

Chapter 3

The Rapidly Changing Teaching and Research Landscape: The Future of SoTL and the Teaching-Research Nexus



Karena L. Waller and Michael Prosser

Abstract The scholarship of teaching and learning (SoTL) as a scholarly field of study has been rapidly developing since Ernest Boyer published *Scholarship Reconsidered: Priorities of the professoriate* in 1990. In that Boyer drew the distinction between four scholarships—Discovery, Integration, Application, and Teaching & Learning (Boyer in *Scholarship reconsidered: Priorities of the professoriate*. Carnegie Foundation for the Advancement of Teaching, 1990). In this chapter, we aim to introduce readers to SoTL by:

- briefly reviewing these four scholarships;
- illustrating how SoTL may be differentiated from the other forms of scholarship, and its relationship with the teaching-research nexus;
- commenting on the sorts of inquiry problems, questions and issues common to SoTL; and finally,
- commenting on the range of methodologies adopted in such inquiries.

Fundamental to the discussion will be the idea that SoTL is a research informed, evidence based, critical yet collegial reflection on teaching and learning practice with the aim of improving practice within the aligned disciplines and professions. Most often SoTL-based research projects are conducted by discipline-based staff inquiring into and reflecting on their own practice to improve their teaching and students' learning.

Since Boyer's publication, numerous scholarly societies, conferences, journals, and other forms of scholarly communication have evolved. A recent thematic review of the SoTL literature will be used as the basis for highlighting how the communication of SoTL inquiries, and their findings are being, and can be, fostered.

K. L. Waller (✉)

Faculty of Medicine, Dentistry and Health Sciences, The University of Melbourne, Melbourne, Australia
e-mail: klwaller@unimelb.edu.au

M. Prosser

University of Melbourne, Melbourne, Australia

University of Tasmania, Hobart, Australia

© The Author(s) 2023

K. Coleman et al. (eds.), *The Educational Turn*, Rethinking Higher Education,
https://doi.org/10.1007/978-981-19-8951-3_3

Keywords SoTL · Teaching · Learning · Research · Scholarship · Critical reflection

3.1 Introduction

With the arrival of the COVID-19 pandemic and the disruptive forces it has unleashed on teaching and learning in higher education, it is opportune to review and critically analyze the present state of scholarship of teaching and learning (SoTL) activities and to explore their possible future directions. In this chapter, we will first outline the origins of SoTL activities in the writings of Boyer and others and analyze the present state of those activities before finally outlining our views on how those activities may need to be developed to address some of the current issues facing teaching and learning.

The rapid whole-of-institution transition to online approaches to teaching and learning brought about by the COVID-19 pandemic has afforded teachers in higher education a collective opportunity for reflecting on and reconsidering their priorities in teaching and learning. These considerations include the need to adopt and master innovative approaches to teaching and learning while simultaneously fostering and maintaining the quality of student and teacher experiences and relational connections in a rapidly changing context. This has proven overwhelmingly challenging for many students and teachers. We recognize that although this opportunity for reflection, reconsidering, and scholarly inquiry has commenced, it is far from complete, and consequently, the full ramifications of these on post-COVID-19 higher education are yet to be realized. We would argue that the pursuit of SoTL over coming years provides one way in which teachers can address and overcome these issues and considerations.

This chapter aims to provide an introduction for teachers wishing to reflect on and improve their teaching and students' learning by outlining the fundamental ideas underpinning SoTL and the current issues needing to be addressed through SoTL.

3.2 Where Has SoTL Come from?

3.2.1 *Early Ideas*

The quality of teaching and learning in higher education has received a great deal of attention over the last 25 years or so. But, in 1990, Boyer brought a somewhat different focus to discussions of teaching and learning. He argued that the focus on teaching should not be just on teaching but on teaching as scholarship. In regard to Boyer (1990), Trigwell et al., (2000, p. 155) noted that,

Boyer's main thesis does not focus on teaching in isolation, but on teaching as part of the larger whole of academic work. Boyer argued that we should let go of the tired old research vs. teaching argument and focus on the idea that scholarship exists in all aspects of academic work.

It was in this seminal work that Boyer drew the distinction between four overlapping avenues of scholarship:

- Discovery—more traditional theory-driven research, aimed at developing theory and understanding;
- Integration—making connections across the disciplines and placing things in larger context—major reviews, systematic reviews, etc.;
- Application (or now often termed engagement)—goes beyond application and develops an interaction that each informs the other (research and application);
- Teaching and Learning—research informed, critical, evidence based, collegial reflection on practice to improve practice.

The aim of drawing this distinction was to enhance the status, practice, and quality of teaching and learning in higher education through the development and use of scholarly practices in understanding, informing, and improving the quality of teaching and learning. While these four scholarships may seem to be individually constituted, in practice that is unlikely. For example, a study that aimed to test some theoretical model or proposition in teaching and learning in higher education (i.e., scholarship of discovery) may well make an important contribution to the practice of teaching and learning (i.e., scholarship of teaching and learning). Similarly, a study aimed at developing the practice of teaching and learning may well contribute to theory development. In this manner, the four scholarships are integrally related and connected rather than mutually exclusive.

3.2.2 Teaching-Research Nexus

At about the same time, the relationship, or nexus, between discovery research and teaching was being hotly debated. On the one hand, higher education academics had often asserted that there was a positive relation between teaching and research (Brew & Boud, 1995). However, Marsh and others argued that there was little or no relation between performance indicators of teaching and research, such as number of publications on one hand and student evaluations on the other (Marsh & Hattie, 2002). It was this lack of a demonstrated empirical relationship between the performance indicators of teaching and (discovery) research which was being used to underlie the argument for the separation of the two. But, such an argument is a misunderstanding of the implication of a zero correlation between the two variables. If, assuming there is a zero correlation between teaching and research, we separate teaching from research and turn our best researchers into research only academics, then we would lose half of our better performing teachers. Conversely, if we turn our best teachers into teaching only, we would lose half of our better performing

researchers. But, in a series of articles, Prosser et al. (2008) instead showed positive relationships between university teachers' experiences of both their research and teaching mediated by their understanding of their subject matter (e.g., Prosser et al., 2008). These authors further concluded that it was not the quantity of research (for example, the numbers of publications) that was related to high-quality teaching, but rather how teachers continued to contribute to the development of scholarship in their discipline, including the development of teaching and learning in their discipline. They concluded that all teachers in higher education need to remain active in the scholarship of their discipline. As Boyer (1990) has argued, this scholarship can take several forms, including the scholarship of teaching and learning within their discipline. We wish to assert that for teaching-focused/teaching-only academic staff, continued engagement in SoTL is vital for the continued development and improvement of scholarly teaching in universities.

3.3 Where Is SoTL Now

If, as we argue, SoTL is central to the academic role, then how is this manifesting in practice? In this section, we outline where we understand SoTL is at present by drawing on the international literature, and then, in the final section of this chapter, how we see this change as a result of the COVID-19 pandemic.

3.3.1 *Conceptualization (Our Own Classroom Practice)*

So, how is SoTL presently conceptualized? What is the focus of SoTL? How might it be differentiated from discovery scholarship described in Boyer's model? These issues have been discussed in detail over the years since Boyer outlined his model.

An early inquiry of the meaning of SoTL by Trigwell et al. (2000) used an interview-based phenomenographic approach to explore university teachers' conceptions or understanding of the meaning of scholarship of teaching. It is important to note that at the time the study was performed the term SoTL (inclusive of learning) was not commonly used; however, learning was explicitly captured and represented in the five hierarchically inclusive categories of description arising from the study. They were as follows:

- (a) The scholarship of teaching is about knowing the literature on teaching by collecting and reading that literature.
- (b) Scholarship of teaching is about improving teaching by collecting and reading the literature on teaching.
- (c) Scholarship of teaching is about improving student learning by investigating the learning of one's own students and one's own teaching.

- (d) Scholarship of teaching is about improving one's own students' learning by knowing and relating the literature on teaching and learning to discipline-specific literature and knowledge.
- (e) The scholarship of teaching is about improving student learning within the discipline generally, by collecting and communicating results of one's own work on teaching and learning within the discipline (Trigwell et al., 2000, p. 159).

At the time, their conclusion was that the last category was the most sophisticated and inclusive description of SoTL. As a result, the authors developed a four-dimensional model of teacher engagement in SoTL. The dimensions were as follows:

- (a) the extent to which they engage with the scholarly contributions of others, including the literature of teaching and learning of a general nature and particularly that in their discipline.
- (b) the focus of their reflection on their own teaching practice and the learning of students within the context of their own discipline: whether it is unfocused, or whether it is asking "*what do I need to know and how do I find out?*"
- (c) the quality of the communication and dissemination of aspects of practice and theoretical ideas about teaching and learning in general, and teaching and learning within their discipline, and
- (d) their conceptions of teaching and learning: whether the focus of their activities is on student learning and teaching or mainly on teaching (Trigwell et al., 2000, p. 163).

These dimensions highlight what they considered to be the key aspects of SoTL including engagement with discipline-based teaching and learning literature, continued reflection and critical analysis of teaching and learning within their discipline, importance of communication and dissemination of the results of analyses, and a focus on students and their learning.

In another of the earlier papers on SoTL, Prosser concluded:

For me, the main point of engaging in the scholarship of teaching and learning in higher education is to work toward improving our students' learning. To do this, we need to systematically reflect upon evidence of our own students' learning within our own classes and disciplines. We need to draw upon the more generic research, but carefully situate that within our disciplines. We then need to monitor the success or otherwise of our efforts to improve our students' learning and then communicate the outcomes of those efforts to our colleagues. The scholarship of teaching and learning from this perspective is not research in the traditional sense. It is a practically oriented activity, conducted collegially, and increasingly being conducted alongside traditional research within the disciplines. (Prosser, 2008, p. 4)

Here, the focus of SoTL was on improving student learning within a practical and collegial atmosphere. It was not educational discovery research focused solely on theory and conceptualization, but rather discovery inquiry focused on teaching practice with the aim of improving student learning, which is the overarching aim of SoTL.

Furthering this, Poole and Simmons (2013) argue that SoTL focuses on teachers investigating teaching and learning processes in their own classroom. They quote McKinney (2006) observing “the scholarship of teaching and learning ... involves systematic study of teaching and/or learning and the public sharing and review of such work through presentations, performance, or publications” (p. 39). They also cite two early and continuing leaders in the field, Hutchings and Shulman (1999), that “faculty frame and systematically investigate questions related to student learning” (p. 13) with the intention of improving student learning and enhancing educational quality. The key points here are that SoTL involves systematic study of teaching and learning with that aim of improving student learning.

In a more recent article, after reviewing several conceptualizations of SoTL in the literature, Tight (2018, p. 64) concluded:

While there are undeniably differences in emphasis on display in these characterizations of the scholarship of teaching and learning, they are recognizably describing the same phenomena, and several key components are evident throughout. Thus, the scholarship of teaching and learning was conceived as involving being an informed, questioning, reflecting, critical and inquiring teacher, whose focus is on the improvement of their teaching so as to improve their students’ learning and on sharing their practices widely with others so as to advance the status and practice of teaching and learning in their discipline and in higher education in general.

In concluding this section, our own heuristic definition of SoTL as it is presently practiced is as follows: SoTL is a research informed, evidence based, critical yet collegial reflection on teaching and learning practice with the aim of improving practice within the aligned disciplines and professions. Most often SoTL-based research projects are conducted by discipline-based teachers inquiring into and reflecting on their own practice to improve their teaching and students’ learning.

3.3.2 SoTL Inquiries and Problems

Having arrived at our definition of the present understanding of SoTL, the discussion will turn to the nature of SoTL inquiries and problems represented in the present literature. In one of the earlier discussions of SoTL, Glassick, Huber, and Maeroff (1997, p. 36) listed the areas they considered common to any scholarly activity, including SoTL activities: Clear Goals; Adequate Preparation; Appropriate Methods; Significant Results; Effective Presentation; and Reflective Critique. In 2013, Felton similarly listed aspects of what he considered to be good practices in SoTL: Inquiry focused on student learning, grounded in context, methodologically sound, conducted in partnership with students, and appropriately public (Felton, 2013, p. 122). Interestingly, here, Felton added the practice of partnering with students, a practice that will be discussed later.

Often the most difficult yet important stage in a SoTL project is the initial phase, that of choosing a problem to investigate, and then developing the inquiry question(s) and method. First and foremost is selection of a problem that:

- is meaningful and significant in the sense that it addresses real problems in the practice of teaching and learning;
- is possible to research with the time, resources, and students available, given that most investigations are conducted by teachers whose primary focus and allocation of time is to the practice of teaching and learning; and
- is deliberate, narrow, and focused, so that the project will adequately answer the inquiry question(s).

While these aspects of problem selection may seem obvious, they are often not adequately addressed in SoTL inquiries. Inquiry questions are often vague and unfocused, leading to the collection of large amounts of unused and unanalyzed data. But, having successfully identified the nature of an inquiry problem, the next issue is to identify an appropriate method to address the problem.

3.3.3 *SoTL Inquiry Methods*

Given that SoTL inquiries and inquirers are based within the disciplines in higher education, a broad range of inquiry methods may be applied. A systematic review of SoTL by How (2020) provides a useful summary of the diversity of SoTL methodologies and cites several very useful references. These range over issues of methodologies from the social and natural sciences to the humanities, including both quantitative and qualitative research methodologies. How (2020) cites Bloch-Schulman et al. (2016), arguing that:

...debates within SoTL about appropriate methodology distract researchers from more significant questions and even lead them to reject SoTL altogether, thus calling on researchers to embrace diversifying methodologies, including the exploratory, representational, and interpretive tools used in the arts and humanities, as well as the observational, experimental, and quantitative approaches adopted in the social sciences. (How, 2020, p. 18)

How (2020) additionally cites others, such as Gurung (2014), as arguing for mixed methods research including the collection of qualitative and quantitative research data. But, these arguments raise more difficult questions about how teachers, with their training and education founded within their disciplinary methodologies, can adjust to and adapt their own research methods to the investigation of teaching and learning. In response, How (2020) refers to a heuristic guide developed by Rowland and Myatt (2014), which was designed to assist natural science faculty who possessed no prior training in SoTL, in the selection of methodologies to plan, implement, and evaluate SoTL research projects. Some contemporary issues of methodology are later discussed in this chapter.

Given this diversity in methodologies, which is central to the idea of disciplinary-based inquiry into teaching and learning, Bernstein (2018) raised the issues of internal and external validity of SoTL inquiries. Key questions include: How do educators know if their innovation worked within our discipline, and how generalizable is what works in our discipline to other disciplines? Further, can educators communicate the

implications of SoTL work in the humanities using a humanities-based methodology to those working in the sciences, and if so, how? Are there such fundamental differences in teaching and learning between the humanities and sciences that mean communication is not possible? Are there such fundamental differences methodologically that communication is not possible? In effect, can SoTL researchers bridge C. P. Snow's *Two Cultures* (Snow, 1959), with these being the sciences and humanities? Such methodological disputes and differences exist in other fields; however, Bernstein asks that educators focus our communications and discussion on how well they are advancing students' learning and what others can learn from our work, rather than on continued arguments about methodology. These methodological issues are considered in the final section of this chapter.

And finally, in this chapter, we wish to refer to a recent publication by Keith Trigwell (2021), which describes a number of vignettes or small case studies of SoTL investigations. Through these case studies, Trigwell describes the key steps in a SoTL investigation and makes some comments on publishing SoTL investigations.

Having tried to summarize where SoTL is at present, the final section discusses issues and concerns about the future of SoTL.

3.4 Where Is SoTL Going?

Having outlined how we see the present state of SoTL activities, we now turn to some of the criticisms raised in the literature about the present state and where we might see it go in the future.

3.4.1 *Some Issues for Consideration in Present State of SoTL Activities*

In 2021, an article was published in *Teaching & Learning Inquiring* by Cruz and Grodziak titled "SoTL Under Stress: Rethinking Teaching and Learning Scholarship During a Global Pandemic." In that essay, they discussed several key concerns they have for the future of SoTL inquiries. The first of these was a direct consequence of the disruptive nature of the COVID-19 pandemic, which led to an "accelerated change" in teaching and learning.

Normally, we have the ability to learn from those who came before us, but the current experience is not staggered but simultaneous, which means we need to develop an almost entirely new body of evidence-based practice, and we need to do so all at once—very quickly (DeSantis & Dammann, 2020). (Cruz & Grodziack, 2021, p. 5)

But, change and development had to occur immediately, over whole-of-institution and whole-of-study program, during the rapid transition to online teaching and learning—there was no time to develop an evidence base. Educators had to act

and convert without significant precedence or evidence. It is now vital that they start to develop this new body of evidence, by reflecting on the changes that occurred, at the levels of whole-of-institution and program and individual teachers, resulting in the transition to online teaching and learning during the pandemic, and carefully describing and analyzing the outcomes of those changes and innovations. It is important to identify and document, in Pat Hutchings (2000) terms, “what works.”

Another issue identified by Cruz and Grodziack has grown out of the use of social media in amplifying “the power of connecting individual voices to others as a vehicle for social change” (Cruz & Grodziack, 2021, p. 6). They cite several authors in higher education literature as identifying “deep biases” in higher education that have been amplified by the pandemic. They go on to say, “Implicit in this wave of narrative crowd-sourcing is recognition of the value of lived experience, not just as anecdote, but as catalysts and, perhaps most importantly, as evidence” (Cruz & Grodziack, 2021, p. 6).

This leads us as authors to argue for a greater use of auto-ethnography, personal narratives, and ethnographic methods to systematically capture the lived experience of teachers and students during the disruptive period of the pandemic. Such methods have been used in SoTL investigations, but they have been in a minority, and we would argue they are urgently needed to capture experiences and to facilitate careful reflection on the outcomes.

Finally, in this section, Cruz and Grodziack identify the need for larger teams of SoTL investigators given the rapid inclusion of instructional designers, educational developers, and students as partners (discussed later). In contrast, much of the previous SoTL studies have been conducted by individual or small groups of teachers. Given the changing nature of teaching and learning resulting from the pandemic, SoTL investigation teams need to be expanded to include these new players.

We have quoted at length from the paper of Cruz and Grodziack (2021) because it succinctly identified several issues that will face SoTL scholars in the post-pandemic period. Finally, we would like to quote the final paragraph of their article, highlighting a change in emphasis in the needs of SoTL studies:

The way forward involves not just technological innovation, but also attention to our shared humanity and, by extension, the study of the previously beleaguered humanities. The need for cross-disciplinary collaboration has never been more evident than it is right now. The sharing of our individual experiences, our stories, will provide SoTL, as a field, the collective opportunity to look inward, check our own biases (McKinney and Chick 2010), and navigate our own marginalities, in preparation for taking on more public roles within a greatly expanded teaching commons. In terms of making sense of the world, the SoTL movement had already proven itself to be quite resilient, largely because of the deep idealism at its heart, an idealism that was, admittedly, challenged by the previous shift toward institutionalization, but never extinguished. Rather than despair of our current situation, we should perhaps be proud of the fact that, through the darkest hours of modern academic history, we have sustained, and been sustained by, a love of teaching, care for our students, and the belief that higher education matters. (Cruz & Grodziack, 2021, p. 9)

3.4.2 *Disciplinary, Multidisciplinary, and Interdisciplinary*

The SoTL literature has been by its nature multidisciplinary. The call by Boyer (1990), supported by Shulman (2005) and others, that scholars within the disciplines should approach teaching within their disciplines as scholarly activities means that SoTL studies have been conducted with a range of disciplines and professions. To exemplify this, Malcolm Tight's (2018) article *Tracking the Scholarship of Teaching and Learning* cites papers from an array of disciplines, including accounting, communication, dentistry, economics, education, engineering, geography, history, hospitality, law, librarianship, management, mathematics, nursing, occupational therapy, pharmacy, philosophy, political science, psychology, science, social work, sociology, textiles, and theology. We note, this is in no way an exhaustive listing of disciplines and professions that have published SoTL articles.

While these are some of the disciplines and professions in which studies have been published, the literature does include a range of methodologies—often related to the discipline or profession most concerned. In other words, the methodologies adopted are multidisciplinary. This multidisciplinary nature of SoTL methodologies is confirmed in How's (2020) systematic review:

... within the literature that focuses on SoTL methodologies and approaches, articles are evenly distributed between those that discuss particular SoTL methodologies and those that synthesize diverse SoTL methodologies. This indicates that present SoTL research is not dominated by any singular methodological approach; it is an inclusive field that embraces different methodologies and research methods. (How, 2020, p. 28)

While this might be so, the majority of studies have drawn on methodologies from “observational, experimental and quantitative approaches adopted in the social sciences” rather than “the exploratory, representational, and interpretive tools used in the arts and humanities” (How, 2020, p. 18).

This brief review of disciplinary, multidisciplinary, and interdisciplinary highlights the multidisciplinary aspect of SoTL activities and the predominance of social science research methodologies. But, in some ways, the multidisciplinary aspects of SoTL are not strictly multidisciplinary. They are not single studies incorporating a range of disciplines. That is, they are not a single issue focused on from several disciplines. Neither are they, in the main, interdisciplinary—holistic studies across several disciplines synthesizing the issues and methodologies across those of disciplines. Given the growth in multidisciplinary and interdisciplinary studies in higher education on the one hand and the need identified in the previous section to adopt more humanistic approaches to address the post-COVID-19 pandemic problems and issues, the development of more multidisciplinary and interdisciplinary studies is clearly warranted.

3.4.3 *Students as Partners*

The idea of “Students as Partners” (SaP) in higher education teaching and learning has been growing for a number of years. The idea grew out of earlier work which focused on the teaching-research nexus in higher education and students engaged as co-researchers. Engaging SaP in the teaching and learning process is seen to have benefits such as “increased engagement in learning and enhancement activities, transformed thinking about teaching and learning and development of awareness of one’s role and agency in the wider academic community” (Cook-Sather, Bovill & Felton, 2014, quoted from Healey, Flint, and Harrington, 2014).

The SaP movement is broad and incorporates a number of areas of the student–teacher relationship. These areas are described in a model developed by Healey, Flint, and Harrington (2014) and are as follows:

- Learning, teaching, and assessment;
- Subject-based research and inquiry;
- Scholarship of teaching and learning (SoTL);
- Curriculum design and pedagogic consultancy.

In this chapter, it is the area of student engagement in SoTL which is of interest. Healey, Flint and Harrington (2014) describe a number of examples of students acting as partners in SoTL activities. For example, students may undertake a final year SoTL project as an alternative to a subject content-based project. Another example may be a final year physics honors project in which students research the misconceptions of first-year students in relation to key concepts. In the process, final year students review their understanding of key first-year concepts which were initially only partially understood. Other project examples cited by Healey et al. (2014) have included undergraduate teaching and learning internships and students researching the teaching and learning environment across the university.

Given the issues identified in the article by Cruz and Godziack (2021), including students in the SoTL investigation research team would seem appropriate. Students have undergone as much, or perhaps even more rapid change in their learning experiences than their teachers have in their teaching experiences. Documenting the change in students’ experiences, drawing on some of the methods from the humanities identified earlier, is of extreme importance. Use of student diaries, auto-ethnographies, students interviewing other students may be ways in which educators could identify and document authentic student experiences. With the increasing use of online learning, zooming, breakout rooms, etc., it is difficult for teaching staff to remain aware of individual student activity and experiences. Engaging students themselves to report on their and other students’ experiences in a systematic and research rich environment would seem appropriate.

3.4.4 Development of Future Scholars of Teaching and Learning

Given that much SoTL research needs to be conducted rapidly in light of the rapid transition to online teaching and learning, our final consideration is that of the development of SoTL researchers, and particularly those that are new to SoTL inquiry. With many SoTL researchers beginning their SoTL research careers solely with disciplinary-based research experience and little or no experience in SoTL research methodologies (Rowland & Myatt, 2014), there is arguably a need to support and develop those individuals new to SoTL, to ensure successful inquiry outcomes, including the production of appropriate, valid, and informative research findings and their communication. Indeed, the work of Rowland and Myatt (2014) directly addresses this need with the development of a guide to assist natural science-disciplinary researchers, who possess no prior training in SoTL inquiry methods, to identify, design, conduct, evaluate, and communicate the findings of SoTL research projects. They additionally acknowledge the challenges faced by newcomers to SoTL inquiry, particularly in relation to conducting SoTL in isolation or small groups, and outline that participation in formal training in SoTL inquiry, perhaps via completion of higher education teaching and learning qualifications (which may be inclusive of SoTL training), participation in SoTL mentoring programs (offered by some professional societies and institutions), and collaborative research teams can be beneficial (Rowland & Myatt, 2014). Two recent publications (Friberg et al., 2021; Cruz & Grodziack, 2021) have explored these latter two aspects of mentoring and participation in collaborations in more detail. While traditional mentoring, where experienced SoTL researchers' mentor newer researchers, has long been used to support the development of SoTL researchers and SoTL communities, particularly in regard to SoTL practice and methodologies (Hubball et al., 2010), in more recent times, broader mentoring relationships have been described, including students as partners (SaP) and co-researchers (Healey, Flint & Harrington, 2014), participation in collaborative writing groups and working in collaborative teams with educational developers (Friberg et al., 2021) or other more experienced individuals (Cruz & Grodziack, 2021). These broader mentoring relationships offer many more and varied opportunities to support and develop new researchers in their engagement with SoTL research.

3.5 Conclusion

In summary, we have outlined the origins of SoTL in terms of Boyers concerns about the status of teaching in higher education, arguing for teaching to be seen as a scholarly activity in itself—indeed one of the four scholarships in higher education. The present state of SoTL activity in terms of the focus of SoTL inquiries was summarized and inquiry methods. A number of areas of concern in SoTL work have

been summarized, and several ways ahead have been presented. We conclude this chapter by again emphasizing that teaching and learning is, and needs to be, seen as a critically important scholarly activity in a modern university. The disruptions caused by the COVID-19 pandemic have led to quite profound questioning of the future of higher education. The questions raised are not likely to be easily answered. Educators need to be actively engaged in discussion about the future, through their active involvement in the scholarship of teaching and learning. Such scholarship has come a long way in the last 30 years. Major national and international professional associations have been established, bringing together scholars from around the world, building a community of practice and communication, while many disciplinary and SoTL-based peer-reviewed journals publish the scholarly work of university teachers. The culture and practice of SoTL is now well established and continuing to develop within university teaching and learning environments, and therefore, it is now time for SoTL scholars, through their inquiries, to play a leading role in forging the future of teaching and learning in higher education.

References

- Bernstein, J. L. (2018). Unifying SoTL methodology: Internal and external validity. *Teaching & Learning Inquiry*, 6(2)
- Bloch-Schulman, S., Conkling, S. W., Linkon, S. L., Manarin, K., & Perkins, K. (2016). Asking bigger questions: An invitation to further conversation. *Teaching & Learning Inquiry*, 4(1), 108–114.
- Boyer, E. (1990). *Scholarship reconsidered: Priorities of the professoriate*. Carnegie Foundation for the Advancement of Teaching.
- Brew, A., & Boud, D. (1995). Teaching and research: Establishing the vital link with learning. *Higher Education*, 29, 261–273.
- Cook-Sather, A., Bovill, C., & Felten, P. (2014). *Engaging students as partners in teaching and learning: A guide for faculty*. Jossey-Bass.
- Cruz, L. E., & Grodziak, E. M. (2021). SoTL under stress: Rethinking teaching and learning scholarship during a global pandemic. *Teaching & Learning Inquiry*, 9
- DeSantis, J., & Dammann, S. (2020). Say goodbye to best practice in higher education. *The National Teaching and Learning Forum*, 29(5), 6–7. <https://doi.org/10.1002/ntlf.30248>
- Felton, P. (2013). Principles of good practice in SoTL. *Teaching & Learning Inquiry*, 1, 121–125.
- Friberg, J. C., Frake-Mistak, M., Healey, R. L., Sipes, S., Mooney, J., Sanchez, S., & Waller, K. L. (2021). A developmental framework for mentorship in SoTL illustrated by three examples of unseemly opportunities for mentoring. *Teaching & Learning Inquiry*, 9(1), 395–413.
- Glassick, C. E., Huber, M. T., & Maeroff, G. I. (1997). *Scholarship assessed: Evaluation of the professoriate. Special report*. Jossey Bass Inc.
- Gurung, R. A. (2014). Getting foxy: Invoking different magesteria in the scholarship of teaching and learning. *Teaching & Learning Inquiry*, 2(2), 109–114.

- Healey, M., Flint, A., & Harrington, K. (2014). *Engagement through partnership: Students as partners in learning and teaching in higher education*. Higher Education Academy. Retrieved from: <https://www.heacademy.ac.uk/engagement-through-partnership-students-partners-learning-and-teaching-higher-education>
- How, Z. J. (2020). A systematic review of scholarship of teaching and learning research in higher education institutes from 2014–2019. In S. Tan, S. H. Chen (Eds.), *Transforming teaching and learning in higher education*. Springer. https://doi.org/10.1007/978-981-15-4980-9_2
- Hubball, H., Clarke, A., & Poole, G. (2010). Ten-year reflections on mentoring SoTL research in a research-intensive university. *International Journal for Academic Development*, 15(2), 117–129.
- Hutchings, P., & Shulman, L. S. (1999). The scholarship of teaching: New elaborations, new developments. *Change: The Magazine of Higher Learning*, 31(5), 10–15
- Hutchings, P. (Ed.). (2000). *Opening lines: Approaching the scholarship of teaching and learning* (pp. 1–10)
- Marsh, H. W., & Hattie, J. (2002). The relation between research productivity and teaching effectiveness: Complementary, antagonistic, or independent constructs? *The Journal of Higher Education*, 73(5), 603–641.
- McKinney, K. (2006). Attitudinal and structural factors contributing to challenges in the work of the scholarship of teaching and learning. *New Directions for Institutional Research*, 129, 37–50.
- McKinney, K., & Chick, N. (2010). SoTL as women’s work: What do existing data tell us? *International Journal for the Scholarship of Teaching & Learning*, 4(2)
- Poole, G., & Simmons, N. (2013). Contributions of the scholarship of teaching and learning to quality enhancement in Canada. In *Enhancing quality in higher education* (pp. 158–168). Routledge
- Prosser, M., Martin, E., Trigwell, K., Ramsden, P., & Middleton, H. (2008). University academics’ experience of research and its relationship to their experience of teaching. *Instructional Science*, 36(1), 3–16.
- Prosser, M. (2008). The Scholarship for the teaching and learning: What is it? A personal view. *International Journal of the Scholarship of Teaching and Learning*, 5(2)
- Rowland, S. L., & Myatt, P. M. (2014). Getting started in the scholarship of teaching and learning: A “how to” guide for science academics. *Biochemistry and Molecular Biology Education*, 42(1), 6–14.
- Shulman, L. S. (2005). Signature pedagogies in the professions. *Daedalus*, 134(3), 52–59.
- Snow, C. P. (1959). Two cultures. *Science*, 130(3373), 419–419.
- Tight, M. (2018). Tracking the scholarship of teaching and learning. *Policy Reviews in Higher Education*, 2(1), 61–78.
- Trigwell, K., Martin, E., Benjamin, J., & Prosser, M. (2000). Scholarship of teaching: A model. *Higher Education Research and Development*, 19, 155–168.
- Trigwell, K. (2021). Scholarship of teaching and learning. In *University teaching in focus* (pp. 286–303). Routledge

Karena Waller is a Professor in Microbiology and Immunology in the School of Biomedical Sciences and in Higher Education in the Melbourne Centre for the Study of Higher Education. Karena is also the Deputy Program Director of the Bachelor of Biomedicine, and coordinator and lecturer of numerous subjects and programs available to Bachelor of Science and Bachelor of Biomedicine students, as well as fellow academic staff at the University. Karena is a member of numerous Department, School, Faculty, Institute and University committees, focused primarily on teaching and learning, student experience and engagement, and academic integrity and governance, and program management. Karena has published numerous biomedical science, educational research and Scholarship of Teaching and Learning (SoTL) articles in international, peer-reviewed journals.

Michael Prosser is an Honorary Professorial Fellow in the Melbourne Centre for the Study of Higher Education at The University of Melbourne. He has published widely, including a well cited book analysing much of his early research work with Keith Trigwell, and a recently published book reviewing their more recent work. He has been a Chief Investigator on several Australian Research Council and Hong Kong General Research Fund research grants. He has twice been an Editor of the journal Higher Education Research and Development and has been an Associate Editor of the British Journal of Educational Psychology. He has been elected as a Life Member of the Higher Education Research and Development Society of Australasia for distinguished contributions to teaching and research in higher education and of the International Society for the Scholarship of Teaching and Learning for leadership in the scholarship of teaching and learning.

Open Access This chapter is licensed under the terms of the Creative Commons Attribution 4.0 International License (<http://creativecommons.org/licenses/by/4.0/>), which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

