or reflection, whether voluntary or mandatory	26	76%	7	21%	1	3%
Alumni feedback	26	76%	8	24%	0	0%
Student evaluation of advising	22	65%	11	32%	1	3%
Workforce/employer feedback	22	65%	12	35%	0	0%
Student interviews or focus groups	21	62%	12	35%	1	3%
Peer and/or supervisor evaluation of classroom performance for teaching improvement	19	56%	15	44%	0	0%
Data analytics of student performance	18	53%	14	41%	2	6%
Peer and/or supervisor evaluation of classroom performance for promotion and tenure	15	44%	17	50%	2	6%
Professional certifications (e.g., CPH, CHES)	7	21%	26	76%	1	3%
Other (n=21)*	7	33%	14	67%	0	0%

*Individual comments from unique respondents (i.e., not grouped into themes) are listed below.

All respondents noted that their institutions used student course evaluations to measure faculty teaching effectiveness.

> More than three-quarters of participants stated that teaching awards and recognition (82%), instructor-initiated evaluation or reflection (76%), and alumni feedback (76%) were used by their institutions to measure teaching effectiveness.

Only peer and/or supervisor evaluation of classroom performance for promotion and tenure and professional certifications had fewer than half of respondents indicating that their institutions used them in evaluating teaching.

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Other sources cited for how teaching effectiveness is measured include the following (all of which were cited by only one respondent):

- institutional-level review of course evaluations
- degree program governance processes (i.e., committee student representatives who provide overall program-level feedback rather than instructor-level feedback)
- key LMS metrics related to faculty performance around quality standards
- "boot camps" and town halls
- student competency mastery as demonstrated in competencies portfolio
- alumni employment rates and outcomes, as well as how alumni help current students with internship placements, etc.
- pedagogical research

Question 9 examined the purposes for which institutions use evaluation data on teaching effectiveness (Table 4). Note that the survey question was explicit in stating the assumption that all ASPPH members use teaching evaluation data for accreditation, therefore accreditation is not included in the table.

Table 4: Number and percentage of respondents whose institutions use evaluation data on teaching effectiveness for various purposes (n=34)

Purpose of using evaluation data on teaching effectiveness (n=34 except for "Financial incentives" and "Other")	Yes		No		Don't Know	
	n	%	n	%	n	%
Promotion and/or tenure	28	82%	4	12%	2	6%
Course and curriculum design, development, and/or delivery	26	76%	8	24%	0	0%
Teaching assignments	24	71%	10	29%	0	0%
Faculty hiring	21	62%	9	26%	4	12%
Faculty development program planning and/or implementation	18	53%	15	44%	1	3%
Financial incentives (e.g., raises and/or bonuses not linked to promotion or tenure) (n=33)	10	30%	20	61%	3	9%
Marketing and/or student recruitment	7	21%	24	71%	3	9%
Other (n=20)*	4	20%	16	80%	0	0%

*Individual comments from unique respondents (i.e., not grouped into themes) are listed below.

More than four-fifths (82%) of respondents indicated that their institution used teaching evaluation data for promotion and tenure. In addition, around three-quarters of participants noted that evaluation data on teaching effectiveness is used in course and curriculum design, development, and/or delivery (76%) and teaching assignments (71%).

Other responses for how evaluation data are used include the following (each mentioned by only one respondent with no grouped themes):

- faculty improvement – statement of improvement required by graduate school committee who then makes recommendations
- annual faculty review and assessment (which determines merit increases)
- program support within the university
- student support (e.g., remediating students who do not pass a competency)
- outreach among other schools within university and pedagogical resource/research sharing

Faculty Appointments and Promotion/Tenure

The next question (Q10) relates to the recognition of scholarly teaching and learning and addresses faculty priority areas available for faculty appointments and promotion/tenure. Regarding the faculty priority area of most interest, instructional/teaching, 91% indicated the availability on an instructional/teaching area for appointment and promotion/tenure. Of these respondents, 14% stated these positions could be tenure-leading, 41% stated the positions are non-tenure leading, 21% percent said that their institution offers both tenure-leading and non-tenure leading options, and 24% indicated that tenure was not applicable at their institution.

When respondents were invited to comment further on their institution's promotion/tenure (P&T) policies, their comments revealed the **diversity in P&T policies** across institutions:

- "teaching faculty have two tracks – tenure-track and non-tenure track. Tenure-track teaching faculty are expected to have some research activity related to teaching methods."
- "[the] instructional/teaching track is all teaching (lecturer, senior lecturer, master lecturer)."
- "everyone has [the] same type of appointment: all tenure-track, and each faculty member can choose which two of the four areas (research, teaching, practice, service) will be their areas of excellence for tenure and promotion."
- "[we have] one tenure track; [faculty] can get promoted based on research/teaching, practice excellence, or scholarship – BUT [they] can only get tenured based on research or teaching "
- "[we have one] tenure-track line [with] two foci: distinction in both teaching and research and good progress in a third area (clinical or service)."
- "[there is] no tenure at this institution. Faculty can apply for senior faculty status which is equivalent to promotion."
- "[our] institution does not have tenure, but faculty have rolling appointments (1 year for assistant, 2 years for associate, 3 years for full)."
- "[there are] two non-tenure tracks: 1) research – promotable only on research excellence and scholarship [with] only a little teaching [and] 2) clinical/teaching/practice – promoted based on teaching excellence and scholarship or clinical/practice excellence and scholarship."
- "[there is] some discussion of [a] non-tenure research track (100% on soft money) [that] may be available in the future; [the] same is true for the clinical track."

A major theme was the importance of research productivity for promotion and tenure **and the lesser value of teaching** toward this same end:

- "research and other activities combined are counted in tenure decisions… teaching will not be enough for tenure without other activities (namely research)."
- "teaching is a 'medium' priority for tenure-track; awesome teaching would not outweigh weak research performance."
- "tenure-track faculty focus/priority is on research… promotion/tenure is dependent on research activity. Research track faculty are not allowed to teach. Teaching faculty are allowed to do research, but are not required to. Practice faculty can pretty much do whatever; [they are] expected to have some type of "practice," but [their] main focus is also on teaching."
- "current requirements for the teaching track are not realistic. We have the teaching track, but no one has ever been promoted or tenured based on the teaching track. It requires success in research (measured by external funding, PI status, publications) as junior faculty on the research track and in addition requires a heavier teaching load."

Twenty-five out of 31 (81%) respondents responded that they could share their faculty policies on the role of teaching in promotion and tenure. Eleven of the 25 (44%) followed through by emailing their policies to their respective phone interviewers. An initial review and analysis of this small sample of P&T policies, which cannot purport to represent ASPPH members' views, practices, or policies on the issue, reveal few points of commonality.

Production of Scholarship in Teaching and Learning

Faculty Conducting and Disseminating SoTL and Applicability to FTE Allocation and/or Promotion/Tenure

This section corresponds to the final two questions in the survey, which address the production of scholarly teaching and learning.

> The production of SoTL is based on and serves as the most visible marker of prior and ongoing consumption of such scholarship.

The responses indicate the following:

- eighteen out of 34 (53%) respondents stated that faculty at their institutions conduct research on teaching and learning and that approximately one to 12 faculty currently conduct this research; the median was three faculty.
- fifteen of these 18 respondents (83%) reported that faculty at their institutions disseminate this research through peer-reviewed presentations and/or publications.
- fifteen of 17 respondents[3] (88%) reported that SoTL scholarship counts toward promotion/tenure, while substantially fewer said the same for FTE allocation (61%) (Table 5).

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[3] One respondent skipped this P&T question; thus, the n equals 17, not 18.

Table 5: Number and percentage of respondents who conduct research on teaching and learning whose institutions count it toward promotion/tenure and/or FTE allocation (n=18)

Research on teaching and learning counts toward…	Yes, counts		No, does not count	
	n	%	n	%
Promotion/tenure (n=17)	15	88%	2	12%
FTE allocation (n=18)	11	61%	7	39%

Faculty Funding and Time Allotted for Research on Teaching and Learning

These 18 respondents were also asked about how faculty who conduct research on teaching and learning are funded and allotted time for this research. A substantial number of respondents noted that their institutions did not provide any mechanism for funding or allotting time to faculty – this was the most common theme for both questions. Other themes that emerged included the following (all from multiple respondents unless indicated otherwise in the table below, ordered from most to least frequent):

Faculty who conduct research on teaching and learning indicated that they are funded through…

- internal sources (e.g., Academy of Master Teachers that does not require membership, Provost's fellowship, or through the university, college, and/or department)
- external sources
- combining internal, external, and discretionary funds (i.e., self-funded)

Faculty who conduct research on teaching and learning indicated that they are **allotted time to research (through)**…

Comment	Multiple respondents	Unique respondent
On top of regular duties because they are committed (although they may get some time if they asked for it)	X	
By reducing their teaching effort (e.g., course release)	X	
Only if externally funded	X	
Depending on the track – if teaching, they may be granted time as research on teaching and learning is expected of them	X	
College-funded research		X
Professional association grants for mentored teaching		X
Service (e.g., 20-40% for 9-month faculty)		X
Sabbatical		X

These themes seem to indicate that, as individual faculty members, it can be difficult to obtain the funding and/or time to conduct research on teaching and learning; and furthermore, even when they are available, this research is secondary to other faculty responsibilities.

DISCUSSION

Key Findings

This research is seminal as it represents the first institutional study of the scholarship of teaching and learning in ASPPH-member, CEPH-accredited schools and programs of public health. This inquiry and its findings iterate with the Teaching Working Group of the Scholarship of Teaching and Learning Task Force, which has called for evidence-based educational practices for public health and the need for evidence-based evaluation of teaching (**here**). Likewise, the Course and Teacher Evaluations Working Group of the Scholarship of Teaching and Learning Task Force has produced recommendations on methods, practices, and advocacy to improve evidence-based approaches and metrics in student course and teacher evaluations (**here**).

Institutional survey results from this study show that both universities and individual schools and programs are providing opportunities and resources that support faculty development in teaching and learning, but there is much more work that could be done. While not addressed as a specific area of inquiry in this study, the challenges identified in the report appear to reflect the difficulty of both in-person and remote/online means of conducting SoTL.

> Strengthening institutional programs, practices, and policies are not only possible, but necessary to strengthen the scholarly base of these institutions' educational mandates and to improve student learning outcomes and competency attainment that are so important to education in public health.

The working group presents its significant findings followed by key recommendations for action on scholarly teaching and learning in the following pages.

Findings on Institutional Programs, Practices, and Policies that Promote the Consumption or Use of SoTL (Scholarly Teaching)

Responding institutions devote more attention to offering content and skill-building in technical skill areas (e.g., course development and the use of technology) for faculty consumption and less to the "art of teaching" (e.g., learning theories and teaching for student engagement). Content and skill-building activity in areas where schools and programs could and should excel, such as integrating practice into student learning, is not as available as expected in institutions that seek to produce graduates ready to apply their learning to solving real-world public health problems. Such integration of practice into teaching and learning requires institutional commitment, faculty time, and other resources compared to traditional, didactic delivery. Content and skill-building activity in areas where faculty struggle, such as interprofessional education (IPE) for collaborative practice, are also lacking. Creating, implementing, and sustaining IPE is challenging, and faculty need new knowledge, skills, and perspectives both to prepare their students and time and other supports to build the collaborative relationships that enable students to gain important experiences in interprofessional practice.

Respondents rated the following faculty development strategies as most successful for improving teaching effectiveness and SOTL: access to coaching and mentoring (individual, peer, or group), access to educational design staff and teaching workshops. Faculty likely could benefit from institutional programs and policies that offer more intensive training with expert peers and support from instructional design professionals to improve their teaching. Strengthening the institutional culture for teaching excellence is not only a key facilitator, but also works to remove barriers. These opportunities represent potential means to accelerate scholarly teaching by increasing the adoption of proven methods of high-impact teaching practices. Faculty self-development time and financial support, which were reported to have fairly high faculty participation, were rated lowest for improving teaching effectiveness. The facilitators and barriers for planning, implementing, and participating in faculty teaching and learning development activities were very similar.

Looking at the evidence to assess teaching effectiveness in this survey, the average number of sources of evidence selected by respondents to evaluate teaching was seven (ranging from three to 11). The number of sources of evidence may represent holistic review processes, but this interpretation cannot be determined from the data. Further, it is unclear how the evaluation data are used to improve teaching and learning and student outcomes. It may be that many schools and programs expect faculty to use evaluation data for self-improvement, however, evaluation data does not appear in use to strengthen the teaching enterprise, education programs, and/or an institutional culture of scientific inquiry into and the evidence-based practice of high-quality teaching.

> Clearly, the evaluation of teaching effectiveness and its influence on learning outcomes in schools and programs of public health requires further research to illuminate practices and policies that are delivering the most meaningful results.

Both the quantitative (e.g., the lower percentage of respondents for whom teaching positions lead to P&T compared with research positions) and qualitative (e.g., the major theme of the lesser value of teaching toward gaining P&T) data demonstrate a low priority on and low bar set for teaching effectiveness in promotion and tenure guidelines. Promotion and tenure guidelines should be reevaluated and elevated to recognize the importance of quality teaching not only to the overall mission of schools and programs of public health but to increase accountability in response to accreditation, consumer, and employer demands for improved student learning outcomes.

Findings on Institutional Programs, Practices, and Policies Supporting the Production of SoTL (Scholarly Research)

Moving schools and programs to value and prioritize the production of scholarship in teaching and learning in addition to prioritizing research is important for assuring students are gaining from impactful educational experiences that will prepare them to advance the health of the public. The scholarship of teaching and learning represents critical research as it advances the practice of teaching through the rigorous investigation of student learning, with the purpose of developing novel teaching methodologies and practices that can lead to the measurable enhancement of student learning. The results of the investigation are disseminated through high quality scholarly outlets, conferences, and general or discipline-specific journals.

Survey results indicate less of a commitment to support faculty to conduct research on the scholarship of teaching and learning as compared with other kinds of research. Eighteen out of 34 (53%) participants responded that faculty at their institutions conduct research on teaching and learning and of these, an estimated one to 12 (median 3) faculty currently conduct this research. However, not all these schools and programs report that research time is protected or that the research counts toward promotion and tenure, as is standard practice with non-pedagogical research. This finding acknowledges the lower value placed on the conduct of scholarship of teaching and learning research in comparison to more traditional research activities. While the small sample of P&T guidelines received in the study (n=11) cannot serve to represent the ASPPH members' views, practices, or policies on the issue, the extremely wide variation in the treatment of excellence in teaching in promotion and tenure is an area for additional research.

Strengths

The sampling resulted in balanced participation between ASPPH-member schools and programs, with 47% of respondents representing schools of public health and 53% representing programs. This representation correlates closely with the 50/50 representation of schools versus programs among the 128 ASPPH-member institutions at the time of the survey. The same was true for private (32% in the sample, 38% in ASPPH membership) and public (68% and 62%, respectively) institutions.

The response rate of 67% was robust, especially given the length of the survey and its undertaking during the early days of the COVID-19 pandemic that added significant stress and uncertainty among the faculty surveyors and respondents. Engaging the working group members – all of whom are administrative leaders at ASPPH-member institutions – to interview faculty respondents, as opposed to circulating a digital survey, may have enabled a greater degree of relevant probing on questions with qualitative components. Although there is no way of knowing whether saturation was reached (i.e., where enough qualitative data was collected so that no new themes emerge), particularly with a primarily quantitative survey, the resulting data still yielded strong themes in the qualitative components.

The opportunity to vet initial findings from a draft version of the report with audience members in an open "town hall-type" session at ASPPH's 2021 Annual Meeting enabled the WG to benefit from excellent questions and comments from vested ASPPH-member stakeholders and interested partners in refining and finalizing this work.

Limitations

Limitations of the survey include a small sample size from which to draw quantitative conclusions. Unique programs, practices, and policies at additional, potentially innovative, ASPPH-member institutions may have been missed. In addition, the framing of much of the qualitative component of the survey as "Other – please comment," lessened the potential data richness that could have been gathered in structured focus groups and/or key informant interviews. Data may have been incomplete, either from lack of opportunity to respond or potential transcription errors. It is important to note that individual faculty respondents may also not have had full knowledge of SoTL issues, particularly SoTL-related assets and deficiencies at their institutions. Only one faculty member was interviewed from each institution, and their responses should not be taken to represent the full report of programs, practices, and/or policies of that institution. There is some possibility of respondent (courtesy/social desirability) bias, especially given the non-anonymous nature of the survey and "small world" of academic public health.

The survey was administered at the beginning of the coronavirus disease 2019 (COVID-19) pandemic and was not designed to measure the impact of pandemic on the scholarship of teaching and learning. However, as of this writing, COVID-19 is having and will continue to have an indelible effect on both teaching and student learning. Many of the schools and programs interviewed were in the process of transitioning to a remote learning environment. The teaching realities encountered during COVID-19 could result in the reporting of higher levels of development activities related to teaching and learning, particularly related to course development, use of technology, and content delivery. The pandemic is another topic that will need further exploration by other groups far into the future.

CONCLUSIONS

This report advances the understanding of institutional programs, practices, and policies across ASPPH-member schools and programs in support of two of the association's strategic objectives: to provide resources to support and strengthen faculty teaching and practice skills that lead to academic success as well as advance and strengthen education for public health to meet the evolving needs of the field. It also points to areas for deeper probing and poses additional research questions that could identify superior models and produce data regarding the return on investment for institutional efforts in scholarly teaching and learning. Such discovery could illuminate potential paths forward that institutions may consider to improve the state of teaching and learning in public health academe. The promotion of scholarly teaching and greater recognition of the scholarship of teaching and learning could encourage more faculty to conduct and disseminate research on teaching and learning.

Lastly, this study is anticipated to inspire and provoke open conversations in which schools and programs could consider opportunities to improve the institutional culture around teaching and learning that advances and strengthens education for public health for everyone, everywhere to meet the evolving needs of the field.

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RECOMMENDATIONS

The working group proposes the following recommendations to improve teaching for accelerating student learning outcomes that contribute to a strong public health workforce. The recommendations are organized by key public health actors responsible for accredited education in public health.

Table 6: Multi-level recommendations derived from the presented evidence.

Actor/Target*	Recommendations

Public Health Deans and Public Health Program Directors/ Leaders	Deans of schools/colleges and directors of public health programs (a.k.a. the primary members of ASPPH) could:
	▪ *request* that faculty and department chairs quantify SoTL achievements in their Annual Activity Reports
	▪ *set* annual SoTL goals for the school/program to measure progress in assessing the consumption and/or consumption of SoTL, such as on indices of:
	   o value
	   o incentives (e.g., awards, mini-grants, funding),
	   o resources (e.g., instructional designers),
	   o activities (e.g., coaching and mentoring faculty programs, workshops), and
	   o student learning outcomes
	▪ *offer* adult learning and/or teaching instruction as part of the curriculum of doctoral programs
	▪ *ensure* hiring committees assess the teaching record and teaching potential of applicants for faculty positions
	▪ *allocate* resources to incentivize SoTL (e.g., service recognition, compensated time, supplemental pay, and teaching recognitions or awards.
	▪ *provide* training opportunities for faculty on the scholarship of teaching and learning
	▪ *appoint* an ad-hoc committee that:
	   o evaluates the:
	      ▪ prior bullet items; and
	      ▪ balance between teaching and research priorities, establishment of faculty benefits, and interest in/commitment to teaching
	   o includes decision-makers who can implement the proposed changes, individuals who understand and support SoTL, and representatives outside of the institution or academic public health who value SoTL.

Promotion and Tenure Committees	Public Health School Promotion and Tenure (P&T) committees/councils could: ▪ *recognize* measured outcomes of SoTL as one of the many ways for faculty to achieve excellence in both "Research" and "Teaching" and articulate this standard in promotion criteria

	articulate in promotion and tenure guidelines how SoTL and the quality of instruction is used to achieve excellence in both: "Teaching," for example, by applying evidence from SoTL to course design and delivery and by producing and disseminating SoTL "Research," for example, by securing funds and producing publications on effective knowledge, attitudes, and practices by trainees and/or graduates of accredited schools and programs of public health in the workforce Programs with Faculty from Diverse Universities, Non-Public Health Departments and Schools could: ***negotiate*** recognition of SoTL in the promotion criteria for program faculty in non-public-health disciplines
Department Chairs	Chairs could: ***convey*** to faculty during departmental meetings that SoTL: - could get counted as "funded and unfunded research" and - is valued towards: - teaching awards and - promotion (e.g., meeting "excellence in teaching" criteria) ***develop*** departmental SoTL goals that link to their institution's SoTL goals ***establish*** a program linking SoTL and teaching mentors (of any rank) with new or interested faculty to: - improve faculty teaching effectiveness and SoTL - share outlets for SoTL dissemination. ***incentivize*** SoTL and teaching mentors' efforts (e.g., service recognition, compensated time, supplemental pay) ***create*** and/or actively promote annual teaching recognitions or awards, that also include SoTL contributions, to faculty (at the department, institution, or ASPPH-level). ***assess*** faculty during annual evaluations on measures of SoTL ***select*** a SoTL project to advance a specific initiative within the department.
Faculty	All levels of faculty should: ***consider*** a SoTL project that can be used for their professional development - this may help advance their institution's compliance with CEPH's mandates for E3. Faculty Instructional Effectiveness (e.g., faculty currency, faculty instructional technique, and/or school- or program-level outcomes) ***discuss*** with their chair how to advance a SoTL project along with necessary resources (e.g., protected time, funds for conference or publication, a student assistant, etc.)

	▪ **discuss** this report and implications for the value and impact of SoTL at their institutions through:
	    ○ informal events (e.g., hosting of brown bag lunches, creating a teaching and learning community) and/or
	    ○ formal events (e.g., conducting an institutional-level "faculty council," departmental faculty meetings etc.)

CEPH	At the next CEPH criteria revision, CEPH could: ▪ **add** inclusive language that SoTL represents a viable means to "integrate research and scholarship with their [faculty] instructional activities" (**CEPH Criteria, E.4 Faculty Scholarship, p. 40**).

ASPPH	In support of **ASPPH's strategic framework**, ASPPH could:
	▪ **continue** to motivate and recognize individuals and organizations for SoTL and teaching excellence with initiatives and awards
	▪ **host** at least one session in education-focused meetings and conferences on:
	    ○ measuring SoTL outcomes and using them to foster SoTL improvements
	    ○ addressing institutional cultures that are less supportive of teaching or SoTL
	▪ **develop** spaces for SoTL practitioners to collaborate (e.g., online and/or at annual meetings) with each other and with other ASPPH groups who also work to elevate excellence in teaching and student learning
	▪ **support**, or partner with, journals and other media to disseminate peer-reviewed SoTL materials
	▪ **identify** promising practices on applying evaluation data to:
	    ○ advance student academic growth (knowledge, practice, etc.)
	    ○ strengthen instructor teaching effectiveness and research on SoTL

*Actor/Target-specific recommendations may also be applied to other actors/targets in the table, as appropriate.

APPENDIX A: ASPPH SCHOLARSHIP OF TEACHING AND LEARNING TASK FORCE INSTITUTIONAL PROGRAMS, PRACTICES, AND POLICIES WORKING GROUP

Chair

- Christine Arcari, PhD, MPH (University of Nebraska Medical Center College of Public Health)

Members

- Maggie Chorazy, MPH, PhD (University of Iowa College of Public Health)
- Joel Lee, DrPH, CPH (University of Georgia College of Public Health)*
- Tricia Penniecook, MD, MPH (University of South Florida College of Public Health)
- Annie Gjelsvik, PhD (Brown University School of Public Health)
- Nancy Kane, DBA (Harvard T.H. Chan School of Public Health)*
- John McGready, PhD (Johns Hopkins University Bloomberg School of Public Health)*
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- Juan Leon, PhD, MPH (Emory University Rollins School of Public Health)*
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- Shan D. Mohammed, MD, MPH, FAAFP (Northeastern University MPH Program), ex officio, chair, ASPPH Education Advisory Committee and chair, ASPPH Scholarship of Teaching and Learning Task Force

ASPPH Staff

- Elizabeth Weist, MA, MPH, CPH
- Jonathan Sung, MPH, CHES®
- Christine Plepys, MS
- Emily Burke, MPH, CPH

*indicates an ASPPH teaching award winner

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APPENDIX B: SURVEY INSTRUMENT

ASPPH ASSOCIATION OF SCHOOLS & PROGRAMS OF PUBLIC HEALTH

Scholarship of Teaching and Learning Institutional Workgroup Telephone Survey

Introductory phone script for the surveyor:

First of all, I'd like to express gratitude from the Association of Schools and Programs of Public Health (ASPPH) leadership for taking this time out of your schedule to assist, especially during this challenging period.

This phone survey is undertaken on behalf of ASPPH's Scholarship of Teaching and Learning Task Force (SoTL), which is under the jurisdiction of ASPPH's Education Advisory Committee. This survey has been sanctioned by the ASPPH Data Advisory Committee for dissemination to member schools and programs of public health.

One of the working groups under the task force is charged with exploring and analyzing institutional models, programs, and policies for supporting or enhancing the scholarship of teaching and learning. I am a member of this institutional models working group.

Your institution was chosen from among the 128 ASPPH-member schools and programs in a random sample to take part in this survey. We are seeking to survey 50 schools and programs in total. I expect that the survey should take ~45 minutes to complete.

ASPPH will report the survey findings in the aggregate with no identifying markers to your school or program nor the individuals interviewed.

Do you have any questions?

Let's begin!

ASPPH ASSOCIATION OF
SCHOOLS & PROGRAMS
OF PUBLIC HEALTH

Scholarship of Teaching and Learning Institutional Workgroup Telephone Survey

Respondent Information

* Respondent Name (NOT the faculty surveyor's name):

[   ]

  * Select respondent's School or Program name from the dropdown list.

[⬍]

  If school/program name is not listed, enter it here:

[   ]

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SoTL Consumption-related Questions

The first set of questions relates to Opportunities and Resources.

I am going to read a list of opportunities and resources that support faculty development of teaching and learning. For each item:

- 1a. Respond with "yes," "no," or "don't know" if your school/program or university provides the opportunity or resource.

- 1b. If yes, indicate the organizational level that provides this resource: University, Unit of accreditation (e.g. School or PH Program), or both.

After we complete the list, I will ask you two additional questions:

- 1c. Which three (3) opportunities and resources have the highest faculty participation rate?

- 1d. Which three (3) opportunities and resources have the most success in improving faculty teaching effectiveness?

[NOTE to Surveyor: Respondents may answer questions 1c and 1d with their own opinion, experience, or with data, as relevant. Select "Top 3" from the dropdown for each list item mentioned. The "Top 3" selections do not indicate a "ranking."]

	1a. Yes, No, Don't Know	1b. Select Level(s): University, Unit of accreditation (e.g. School or PH Program), or both.	1c. Opp./Resource with the highest faculty participation rate (Indicate Top 3)	1d. Opp./Resource that is the most successful in improving faculty teaching effectiveness (Top 3)
Workshops	⬍	⬍	⬍	⬍
Coaching/mentoring, individual, peer, or small group, whether formal or informal, e.g. working with a mentor or established educator	⬍	⬍	⬍	⬍

	1a. Yes, No, Don't Know	1b. Select Level(s): University, Unit of accreditation (e.g. School or PH Program), or both.	1c. Opp./Resource with the highest faculty participation rate (Indicate Top 3)	1d. Opp./Resource that is the most successful in improving faculty teaching effectiveness (Top 3)
Formal entity that develops teaching excellence, e.g. Teaching academy or Center for Teaching and Learning	⇕	⇕	⇕	⇕
Faculty self-development time, e.g. release time or FTE allocation to attend meetings/ conferences, webinars, etc.	⇕	⇕	⇕	⇕
Financial support to attend meetings, trainings, etc. and/or to purchase resources or materials or tools, e.g. purchasing case studies, hardware, or software, that improve teacher effectiveness	⇕	⇕	⇕	⇕
Access to educational design staff, e.g. instructional designer, instructional technologist, etc.	⇕	⇕	⇕	⇕
Teaching and Learning Center including similar entities	⇕	⇕	⇕	⇕
Other (Write In response below)	⇕	⇕	⇕	⇕

Other write in response:

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SoTL Consumption-related Questions

Now, we're going to focus on teaching and learning at your [school or program], specifically.

2. I am going to read a list of content or skill-building topics that may have been addressed by faculty development activities related to teaching and learning at your [school or program]. Tell me if your [school or program] addresses this content or skill-building topic by answering: "yes," "no," or "don't know."

Content/Skill-building Topics

	Yes	No	Don't know
Learning theories, e.g. adult learning theories, teaching millennials, learner-centered vs. content-centered, etc.	○	○	○
Course design, e.g. approaches to creating quality learning environments and experiences for students	○	○	○
Course development, e.g. creating a syllabus, competencies, and/or learning objectives, weighting of course components	○	○	○
Content delivery, e.g. problem-based learning (PBL), flipped class, case studies, team-based learning, project-based learning, etc.	○	○	○
Teaching for Student Engagement/Success, e.g. instructor preparation to: use design learning; communicate dynamically; stimulate critical, thinking; facilitate effective discussions, etc.	○	○	○
Assessment of student learning, e.g. tests, peer reviews, quizzes, homework, design of rubrics, how to assess individual students in group projects, etc.	○	○	○
Use of technology, e.g. online vs. in-person teaching, clickers for polling, how to detect plagiarism, course management systems, overuse/overload of technology, Quality Matters standards, etc.	○	○	○
Integrating public health practice into classroom teaching, e.g. how to bring real-world experiences to the classroom	○	○	○
Interprofessional education (IPE) for collaborative practice	○	○	○
Other (Write in response below)	○	○	○

Write in response for other

[   ]

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SoTL Consumption-related Questions

3. I am going to read conditions of faculty participation in activities that improve teaching and learning. Tell me if the condition applies at your institution, and if yes, provide a brief explanation.

3a. Condition of Faculty Participation:
Incentivized but not required? e.g. financial, annual reviews, benefit for promotion and tenure, etc.

○ Yes

○ No

○ Don't know

If "Yes," provide a brief explanation.

SoTL Consumption-related Questions

3b. Condition of Faculty Participation:
Required? e.g., new faculty, poorly-rated instructors, to support institution-wide standards for teaching excellence, etc.

○ Yes

○ No

○ Don't know

If "Yes," provide brief explanation.

SoTL Consumption-related Questions

3c. Condition of Faculty Participation:
Neither incentivized nor required. Voluntarily initiated by individual faculty? e.g. attending workshops, lunch and learns, and conferences, taking courses, etc.

○ Yes

○ No

○ Don't know

If "Yes," provide brief explanation.

These next questions are about Institutional Culture.

4. What are the major institutional facilitators to *planning and implementing* faculty development of teaching and learning activities at your school/program?

5. What are the major institutional barriers to *planning and implementing* faculty development of teaching and learning activities at your school/program?

6. What are the major facilitators to faculty participating in teaching and learning activities at your school/program?

7. What are the major barriers to faculty participating in teaching and learning activities at your school/program?

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SoTL Consumption-related Questions

The next questions relate to Teaching Effectiveness

8. I am going to read a list of sources of evidence for how your school or program is *measuring* teaching effectiveness. Tell me if your institution uses the source of evidence. Response options are "Yes," "No," and "Don't know."

Source of Evidence:

	Yes	No	Don't know
Student evaluation of course	○	○	○
Student evaluation of advising	○	○	○
Student interviews or focus groups	○	○	○
Peer and/or supervisor evaluation of classroom performance for promotion and tenure	○	○	○
Peer and/or supervisor evaluation of classroom performance for teaching improvement	○	○	○
Instructor-initiated evaluation or reflection, whether voluntary or mandatory	○	○	○
Data analytics/metrics of student performance/learning outcomes, e.g. LMS data	○	○	○
Teaching Awards and Recognition, e.g. election into an academy of master teachers	○	○	○
Alumni feedback	○	○	○
Workforce/Employer feedback	○	○	○
Professional certifications, e.g. CPH and CHES	○	○	○
Other (Write in response below)	○	○	○

Write in response for other:

[ ]

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SoTL Consumption-related Questions

9. For what purpose(s) are evaluation data on *teaching effectiveness* used by your school/program? The assumption is that it is used by all for accreditation. Tell me if your institution uses teaching effectiveness evaluation data for the purpose indicated. Response options are "Yes," "No," and "Don't know."

Purpose(s):

	Yes	No	Don't know
Faculty hiring	○	○	○
Teaching assignments	○	○	○
Faculty development program planning and/or implementation	○	○	○
Course and curriculum design, development, and/or delivery	○	○	○
Promotion and/or tenure	○	○	○
Financial incentives, e.g. raises and/or bonuses (not linked to promotion and tenure), etc.	○	○	○
Marketing and/or student recruitment	○	○	○
Other (Write in response below)	○	○	○

Write in response for other:

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SoTL Consumption-related Questions

This next part addresses Faculty Appointments

10. Which of the following faculty priority areas are available at your school/program for appointments and promotion/tenure? Response options are: yes, no, don't know.

Priority Areas are:

- Research
- Clinical
- Instructional/Teaching
- Practice
- Other

For each "Yes" answer, is the track tenure-leading?
Response options are:

- Tenure-leading (T)
- Non-tenure leading (N)
- Both (B)
- Not applicable (N/A), e.g. some schools/programs do not offer tenure.

	Yes, No, Don't Know	If "Yes," is it tenure track?
Research	⬍	⬍
Clinical	⬍	⬍
Instructional/Teaching	⬍	⬍
Practice	⬍	⬍
Other (Write in response below)	⬍	⬍

Write in response for other:

Comments (if provided):

11. Would you be able to share your faculty policies on the role of teaching in promotion and tenure? ASPPH staff will seek to excerpt the relevant material from your documents and the information will be reported without school or program identifiers.

Note to surveyor: If respondent agrees to share their policy, please have them email it to you.

○ Yes

○ No

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SoTL Production-related Questions

These final questions relate to Research on Teaching and Learning

12. Are any of your faculty conducting research on teaching and learning?

○ Yes

○ No

○ Don't Know

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SoTL Production-related Questions

12a. Approximately how many faculty are conducting research on teaching and learning? (Enter whole number.)

[   ]

12b. Are any of these faculty disseminating research findings on teaching and learning through *peer-reviewed* presentations and/or publications?

○ Yes

○ No

○ Don't Know

12c. How are faculty who are conducting research on teaching and learning *funded* to do this scholarship, such as from internal or external funding sources?

[   ]

12d. How are these faculty allotted *time* to conduct research on teaching and learning, e.g. sabbatical, course release, etc.?

[   ]

12e. Does conducting research on teaching and learning count toward the following?

	Yes	No	Don't Know
FTE allocation	○	○	○
Promotion and/or Tenure	○	○	○

Thank You!

We appreciate your participation in this survey and thank you for your time. Stay tuned in the coming months for the deidentified, aggregate results.

APPENDIX C: SIX KEY INFORMANTS REPRESENTING DIFFERENT ASPECTS OF INSTITUTIONAL LEADERSHIP

Randy F. Wykoff, MD, MPHTM
Public Health Dean
(East Tennessee State University College of Public Health)

Theresa L. Byrd, DrPH
Public Health Program Director
(Texas Tech University Health Sciences Center MPH Program)

Gulzar H. Shah, PhD
Department Chair
(Georgia Southern University Jiann-Ping Hsu College of Public Health)

Juan Leon, PhD, MPH
Faculty
(Emory University Rollins School of Public Health)

Laura Rasar King, EdD, MPH, MCHES®
(Council on Education for Public Health)

Shan D. Mohammed, MD, MPH, FAAFP
(Northeastern University MPH Program)

*The six key informants listed here participated in a virtual "town hall-type" session entitled "Institutional Findings and Implications from ASPPH's Scholarship of Teaching and Learning Survey" on March 23, 2021, as part of the ASPPH 2021 Annual Meeting. The key informants represented different aspects of institutional leadership and were invited to provide their feedback specifically on draft recommendations in Table 6 of the report, as relevant to their levels of leadership. In addition, the session drew 70 audience members whose questions and comments in the virtual chat were addressed within the session as well as reviewed afterwards for consideration in refining this report.