The Scholarship of Teaching and Learning

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Summary: *The chapter traces the evolution of the scholarship of teaching and learning (SOTL). Part of the evolution is a change from construing teaching and learning narrowly through the lens of disciplinary expertise development to construing it more broadly, acknowledging also its socio-political purposes. The relationships between disciplinary learning, the aims of higher education and the purposes of SOTL are discussed. The author conceptualizes SOTL as a transformative learning process and social practice that is informed by certain types of critical reflection and virtues. A distinction is drawn between formal and informal inquiries into teaching and learning; yet it is argued that both forms involve peer review and going public, and both could lead to fresh insights, transformed perspectives on teaching, and, by extension, improved teaching practices, better student learning and enhanced benefits to society. While the theoretical viewpoint presented here is not mainstream, it is suggested that it could usefully extend SOTL (and perhaps also 'Wissenschaftsdidaktik').*

Keywords: *Scholarship of teaching, Teaching and learning, inquiry, reflection, goals, disciplines, reward system*

1 Introduction

The scholarship of teaching and learning (SOTL) originated in the United States in the early 1990s, but since then has been noticed, debated and, at times, enthusiastically embraced by individuals and institutions in other countries. The fact that the *International Society for the Scholarship of Teaching and Learning*, founded in 2004, now draws a membership from 23 countries across six continents (International Society for the Scholarship of Teaching and Learning [ISSOTL], 2021) attests to the concept's transnational reach.

SOTL is informed by two central ideas. One idea is that academics (i.e., university teachers) inquire into teaching and learning in the context of their own practice or discipline. The focus here is on the interaction between teaching, research and student learning, and evokes a sense of relatedness to the German tradition of Wissenschaftsdidaktik. The other idea is that knowledge creation and knowledge dissemination are both scholarly activities, and, moreover, that asking investigative questions of teaching and learning means to be involved in a distinct aspect of knowledge creation. Here, the focus is on the interaction between teaching, research and the university's reward system in the context of an enlarged notion of scholarship. While one idea is motivated by a desire to support students' success in learning, work and life, the other is motivated by a desire to support academics' success (tenure, promotion, recognition, etc.) within the academy.

These two distinct ideas are easily identifiable in the growing literature on SOTL. Most authors concern themselves either with the one or the other. However, the literature becomes more complex as additional questions are asked and overlaid onto these two concerns bringing them into a relationship with one another. For example, what is meant by inquiry, quality, evidence, student success, or *higher* education? What criteria define scholarship, how is scholarship linked to research and how is scholarship linked to educational development and professional learning about teaching practice? It is both ideas, and the complex questions they give rise to, that infuse this chapter.

I will first show how the idea of SOTL originated and evolved over time. Part of the evolution is a change from construing teaching and learning narrowly through the lens of disciplinary expertise development to construing it more broadly and acknowledging also its socio-political purposes. This leads me to a discussion of the role of disciplinary learning, the aims of higher education and the purposes of SOTL. I then turn to a particular theorization of SOTL as a transformative learning process on the part of academic teachers involved in teaching understood as a social practice informed by certain types of critical reflection and virtues (Kreber & Cranton, 2000; Kreber, 2015). I show that both formal and informal inquiries into teaching and learning involve peer review and going public, and that both can lead to fresh insights, transformed perspectives and, by extension, improved teaching practices, better student learning and enhanced benefits to society. While this theoretical viewpoint is not mainstream I suggest that it could usefully extend SOTL (and perhaps also '*Wissenschaftsdidaktik*'). Towards the end of the chapter I raise a number of issues that remain contested or unresolved in SOTL.

I will not attempt a direct comparison between SOTL and '*Wissenschaftsdidaktik*' as I believe the two traditions are quite different. However, I suspect that points of convergence and divergence between the two traditions will become readily apparent.

2 Historical context

Since at least the 1950s, researchers in North America have explored aspects of university teaching and the learning and development of students participating in higher education. A well-known example is Wilbert McKeachie's popular text *Teaching Tips*, which first appeared in 1951 and more than sixty years later was published in its 14th edition (Svinicki & McKeachie, 2014). Although McKeachie's work focused on teaching practices, as a psychologist he was interested precisely in the interaction between teaching practice and student learning. Other widely-cited treatises, now considered classics in the higher education research literature, such as Alexander Astin's (1987) *What Matters in College* and Ernest Pascarella and Patrick Terenzini's (1991) *How College Affects Students*, applied a broader lens and explored the effects of teaching (here teaching is understood in the comprehensive sense of courses, programs and learning environments, and the experiences that these afford, and not narrowly as the practices of teachers on the learning and development of students). However, endeavours to explore the interaction between university teaching practice and student learning in the context of individual academic disciplines and programs are a more recent phenomenon. To facilitate an understanding of the evolution of interest in this more specific interaction, especially in the North American setting, I will now turn to some relevant publications that have appeared since the mid-1980s.

Addressing directly the connection between the teacher's content knowledge or disciplinary expertise, pedagogical practice and student learning, Lee Shulman (1986, 1987) coined the notion of *pedagogical content knowledge*, which describes the particular knowledge teachers need to connect students with the complexity of the subject matter. Shulman himself referred to *pedagogical content knowledge* as "the ways of representing and formulating the subject that make it comprehensible to others" (p. 9). Although Shulman's work was not focused on higher education, the notion of pedagogical content knowledge has had a strong impact on how the relationship between teaching and learning in higher education has been conceived.

Around the same time that Shulman introduced the notion of pedagogical content knowledge, Thomas Angelo and Patricia Cross published a book featuring dozens of concrete techniques higher education teachers could employ in their own courses to gain insight into the learning of students (Angelo & Cross, 1993). The idea was to collect small scale data from students (e.g., responses to a single question such as "what are the main insights you have gained from today's class?" that students have one minute to respond to in writing), analyze these and use the findings as a basis for reflection and potentially, changes to one's teaching practice so as to better support student learning. The great appeal of these *classroom assessment techniques,* as the featured techniques or procedures were called, was that they were quick to administer and the elicited data easy to analyze. Importantly, they would directly inform teaching practice and student learning in the context of teachers' own classrooms.

These two separate ideas of *pedagogical content knowledge* and *classroom assessment techniques* are closely linked to a third idea: the notion of the *scholarship of teaching*.

In 1990, the Carnegie Foundation for the Advancement of Teaching in the United States released a report called *Scholarship Reconsidered* (Boyer, 1990), which introduced a four-dimensional model of scholarship: a scholarship of discovery, of integration, of application and of teaching. With regard to the scholarship of teaching, Boyer (1990) argued that "those who teach must, above all, be well informed, and steeped in the knowledge of their fields" and "build bridges between their understanding and the student's learning" (p. 23). However, just how this form of engagement with teaching qualified as 'scholarship' remained elusive, inspiring a number of studies in the same decade aimed at identifying and contrasting various possible interpretations of 'scholarship' and the 'scholarship of teaching' (e.g., Healey, 2003; Kreber, 2002, 2003; Trigwell, Martin, Benjamin & Prosser, 2000).

In 1995, the widely-distributed US higher education magazine *Change* published an article by Robert Barr and John Tagg who called for a shift from a so-called teaching to a learning paradigm in higher education. They associated the learning paradigm with the students' achievement of learning outcomes, and the teaching paradigm with the provision of courses. Although Barr and Tagg (1995) made the highly questionable suggestion that the shift from a teaching to a learning paradigm could be promoted by making funding for institutions dependent on students' achievement of learning outcomes measured through objective tests (foreshadowing the recommendations of

the Spelling Commission Report released a decade later recommending new accountability measures for higher education institutions in the US based on learning outcomes), their article paved the way to an intensified interest in learning. Nonetheless, it is perhaps Lee Shulman's article entitled *Taking Learning Seriously* published in the same magazine four years later that had the most substantial influence on how the scholarship of teaching would henceforth be understood.

In this article Shulman (1999) observed that taking learning seriously demanded taking teaching seriously and the latter would involve also learning from our pedagogical experiences and sharing this learning within our professional knowledge communities. Indeed, as already intimated earlier in this chapter, since the end of the 1990s the scholarship of teaching has been more often referred to as the *scholarship of teaching and learning (SOTL)*. Around the same time Randy Bass (1999) invited his readers to recognize that having a 'problem' in teaching was not something to be ashamed of but something to aspire towards. For Bass SOTL involved understanding teaching practice, and the evidence of student learning, as problems worth pursuing through systematic analysis. By 2004 Pace and Middendorf published their influential volume *Decoding the disciplines: Helping students learn disciplinary ways of thinking*. Many then saw the principal purpose of the scholarship of teaching and learning in the decoding of disciplinary expertise (Pace & Middendorf, 2004) and, similarly, the identification of threshold concepts (Meyer & Land, 2005), with the goal of developing the pedagogical content knowledge (Shulman, 1987) needed to help students construct a sound understanding of the discipline. While the Carnegie report *Scholarship Reconsidered* (Boyer, 1990) had lacked precise definition of what the scholarship of teaching involved, a decade later a particular view had taken hold. The scholarship of teaching (and learning) was associated closely with academics' investigative engagement with their own teaching practice (Richlin, 2001) and student learning, and, importantly, was located firmly within the disciplines (e.g., Healey, 2000; Huber & Morreale, 2002).

3 Disciplines as the means or the ends of a genuine higher education?

The notion that at its core SOTL involves furthering disciplinary expertise in students by means of targeted teaching approaches or practices strikes me as

broadly compatible with the German concept of *Wissenschaftsdidaktik*. However, the foregrounding in SOTL of furthering students' disciplinary expertise has not remained unchallenged. Indeed, in a recent article suggestively entitled *Beyond Decoding the Disciplines 1.0: New Directions for the Paradigm*, David Pace (2021) discusses the evolution of the 'Decoding paradigm' first introduced in 2004. While initially focused on the cognitive processes involved in developing expertise in a discipline (and then developing pedagogical practices appropriate to teach these), more recent applications of 'Decoding' have moved away from a narrow focus on cognitive processes and disciplinary understanding to include various factors (emotional, physical, social, etc.) that might contribute or inhibit student success in higher education. One only has to take a look at recent articles published in journals explicitly concerned with SOTL to appreciate that the field has moved on. Consider journal article titles such as *The Role of Self-Efficacy in the Thesis-Writing Experiences of Undergraduate Honors Students*, *The Effect of Collaborative Learning on Academic Motivation*, or *Instructors' Perspectives of Challenges and Barriers to Providing Effective Feedback* (all examples taken from Volume 10 of *Teaching & Learning Inquiry*, the official journal of the International Society for the Scholarship of Teaching and Learning, published in 2021). Inquiries like these do not chime easily with the first wave movement of 'Decoding' ('Decoding 1:0', to follow Pace's, 2021, terminology), which had a strong disciplinary focus.

Two other strands of critique of the disciplinary expertise development perspective (or simply cognitive process perspective) in SOTL are noteworthy. The first relates to the limits of disciplinary knowledge as the aim or end of education. Higher education is usually thought to have also a transformative function (i.e., contribute to 'Bildung'). It is hoped that it will prepare students to make their own way (Baxter-Magolda, 2001) in a yet unknown future (Barnett, 2004). Being equipped to cope with the challenges posed by a complex and rapidly changing world requires not only disciplinary content expertise but also an ability to think across and critique disciplinary perspectives (Rowland, 2001), as well as an inner constitution or readiness to participate constructively in environments characterised by uncertainty (e.g., Kreber, 2013). The notion that students do not become educated additively by acquiring increasingly greater bodies of knowledge and skills through higher education resonates with John Elliott's (2001) observation that education "involves the transformation of a person's way of seeing the world in relation to him or herself" (Elliott, 2001, p. 562). Citing the British philosopher of education Richard Peters (1966) he goes on to say that "a person is never educated 'in rela-

tion to any specific end, function, or mode of thought'" (Elliott, 2001, p. 562), as, we might say, in having been trained as a linguist, teacher, engineer, physicist, doctor or historian. Of course, such professional *training* for a specific end and *education* can occur simultaneously. Put differently, disciplinary content expertise is not antithetical to substantive or transformative learning; but the disciplines, and disciplinary knowledge, are only the means and not the end of a genuine higher education.

A second strand of critique suggested that the dominant discourse on SOTL was impoverished and "under-theorized" in a sense that examinations of classroom practices were typically void of any theoretical constructs, let alone explicit social and socio-political purposes (Boshier, 2009; McLean, 2006). At first sight such a critique seems surprising given that SOTL has always been associated with a 'transformational agenda' (e.g., Hutchings, 2000). However, the key points of this 'transformational' agenda were summarized by Gilpin and Listen (2009) as:

1) recognizing teaching as inquiry relevant to research, 2) recognizing the act of teaching as a public rather than private endeavor, and thus related to the formation of community or commons; and 3) recognizing teaching as a scholarly endeavor, and thus subject to peer review (p. 2).

While these three points were important, and I shall return to them in a later section of this chapter, it is also evident that they spell out an agenda that was oriented exclusively towards the internal life of the academy (independent of society at large) and, additionally, made no mentioning of the *learning* of academics or students. I sought to extend this vision by suggesting that a truly transformational agenda required SOTL to become more *critical*. A critical vision would move beyond a focus on the academy's reward system to include transformative learning on the part of academics about teaching and student learning (see below). I also wanted to broaden a narrow understanding of SOTL as a process focused exclusively on exploring how students cognitively process difficult concepts within the discipline.

While initially I had intended for this *critical* and transformative perspective to inform the professional learning of academics enacting the role of scholars of teaching, I later extended this notion to include student learning (Kreber, 2013). The aim of higher education, I proposed, should not simply be for students to acquire expertise in the disciplines or programs they study; the aim should be for them to learn how to creatively build on and question received knowledge (Kreber, 2015). Speaking of preparing students for the world of work specifically, Ulrich Teichler (1999) once remarked that universi-

ties need to decide whether their role is to respond to industry's demand for certain competencies in graduates or whether their role is to prepare "active agents of innovation and change" (p. 170). As the pressure on universities to fund research and provide experiential learning opportunities through industry partnerships increases, so does the weight of that decision.

While Teichler was concerned specifically with the world of work, his point extends to what it means to prepare students for life. The university's essential aim to facilitate Bildung (as distinguished from 'Ausbildung') resonates strongly with the idea of equipping students with the tools they need to become active agents of innovation and change. To thrive as persons, to enrich the lives of their communities and to become *good* (read critical and not just compliant) citizens of this world, higher education needs to support students in becoming critical thinkers who care about social justice, "have the Socratic capacity to reason about their beliefs" (Nussbaum, 1997, p. 19) and make sound judgements.

To what extend are these lines of thinking relevant to SOTL? Have these ideas been taken up anywhere else in the scholarship of teaching and learning literature? In December 2021, the *Journal of the Scholarship of Teaching and Learning* (distributed by Indiana University's Faculty Academy on Excellence in Teaching), published a special edition entitled *Pedagogy of the polarized* (Rahko, 2021) that explicitly links investigative questions of teaching and learning with socio-political purposes. The special edition is concerned with *political* issues in two senses of that word. In a first sense, the theme for the special issue was conceived in the aftermath of a fundamental threat to American democracy, the invasion of the United States Capitol building in January 2021, and thus can be seen as an expression of both outrage by academics and an active response to a pressing political problem in America (the crisis of polarization). The editors-in-chief write in the preface to the edition:

> "Higher education needs to prepare a citizenry capable and willing to engage in critical thinking with the empathy necessary to undergird the progress of our society, the pursuit of knowledge and happiness, and the achievement and maximization of justice for all." (Morrone & Young, 2021, electronic version)

The special issue links SOTL with socio-political purposes also in a second sense as soutlined earlier. The authors understand teaching as a field that needs to be interrogated for its contribution to society, and view democracy and social justice not just as topics to be taught in certain courses but as fun-

damental to the teaching and learning process. The various articles featured in the special edition, many situated within the context of particular courses, programs or institutions, report on studies that explored how democracy and social justice could be taught and promoted through higher education. The edition fits well with Huber and Hutchings's (2005) conviction that we need the scholarship of teaching and learning "so as to meet the challenges of educating students for personal, professional and civic life in the twenty-first century" (p. x). It is perhaps not surprising, that the special edition attracted especially academics from the humanities and social sciences (business ethics, communication studies, cultural studies, sociology, history, politics, etc.). If, and if so, to what extent *Pedagogy of the polarized* (Rahko, 2021) will influence the field of SOTL in other disciplines remains to seen. Huber and Moreale (2002) predicted that overtime SOTL will become intellectually richer as a result of the cross-pollination of theoretical perspectives and methodological approaches, as academics from different disciplines undertake inquiries into teaching and learning that are then shared across disciplinary boundaries. A perusal of other journals associated with SOTL suggests that the field already has been expanding its scope over the years, from being concerned largely with the development of disciplinary expertise (or student understanding of the discipline) to include also inquiries into issues of social justice, as Pace (2021) in his recent article also observed.

A final clarification might be needed before concluding this section. There is a difference between student understanding *of* the discipline and student learning *within* the discipline. The shift, or rather expansion, that can be observed in SOTL is from viewing students' learning *of* the discipline as the main concern (see Decoding paradigm 1.0) to recognizing that academics' inquiries into their teaching and the learning of their students can address questions that are broader than how students process disciplinary content expertise, including those related to socio-political purposes. Since SOTL refers to academics' inquiry into their teaching and learning in their own classroom (or institutions), SOTL, by definition, is still concerned with exploring and enhancing student learning within the context of 'disciplines' or particular programs (as learning within the disciplines includes 'learning of' but is not restricted to it).

4 Reflection, knowledge, virtue and evidence

The previous discussion implied that a 'problem' (or investigative question) in SOTL can be framed from different theoretical perspectives. However, the theory debate in SOTL is not just about whether problems should be framed from a psychological or sociological (or other) perspective but extends to the issue of what constitutes valid knowledge and 'evidence'. In an influential article, published in the *Change* magazine in the US, Donald Schön (1995) argued that a technical rationality looking for stable cause and effect relationships with the goal of providing generalizable scientific explanations and predictions was ill suited for professional practices (such as teaching) that are characterised by particularity and contingency. Specifically, he argued that "The new scholarship calls for an epistemology of reflective practice, which includes what Kurt Lewin described as action research" (p. 34). Cross and Steadman's book *Classroom Research: Implementing the Scholarship of Teaching* (Cross & Steadman, 1996) reflects the same idea. Building on earlier work on classroom assessment techniques (Angelo & Cross, 1993), the authors introduced higher education teachers to relevant literature and approaches for carrying out inquiries into teaching and learning in their own classrooms and the sharing of insights and experiences within a community of teachers engaged in this work.

While there was consensus that SOTL would include some form of reflectivity on the part of higher education teachers (e.g., Andresen, 2000; Glassick, Huber & Maeroff, 1997; Kreber, 2002, 2003), what that reflectivity or reflective practice would look like was less clear. Together with my colleague Patricia Cranton, I introduced the notion that SOTL could be usefully construed as a process of transformative learning (Mezirow, 1991) on the part of academic teachers, rooted in certain types of reflection (Kreber & Cranton, 2000). Building on this idea, but with the intent to further enrich the theoretical foundation of SOTL and challenge narrow interpretations of evidence-based practice, I proposed several years later that there could be value in interpreting SOTL from an Aristotelian virtue perspective (Kreber, 2015). I now turn to these two lines of thinking.

4.1 Engagement in SOTL as transformative learning

Mezirow (1991) proposed that significant learning in adulthood is not accumulative but transformative, leading to a more developed, discriminating,

permeable and valid perspective. Accumulative learning leads us to know more than we did before but leaves in tact our existing frame of reference; the fundamental assumptions or premises we hold about how things are, about how the world works, are left unchallenged. Learning becomes transformative and leads to a change in our frame of reference or perspective, when these deeply-held assumptions we hold (for example, about why certain students are not succeeding in our courses) are challenged and become transformed through critical reflection, prompting us to make changes to our practice. Patricia Cranton and I suggested that higher education teachers' engagement in SOTL was usefully understood as a process of adult learning, that ideally would be transformative. We proposed that SOTL involved academics engaging in reflection in at least three different domains: (1) teaching practices and instructional design, (2) student learning and development, and (3) the aims, goals or purposes of teaching within their own courses and of higher education more generally (Kreber & Cranton, 2000; Kreber, 2013). We argued that within each domain reflection could take the form of content, process or premise reflection, adopting these terms directly from Mezirow (1991) who defined them as follows: "We may reflect on the *content* or description of the problem…, the *process* or method of our problem-solving, or the *premise(s)* upon which the problem is predicated" (p. 117, emphasis in original). Since SOTL is about pursuing a 'problem' (Bass, 1999), the different forms of reflection, we proposed, could help frame the problem and steer faculty's investigative engagement with their teaching practice. Without going into too much detail regarding the distinction between the three types of reflection, a single example might be helpful.

Earlier in this chapter we saw that initially 'Decoding' was concerned purely with the cognitive processes of expertise development that were seen as fundamental to students' success. However, over time the focus broadened, indeed shifted, to consider also other factors that facilitate or inhibit student success in learning. This move can be interpreted as perspective transformation as a result of *premise* reflection in the domain of student learning, supported by reflective questions such as:

- What are alternatives to how we presently frame the provision of appropriate support for learning? Why do we believe that all students will respond similarly to certain teaching strategies intentionally designed to achieve mastery of certain concepts? Why do we believe that all learners have an equal chance to master them?

At the level of *process* reflection in this same domain the questions might have been:

- How well do we support students in their learning? Who is doing well, who is not doing well?

Finally, at the level of *content* reflection the questions might have been:

- What do we expect or demand of students in terms of their learning in this course and to what extent do they achieve these targets?

Following Mezirow (1991), we argued that process and premise reflection were deeper forms of reflection than content reflection, and especially premise reflection would lead to transformative learning. As above examples of possible reflective questions also demonstrate, some address instrumental learning (e.g., How well do we support students in their learning? To what extent do they achieve certain targets?) but most address what Mezirow (1991) called communicative and emancipatory learning (e.g., What do we expect or demand of students in terms of the learning in this course and Why do we believe that all learners have an equal chance to master certain concepts?), leaning on Jürgen Habermas' (1971) disctinction between technical, practical and emancipatory interests. I emphasize that the reflective questions are examples. Scholars of teaching engaged in content, process and premise reflection on (1) teaching practices and instructional design, (2) student learning and development, and (3) the aims, goals or purposes of teaching, pose their own questions specific and relevant to their contexts.

Of particular importance to Mezirow's theory of adult learning is the notion that critical reflection is enabled by a community of peers committed to ideal speech conditions (including for example, that everyone has full information, or an equal chance to be heard, etc.), where assumptions underlying assertions (here referring to what we believe about teaching and learning) are identified and subjected to scrutiny. By proposing a view of SOTL as transformative learning on the part of academic teachers and linking reflection on teaching and learning directly to the testing of validity claims within a community, we offered a concrete explication of what reflectivity in SOTL entailed. At the same time we satisfied the expectation that engagement in SOTL include peer review and going public. Finally, we suggested that SOTL could be engaged in informally or formally. Concretely this meant that at the informal

end of the continuum content, process and premise reflection would promote transformative professional learning about teaching and student learning; as the process became more formal, it would still include professional learning about teaching but content, process and premise reflection questions could serve as research questions (or rather help to identify research questions) for formal investigations (Kreber, 2013).

4.2 SOTL as a virtue-based practice

The virtue perspective on SOTL (Kreber, 2015) starts out by suggesting that academic teachers taking an inquiry-based or investigative approach to their teaching practice and student learning require three types of knowledge or intellectual virtues: theoretical or formal knowledge (as in the virtue of episteme), technical or productive knowledge (as in the virtue of techne) and practical wisdom (as in the virtue of phronesis). Episteme is associated with general theories that have been developed, and are in the public domain, about the aims of higher education, student learning and development or instructional design (note the link to the three broad domains of reflection discussed earlier). Techne is associated with making technical judgements about what strategies are most effective when the outcomes or ends of the practice are clearly defined. Phronesis is associated with how to act in the midst of uncertainty and with ethical deliberation. The model further suggests that the criteria we traditionally associate with scholarship (a deep knowledge base, an inquiry-orientation, critical reflectivity, peer-review and going public) are met as scholars of teaching pursue the moral virtues of truthfulness, courage or justice, that define all social practices according to philosopher Alasdair McIntyre (2007). The moral virtues then also are seen to support the quality and rigour of SOTL.

The central role of practical wisdom is two-fold. It assists with decisions regarding the applicability and desirability of both theoretical and technical knowledge in concrete situations. It also enables the development and proper application of the moral virtues in these contexts.

My intent with this model was to challenge two following assumptions: first, only scientific research on teaching and learning is valuable and, second, such scientific research can be applied to teaching practice in higher education in an instrumental fashion so as to tell us which methods are most effective to bring about certain outcomes. Inspired by John Elliott's (2001) discussion of evidence-based practice I suggested that SOTL (i.e., academics' inquiries

into their own teaching contexts and students' learning) would be associated with two types of evidence. It should seek and provide evidence of the internal ethical consistency between how we teach and support learning and what we see as the desired outcomes of higher education (engaging the virtues of phronesis and episteme); it would also seek and provide evidence of how effective our teaching and learning support approaches are in achieving these desired outcomes (engaging the virtue of techne). I argued, as Donald Schön (1995) had done 20 years earlier, that SOTL must not be based exclusively in a technical rationality. I added that SOTL required all three virtues, theoretical and scientific knowledge ('episteme'), productive knowledge ('techne') and wise judgement ('phronesis'), to meet "the challenges of educating students for personal, professional and civic life in the twenty-first century" (Huber & Hutchings, 2005, p. x).

5 Ongoing points of contention

As was discussed earlier, the Carnegie report *Scholarship Reconsidered* (Boyer, 1990) presented a broad vision of scholarship (or Wissenschaft). The 'scholarship of discovery', as Boyer (1990) had dubbed the pursuit of new advancements in one's discipline through knowledge creation, was presented as only one aspect of scholarship; and the dissemination of knowledge (read 'teaching') was to be construed not as something we do next to our scholarship but as an integral part of this broader vision. In the years following the publication of *Scholarship Reconsidered*, the meaning of scholarship in the context of teaching assumed sharper contours and inquiries into questions of teaching and learning within the discipline came to be understood as a distinct aspect of scholarship and knowledge creation, which complemented the scholarship of discovery. We find this same idea expressed in the German notion of 'Wissenschaftsdidaktik', which, compared to the generic concept of 'Hochschuldidaktik', is concerned with inquiries into teaching and learning within the context of particular disciplines. What we have not yet addressed are the debates that this association of teaching with knowledge creation gave rise to. Questions were soon asked on many campuses about whether there was a distinction between 'scholarly teaching' and 'the scholarship of teaching', and also whether all faculty were now expected to become scholars of teaching or whether striving for excellence, let alone competence, in teaching was enough.

5.1 Does formal SOTL equal research?

The widely held assumption that taking an investigative stance towards teaching equals 'doing research', caused some faculty members to worry that if the SOTL movement was to become too popular their university might soon expect them to produce research on their teaching and students' learning. The same assumption, that taking an investigative stance equals 'doing research', caused some higher education teaching and learning experts to question whether regular faculty members (discipline experts) had the knowledge and skills to carry out such investigations and express reservations regarding the quality and usefulness of SOTL projects.

Like Huber and Hutchings (2005) I favour a broad-tent conceptualization of SOTL, whereby informal inquiries and formal inquiries (research) represent two ends of a SOTL continuum, and all forms of engagement are equally valuable (Kreber, 2013). The quality of SOTL activities should be judged by the extent to which inquiries are guided by certain types of reflective processes and virtues (Kreber, 2013, 2015), not whether the process has been engaged in formally or informally. Therefore, in dialogue with the few faculty members who were, or perhaps still are, worried that embracing a broader concept of scholarship would mean that they have to undertake formal inquiries (research) into their teaching I would say something like this: *Most faculty will choose to pursue 'regular research' in their fields (whether this means working on a new proof or algorithm in mathematics, composing an opera in music, explaining the evolution of the universe in astrophysics, or figuring out whether we can eat ourselves out of the climate crises, etc.) rather than engage in SOTL on a formal basis. However, I would like to see the pursuit of formal SOTL as a genuine career option for the few who would like to do this work. Therefore, I don't think faculty should be expected to undertake formal inquiries into teaching and learning. However, all faculty members including those who are research active in their fields should be expected to reflect on their teaching and their students' learning as this is in the best interest of students and society and as such engage in SOTL informally.*

Of course, above statements concerning 'equal value' and 'quality' are deeply contested, as I will show a little later in this section, given that universities have their own systems by which they evaluate scholarship. My reference point with above statements about 'equal value' and 'quality' is the professional development of teachers and the improvement of practice, not the advancement of knowledge more generally.

Higher education scholars with reservations regarding the rigour and value of SOTL often suggest that all that can be expected of regular faculty is that they use the research on teaching and learning in higher education that is already in the public domain as a basis for their teaching (that research being carried out by experts, like themselves). However, the SOTL movement, as will be recalled, was founded on a rather different assumption, namely that one's *own* teaching should be recognized as a basis for research (Richlin, 2001). Achieving such recognition was part of a transformational agenda and seen as something worth striving for (see Gilpin & Listin, 2009). Therefore, in dialogue with the higher education scholars ('experts') sceptical of SOTL I would say something like this: *SOTL starts with faculty's own teaching and learning contexts and the issues they observe there and are curious about. As part of taking an investigative stance they will consult also existing literature/research and make decisions on the extent to which it can usefully inform their own particular context. Their own experience, expertise and agency as both teachers and investigators of teaching and learning should be respected. Some academics choose to engage in SOTL informally, others more formally. At the core of SOTL is critical reflection on assumptions including the scrutiny of validity claims. Those who wish to engage in SOTL formally but do not yet have the knowledge and skills to do it well typically benefit from the many professional learning opportunities on how to carry out such investigations that are now available, often at their institution and even internationally*.

5.2 What counts as peer review?

A point which is often not appreciated by the sceptics of SOTL who worry about rigour and quality is that there are many ways to seek peer review and going public (e.g., Andresen, 2000; Kreber, 2013; Shulman, 1999) beyond the traditional ways we are used to in the academy. Habitually we think of 'peer review' in terms of having our work assessed by designated experts and of 'publication' in terms of conference presentations/posters, journal articles, or monographs. However, as was intimated earlier in this chapter, sharing insights with students or engaging in discussion with a colleague or a larger community of peers characterized by a culture of trust, inclusion and respect, provides a forum in which insights can be shared and validity claims be surfaced and interrogated. Importantly, a community of peers characterized by trust, inclusion and respect, serves as a space where insights are not just reviewed and debated but likely also transformed. Opportunities for such exchanges are endless. They are common practice at many SOTL conferences

(where next to traditionally peer reviewed sessions participants with similar ideas or concerns can come together for informal exchanges in discussion groups) but they can be provided easily within departments, schools and institutions.

5.3 Is formal SOTL the same as the scholarship of discovery on teaching and learning?

A related point of contention is whether there is a distinction between 'formal inquiries in SOTL' and the 'scholarship of discovery in the field of teaching and learning'. In my view there is a distinction, and it is linked to the central point made in this chapter. The scholarship of teaching and learning involves academics' investigative engagement with their own teaching practice and contexts. There is much educational research out there on teaching and learning in higher education (i.e., the 'scholarship of discovery in the field of teaching and learning'), that is not concerned with the particular contexts many faculty members find themselves in. Insights gained from this work are often presented at an abstract level and in expertly distilled form as in: "students who are actively engaged in learning for deeper understanding are likely to learn more than students not so engaged" (Cross, 2005, p. 1). It is unlikely that insights presented at this level of abstraction can help faculty to better support the learning of their students. Cross (2005) observed that if we really want to encourage deep learning on the part of our students, and in ourselves as academics (referring to our professional learning about teaching), we need to pay much greater attention to what we see before us every day. In essence, she was saying that what typically qualifies as research in higher education teaching and learning often cannot provide the answers needed for specific contexts. The type of research she saw greater value in sounds very much like SOTL. I add though that while the distinction between 'formal inquiries in SOTL' and the 'scholarship of discovery in the field of teaching and learning (or simply education research)' is context-specificity and practical relevance, it seems clear that the differences begin to blur at some point. Moreover, while 'formal inquiries in SOTL' and the 'scholarship of discovery in the field of teaching and learning' are not the same (for the reasons outlined), they surely should be recognized and valued as equal within the academy's tenure and promotion processes.

5.4 SOTL and educational development

Another issue I would be remiss not to mention concerns the relationship between the SOTL movement and the educational development centres at universities. SOTL is seen to further the educational development of academics and institutions (Hutchings, Huber & Ciccone, 2011; Kreber, 2013), which, of course, is precisely also the mandate of the centres, some of which established as early as the 1970s. This begs the question of whether the one initiative makes the other one redundant. A distinction that can be drawn between the development opportunities traditionally offered by these centres and the SOTL movement is that the former rarely take full account of the specific contexts that academic teachers find themselves in. Rowland (2001) suggested that by ignoring the complexities and context-specificity of teaching, many educational development programs reduce teaching to a set of predictable processes and behaviours and promote 'surface learning' about teaching. By contrast, and comparable to the German notion of 'Wissenschaftsdidaktik', the scholarship of teaching and learning movement invites academic teachers into a deep learning process that is self-directed and, ideally, transformative (Cranton, 2011; Huber & Hutchings, 2005; Hutchings, 2000; Kreber, 2005, 2006), as they are free to pursue questions about teaching and student learning that have real relevance to them.

However, many centres seem to support SOTL in some form and have shifted their approach from principally instructing colleagues in how to teach to also offering opportunities for self-directed inquiry into teaching and student learning. Some have enriched their offerings by providing small grants for SOTL projects, organizing informal forums and formal symposia where exchanges can occur across disciplinary and departmental cultures, and encouraging attendance at local, national and even international SOTL conferences. A few centres, sometimes renamed Institutes for the Scholarship of Teaching and Learning, encourage formal engagement in SOTL.

5.5 Do we know how to recognize and reward (different forms of) SOTL?

Finally, there are ongoing challenges regarding rewards and recognition. Pursuing SOTL formally is a genuine career option *only if* the various outputs of formal SOTL are recognized as valid knowledge creation in the institutions' tenure and promotion processes. With regard to colleagues who choose the

pursuit of 'regular' research in the discipline over formal SOTL the key challenge is a different one. In an environment that expects them to publish in top ranking journals in their disciplines and acquire prestigious research grants, how will we motivate them to want to grow as teachers and engage in SOTL informally by adopting an inquiry orientation to their teaching practice and student learning? Some institutions have managed to develop thoughtful responses to both challenges, many are still struggling.

6 'Concluding questions'

In this chapter I provided an overview of the origins and evolution of the SOTL movement, discussed some specific theoretical considerations and touched on a few points of ongoing contention. I did not review the German tradition of *Wissenschaftsdidaktik* and, therefore, am not in a position to present conclusions about the extent to which the two fields might be able to learn from one another. However, I can offer some 'concluding questions':

- What is considered valid knowledge in Wissenschaftsdidaktik and SOTL, and where is the expertise seen to reside in each? Who are the experts?
- How does one become a *Wissenschaftsdidaktiker*? Are *Wissenschaftsdidaktiker* scholars of teaching, that is faculty members (i.e., discipline experts/academic teachers) engaged in SOTL? Or are *Wissenschaftsdidaktiker* 'faculty members *plus*' – meaning discipline experts/academic teachers with some formal upgrading or additional qualification (perhaps a masters or even doctoral degree in higher education)? Or are *Wissenschaftsdidaktiker* educational development specialists (Hochschuldidaktiker) who turn into *Wissenschaftsdidaktiker* the moment they enter with faculty members (i.e., discipline experts/academic teachers) into a shared "Wissenschaftsdidaktische Praxis" in the context of a joint SOTL project?
- Is the idea of SOTL as a reflective and virtue-based practice in any way applicable to *Wissenschaftsdidaktik* or, alternatively, could this particular view of SOTL extend the traditional boundaries or scope of *Wissenschaftsdidaktik* in useful ways?

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