

Why is the Scholarship of Teaching and Learning such a hard sell?

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Advocates have difficulty convincing colleagues Scholarship of Teaching and Learning (SoTL) is a worthwhile use of time and resources. This article highlights problems impeding SoTL. First, scholarship of teaching gets used as a synonym for other activities. Second, Boyer's definition was conceptually confused. Third, SoTL is difficult to operationalize. Fourth, much discourse concerning SoTL is anti-intellectual and located in a narrow neoliberalism. Fifth, there is uncritical over-reliance on peer review as the mechanism for measuring scholarship. Each impediment makes SoTL a hard sell – particularly in research-intensive universities. Taken together, they constitute a formidable problem for SoTL advocates and contain incendiary implications for promotion candidates and committees.

Keywords: anti-intellectualism; conceptual inadequacy; critical perspective; impediments to SoTL; marginalization; neoliberalism; vagaries of peer review

Dead in the water

Certain professors and many students grumble about how research allegedly obscures the merits of exemplary teaching at universities. Modern efforts to move teaching from the periphery to the centre of the university were marked by Boyer's (1990) and Glassick, Huber and Maeroff's (1997) oft-cited books on the scholarship of teaching. Since then, the scholarship of teaching has been broadened to include learning. As the twentieth became the twenty-first century, the scholarship of teaching (SoT) became the scholarship of teaching and learning (SoTL).

Scholarship of teaching and learning has been touted as an instrument of salvation, 'a movement that can transform the nature of ... society toward our ideals of equality and justice.' It signals a 'paradigmatic change in higher education' (Atkinson, 2001, p. 1217). Others are not so sure and casual observation suggests a significant number of people consider SoTL a fallback route to promotion for people with patchy research records. If this casual observation was empirically verified it would point to hazards ahead for candidates seeking promotion by SoTL.

Despite 'blockbuster' conferences (Hutchings, 2007) and new journals (such as the *International Journal for the Scholarship of Teaching and Learning*), most university faculty members or academic staff do not know what SoTL means. Nor do they have many incentives to learn about it. In the very first issue of the *International Journal for the Scholarship of Teaching and Learning*, Schroeder (2007) bemoaned the marginalization of SoTL.

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More than 17 years after Boyer (1990), SoTL lurks at the periphery of university life and discourse. Even its most ardent advocates confess there is a ‘kind of crankiness’ amongst those frustrated by its ambiguities (Hutchings & Shulman, 1999). ‘Often marginalized from “true” scholarship in the eyes of institutional or disciplinary peers, SoTL work may not evoke the same respect or carry the same weight as traditional scholarship’ (Schroeder, 2007, p. 1).

The problem is SoTL is built on unsteady foundations and overly dependent on orthodoxies of higher education. Inside the House of SoTL, teaching lives upstairs and learning in the basement.

At least five factors make SoTL a hard sell:

- First, scholarship of teaching is used as a synonym for other activities.
- Second, Boyer’s (1990) definition was conceptually confused.
- Third, it is difficult to operationalize.
- Fourth, much discourse concerning SoTL is anti-intellectual.
- Fifth, there is an over-reliance on peer review.

Any of the above can be fatal to the future of SoTL in the university. Taken together, they complicate promotion and tenure processes and contain potential for disappointment and litigation. Little wonder there is crankiness. Scholarship of teaching and learning is like a fairground mirror distorting the view irrespective of where the observer stands.

The author is a senior professor with more than 30 years experience on promotion and tenure committees at a large and highly rated research-intensive university. This study arose from observing efforts to insinuate SoTL into University of British Columbia promotion and tenure guidelines, tenure as an editorial consultant to publishers, experience as a consulting editor to several journals, conversation with a Nobel laureate who specializes in teaching and learning and close reading of relevant literature. The purpose was to analyse factors making SoTL a hard sell.

Synonym for other activities

The first factor making SoTL a hard sell is the persistent tendency to use it as a synonym for other activities. An example is the idea SoTL is the same thing as scholarly, exemplary or good teaching. Given the career-crushing (or enhancing) importance of what distinguishes scholarly (or good) teaching from SoTL, it is important to have crisp definitions of both. But, from the start, SoTL proponents had difficulty distinguishing them.

The tendency to regard SoT and scholarly teaching as synonymous was an outgrowth of Boyer’s model. Even supporters had reservations. Hence, Glassick (2000, p. 878) noted: ‘the scholarship of teaching was to become the most difficult of Boyer’s proposals to interpret and implement ... precise wording to describe scholarship of teaching was elusive’ (p. 879). Because of this, much post-Boyer literature ruminated about definitions and mostly avoided ‘the substance’ of SoTL (Clarke, 2005). Also, many SoTL proponents don’t understand what is meant by scholarship (Andresen, 2000).

Kreber and Cranton (2000) detected three perspectives on SoTL. The first is ‘parallel to the traditional conceptualization of scholarship’; in the second ‘teaching is equated with excellence in teaching’; in the third ‘scholars of teaching take a scholarly approach to teaching by applying educational theory and research to their practice.’

Academic staff are differentially motivated and the commitment to SoTL ebbs and flows like the tide. This year it is flavour of the month. Next year, barely mentioned (Palmer & Collins, 2006). More than 17 years after Boyer, SoTL is still only a ‘vague notion’ based on ‘difficult to discern models’ (Trigwell, Martin, Benjamin, & Prosser, 2000, p. 156).

The vagueness of SoTL is reflected in terminology describing it. Kreber (2002) used a Delphi procedure to see if there was a developing consensus concerning it. Within the House of SoTL the following are all in use (emphasis ours):

- ‘Scholarship of teaching’ (Boyer, 1990).
- ‘Scholarships of teaching’ (Cross & Steadman, 1996, p. 28).
- ‘Teaching as scholarship’ (Trigwell et al., 2000, p. 155).
- ‘Scholarship in ... teaching’ (Nicholls, 2004; Trigwell et al., 2000, p. 158).
- ‘The *idea* of scholarship of teaching’ (Trigwell et al., 2000, p. 156).
- ‘Scholarly *approach* to teaching’ (Healey, 2000, pp. 170, 172, 174).
- ‘Scholarly teaching’ (Benjamin, 2000, pp. 192, 194; Fincher & Work, 2006, p. 293; Healey, 2000, p. 170; Richlin, 2001, p. 57; Trigwell et al., 2000, p. 156).
- ‘Developing scholarship *within* ... one’s discipline’ (Healey, 2000, p. 170).
- ‘Excellent and scholarly teaching’ (Healey, 2000, p. 172).
- ‘Teach *in* a scholarly way’ (Benjamin, 2000, p. 191).
- ‘Scholarly *discourse* on teaching and student learning’ (Benjamin, 2000, p. 192).
- ‘Scholarly teaching *practice*’ (Benjamin, 2000, p. 193).
- ‘Teaching as scholarly *work*’ (Bender & Gray, 1999).
- ‘Scholarship related to teaching and learning’ (Fincher & Work, 2006, p. 293).
- ‘Scholarly enquiry *into* student learning’ (Wikipedia, 2007).
- ‘The *improvement* of teaching and so forth’ (Hutchings, 2007, p. 2).
- ‘Discipline-specific pedagogical *inquiry* into how students learn’ (Kreber, 2007, p. 1).
- ‘Authentic practice’ (Kreber, 2007, p. 2).
- ‘Systematic *reflection* on teaching and learning made public’ (McKinney, 2001).
- ‘Ongoing learning about teaching and the *demonstration* of such knowledge’ (Kreber & Cranton, 2000, p. 477).
- ‘Scholarly inquiry into the teaching and learning process’ (George Washington University, 2006, p. 1).
- ‘Scholars *of* our teaching’ (Bender & Gray, 1999, p. 3).
- ‘A *new* concept of academic work’ (Bender & Gray, 1999, p. 4).
- ‘Shorthand for a strong *commitment* to teaching’ (Atkinson, 2001, p. 1219).
- ‘A rallying cry for educational reformers’ (Atkinson, 2001, p. 1220).
- ‘Process of *transmitting* perspectives, skills and knowledge’ (Atkinson, 2001, p. 1221).

Candidates for promotion easily get the impression ‘good teaching’, ‘authentic practice’ or a ‘strong commitment’ satisfies SoTL requirements. They might be in for a shock. The author would want an original contribution to knowledge. Teaching codified knowledge or rehashing other people’s ideas (close to what Boyer called ‘integration’) would not suffice.

Creating original knowledge is the difference between doctoral and masters level research and distinguishes non-scholarship from scholarship. Masters students often publish their work. But it may replicate earlier studies or rehash the ideas of others. Doctoral candidates are to make an original contribution to knowledge. Candidates for promotion are under the same obligation to produce original knowledge.

Conceptual confusion

The second factor making SoTL a hard sell is conceptual confusion. Using SoTL as a noun, other times as a verb or touting it as a synonym for other phenomena, is a manifestation of deeper conceptual problems within higher education. At a most basic level, attempts to delineate dimensions of SoTL too often deploy piffling or weak understandings of scholarship.

Piffling elements

Scholarship of teaching and learning is dominated by the orthodoxies of higher education. This is part of the problem, not the solution to its marginalization. For the Carnegie Foundation, SoTL ‘builds on many past traditions in higher education’. These include ‘classroom management, the assessment of student learning, K-12 action research, reflective practice, peer reviews of teaching, traditional education research, faculty development’ (Hutchings, 2002) and, with regard to learning, ‘the development of expertise, learning styles, deep and surface learning, stages of intellectual development, the improvement of teaching and so forth’ (Hutchings, 2007, p. 2).

Scholarship of teaching and learning is dominated by a preoccupation with classrooms, peer review and the politics of publishing. Much work flows from top-down, teacher-centred and, in some cases, discredited approaches to teaching and learning. Why this preoccupation when most teaching and almost all learning does not occur in classrooms or formal educational settings? For SoTL to flourish, there has to be greater recognition of teaching and learning in non-formal and informal settings.

Despite the espoused commitment to scholarship within SoTL, there has been a marked reluctance to define it and almost no agreement about what it is. Instead, leaders like Boyer and Shulman turn the task over to market forces or peer review. If it gets past peers it must be scholarship. If rejected, it wasn’t scholarship.

Separate and apart

Boyer (1990) was thinking holistically when he wrote *Scholarship Reconsidered* but many people took his concepts apart. Today, there are at least three contrasting ways of portraying how Boyer conceptualized SoTL elements:

- First, there is Boyer’s attempt to *aggregate* elements.
- Next, are attempts to *disaggregate* the elements of SoTL.
- Finally, teaching is the *context*, with other elements aggregated within.

Aggregated understandings

For Boyer (1990) the four elements of SoTL were discovery, integration, application and teaching. These were not discrete. And nor do they always occur in a predictable order. Any attempt to operationalize Boyer’s elements would, ideally, reflect the fact

they overlap and interact. For Boyer, the scholarship of teaching was an operating system, not a list of isolated elements.

It is tougher to operationalize aggregated than disaggregated elements and attempts to do so (such as Kreber & Cranton, 2000) produced trivial ‘indicators’ of SoTL (such as ‘read articles on how to teach’ or ‘including a rationale and goals in course outlines’).

Disaggregated approaches

Many (probably most) users of Boyer’s (1990) model disaggregated the elements. Hence, complex interactions get ignored. Four elements are stripped apart, arrayed on a list and promotion candidates told to find evidence for each:

- The scholarship of discovery involves research.
- The scholarship of integration is the process of combining or extracting new meaning from extant knowledge.
- The scholarship of application is the process of applying knowledge to some problem in theory or practice.
- The scholarship of teaching is the process of teaching.

Before SoTL became a route to promotion, faculty or academic staff had to do an appropriate amount of research, teaching and service. There was a strong echo of this tradition in Boyer’s work where discovery became the new term for research, integration and teaching the terms for teaching, and application the process of providing service. The old three-legged approach may be onerous. But it is well understood and, compared to SoTL, probably a safer route to tenure and promotion.

Teaching as context

Cooking cannot be defined as ‘the act of cooking’ or hurdling the ‘act of hurdling’. Hence, the scholarship of teaching cannot be partly defined as the ‘scholarship of teaching’.

What was Boyer thinking when he touted the scholarship of teaching as one component of a 4-legged animal labelled the ‘scholarship of teaching’? How could the scholarship of teaching be one quarter of the scholarship of teaching?

Did Boyer intend SoT to be composed of discovery, integration and application? Teaching would be the setting or context for the other three. There are supporters for this view. For example, Atkinson (2001, p. 1220) described discovery, integration and application in the context of teaching. Fincher and Work (2006, p. 293) were even more direct. They claimed ‘scholarship of teaching is not a fourth distinct form of scholarship, but, rather, may involve discovery, integration or application.’

Figure 1 is our reading of Boyer (1990). Teaching is the frame factor. Discovery and integration interact and occur in the context of teaching. Links between discovery/integration interactions and the application of scholarship are often delayed and ambiguous. But, when scholarship is ‘applied’ to theoretical or practical problems, it informs teaching. Hence, what others have portrayed as a list are active ingredients of a dynamic and iterative teaching process.

Figure 1 is more faithful to Boyer (1990) than listing or disaggregating elements and sending promotion candidates on fruitless searches for four kinds of evidence.

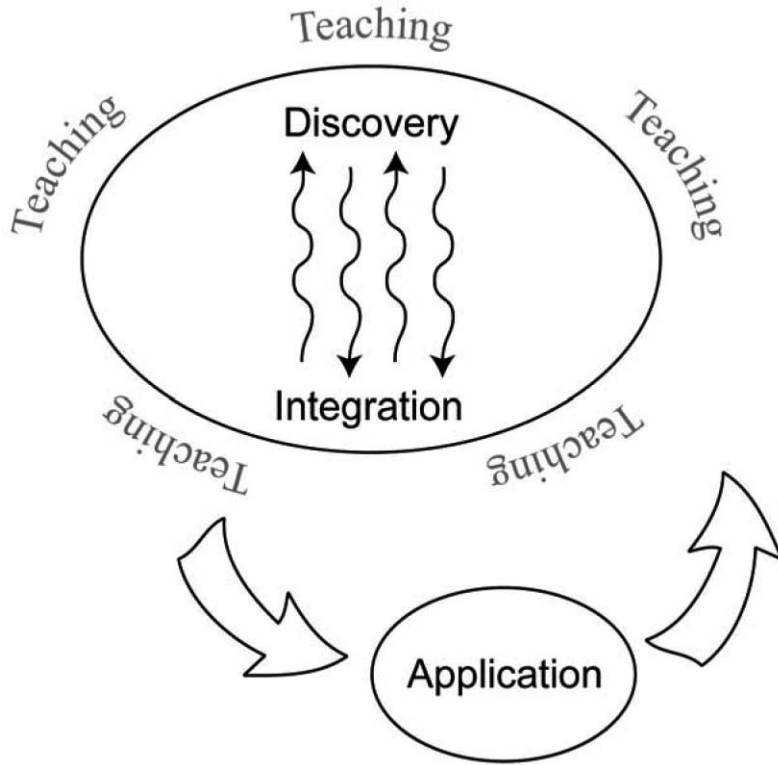


Figure 1. Boshier's reconfiguration of SoTL.

Discovery and integration occur in the context of teaching. Application sometimes occurs in a teaching context but more often in another setting.

There is no such thing as a separate scholarship of discovery, scholarship of integration or scholarship of application. Discovery, integration and application are interacting elements in SoTL. Disaggregating them creates enormous challenges for promotion candidates and ruptures the ecology of what Boyer was thinking.

Application usually occurs outside the teaching context. In ski schools the learner reports for a lesson (involving teaching)? The trainee is sent to the slopes to practice. When the author studied to become a ship's captain, it was assumed what had been learned through discovery and integration would be 'applied' at sea. Except for the life-raft pool, there were few opportunities for application at the Marine Training Institute. Learning through sea time is the centrepiece of marine training.

When questioned about the application of his 2001 Nobel Prize winning discoveries, nuclear physicist Carl Wieman (personal communication, March 9, 2007) stroked his chin, thought for a while and said 'it led to further research'. Even though quick to acknowledge building blocks laid by others, like other Nobel laureates in science, Wieman won for what he discovered. Possible applications of his discovery include nanotechnology and precision measurement. But, as explained in a press release from Nobel Prize headquarters, statements about any application of the findings were speculation (Nobel Foundation, 2001).

If people win Nobel prizes for discovery – without application – why do higher education administrators demand junior faculty or academic staff provide evidence for

application (along with discovery, integration and teaching)? Are junior faculty or staff seeking promotion being asked to meet requirements more onerous than those for Nobel laureates?

Difficulties of operationalising

The third factor making SoTL a hard sell is the difficulty of operationalizing it. Although Boyer was keen on application, his concepts were difficult to apply. This becomes apparent when administrators resort to Boyer in efforts to promote some people and decline others.

Not all blame should land on Ernie Boyer. He didn't want elements disaggregated. The biggest problems arise when users disaggregate elements. An example is Louisville where faculty were 'required to demonstrate proficiency in four separate areas ... to be defined and assessed independently of each other' (Schweitzer, 2000, p. 927).

Nightmare at Louisville

Louisville faculty (academic staff) wanting promotion had to secure evidence of discovery, integration and application in their teaching. What at first seemed a good idea, part of the salvation of American higher education (Atkinson, 2001), became a nightmare. According to Schweitzer:

- Neither administration nor faculty members understood the model and there was considerable resistance from those doing pure science (where, presumably, there was no obligation to demonstrate application or impact of research or teaching).
- Requiring evidence concerning a scholarship of discovery led to a bifurcation of promotion criteria 'before and after Boyer'.
- Candidates had problems gathering data pertaining to elements in Boyer's model. Even 'star teachers' had difficulties producing needed evidence.
- Before adopting Boyer, candidates had to demonstrate a broad proficiency in research. After Boyer they had to demonstrate a broad proficiency in the scholarship of discovery, the scholarship of integration, the scholarship of teaching, and the scholarship of application. This 'was an almost impossible task for any faculty member' and particularly daunting for junior faculty (Schweitzer, 2000, p. 927). The Dean said expecting proficiency in four areas was 'too much'.
- It was difficult, almost impossible, to define and assess the four kinds of scholarship. 'The nomenclature was not user-friendly ... and the process ... deemed arbitrary.' The terms integration and application seemed artificial and vague (Schweitzer, 2000, pp. 927–928).

As the process ground on, conceptual confusion dismayed candidates and bedevilled committees trying to decide which evidence fitted Boyer's elements. Not long after the initiative was launched, administrators were replaced and Boyer went with them. There was a sense 'the Boyer model had not been helpful or useful ... it had been a great source of confusion' (Schweitzer, 2000, p. 928). A few Boyer concepts were retained but, in general, Louisville went back to stressing creation of new knowledge and diffusing it through peer-acceptance mechanisms (like journals).

Controversy in Kentucky

The University of Kentucky College of Medicine also endorsed Boyer's 4-legged definition but equated scholarly teaching with SoTL. Nora et al. (2000) claimed 'the production of new materials, methods of teaching and analyses of the best ways to accomplish the goals of teaching demonstrate the scholarship of teaching' (p. 917). Examples of this at Kentucky included 'developing standardized patients as a training and assessment tool, implementing a new women's health curriculum and developing innovative combined-degree programs' (2000, p. 917).

Kentucky deployed a disaggregated version of Boyer's (1990) model. For them, the scholarship of discovery came closest 'to the traditional definition of research'. With regard to integration, 'it seeks to interpret new insights, draw them together and bring them to bear on original research' (Nora et al., 2000, p. 917). The scholarship of application occurs when 'previously discovered knowledge is applied to consequential problems and new understandings result'; the scholarship of teaching is 'the process of communicating knowledge ... scholarly teaching stimulates active, not passive, learning and encourages students to be critical creative thinkers' (Nora et al., 2000, p. 917).

Just like Louisville, there was controversy in Kentucky. There were, for example, lengthy arguments over language and how to distinguish tenure-eligible faculty members ('academics') from other classes of employees. Even when this was done, academic clinicians were unnerved by the possibility their work might be less valued than pure or traditional research. The new emphasis on scholarship meant there would be fewer tenure-eligible positions. The increased number of clinical contractors – not given time or resources for research – had the potential to make some people Brahmins and others Untouchables.

Anti-intellectualism

The fourth reason why SoTL is a hard sell is because the preoccupation with impact is anti-intellectual and located in a narrow neoliberalism. It mostly ignores the socio-economic context in which universities operate (Davis & Chandler, 1998). Many universities have adopted the language and modus operandi of business. The twenty-first century stress on evidence, best practices, benchmarks, outputs and deliverables, competencies, impact or – most naïve and troubling – excellence, arises from detaching universities from their socioeconomic context and constructing education as a commodity to be sold. From a post-modern perspective, stressing impact reeks of performativity (Lyotard, 1984).

Neoliberalism in universities is a descendant of market rationality and 'reforms' launched by Margaret Thatcher in Britain, continued by Ronald Reagan in the USA, Brian Mulroney in Canada and the free-market *New Zealand Experiment* (Kelsey, 1995). The intellectual roots of neoliberalism reside in the Chicago School of Economics and their wish to privatize, commodify and marketize everything (including education, human and social services).

Neoliberals live within a cult of finance (Jesson, 1999) and are obsessed with investment, efficiency, outputs, evidence, accountability and, in educational settings, the impact and application of scholarship. If the Professor of Philosophy thinks he or she can take years to write a book, they will discover this behaviour is no longer appropriate. The administration wants demonstrable performance – as soon as possible. Leisurely approaches to intellectual work have been replaced by just-in-time scholarship.

Articles in reputable journals are the coin of the academic realm. It is even better if they appear on the Op-Ed pages of a newspaper or as the lead item on television news. Deans seek out media, and publicists are hired to deliver faculty faces or academic staff to the public. Media recognition is among criteria determining promotion and tenure. The value of the work, whether original or a rehash of old ideas, is not the issue. What matters is performance – measured as newspaper column inches or place in the TV news line-up. Like professional sports teams, universities dangle lucrative salaries and privileges in front of Nobel Prize winners and other high-performing scholars. Work is important. But performance matters more.

This is in sharp contrast to a time when universities were places for cultivation of the intellect, knowledge was produced for its own sake and scholars were under no obligation to demonstrate the impact of their work. At a ceremony celebrating the 22nd anniversary of Beijing University (Beida), Cai Yuanpei (1917), the widely admired President, said ‘a university is purely an institution of knowledge, not a place to develop one’s qualifications or to put one’s knowledge up for sale. A scholar should be interested in study and, what’s more, cultivate moral qualities as a person of learning.’ Cai’s words are inscribed on a plaque in the red house (the old Beida near the Forbidden City). He would be delighted to know Beida is now rated world-class (Levin, Ou, & Dong, 2006) but appalled by the worldwide commodification of twenty-first century universities.

The University of British Columbia 2005–2006 *Promotion and Tenure Guidelines* said ‘for the scholarship of teaching, scholarly activity may be evidenced ... by demonstrable impact.’ Impact has to be ‘demonstrable’ and ‘evidenced’. It is hard to know how a university landed on the word ‘evidenced’. But, if SoTL is disaggregated, there presumably has to be evidence concerning all four elements. If an aggregated model is used, how will the candidate ‘evidence’ overlap among SoTL elements?

Delayed impact

Boyer’s (1990) desire to have application as a leg of SoTL was overly ambitious because links between teaching and application are usually ambiguous and delayed. In 1917 when Nobel Prize winner Sir Ernest Rutherford split the atom in the Cavendish laboratories at Cambridge University, he was reputed to have said ‘this has no utility for human affairs’ (Campbell, 1999). In August, 1945, people in Hiroshima and Nagasaki discovered Rutherford’s work had painful implications for life and death. Splitting the atom changed the world. But 28 years separated Rutherford’s ‘discovery’ from its ‘application’ over Japanese streets. With this as a backdrop, the author pressed 2001 Nobel Prize winning nuclear physicist Carl Wieman (personal communication, March 9, 2007) to describe the impact of his success at creating new matter from atoms. Echoing Rutherford, Wieman saw a need for follow-up research – but no immediate impact on the way life is lived.

Boyer’s emphasis on application is a response to neoliberalism, corporatism, vocationalism and pragmatism in American higher education. It drags SoTL into a narrow, functionalist, applied framework. Also, application is primarily a matter for the field of practice, not the teaching environment. The need to demonstrate application of scholarly work can lead to a premature foreclosure on ideas, ambiguities and problems. Demanding evidence of impact is anti-intellectual and the antithesis of what the university supposedly stands for. It is an anti-intellectual and poorly thought out component of SoTL.

Peer review

At the centre of SoTL discourse is widespread acceptance of peer review as a mechanism to detect scholarship. Hence, Shulman (1999) says ‘the work must be available for peer review and critique according to accepted standards.’ Likewise, Fincher and Work (2006) claimed ‘the common elements of all forms of scholarship are peer review and public dissemination.’ Peer review is the fifth factor making SoTL a hard sell.

Smith, former editor of the *British Medical Journal*, calls peer review ‘absolutely sacred’ (McCook, 2006). It is the preferred way to ensure research grants go to the best projects, good teaching is rewarded (and bad teaching corrected). With scholarly publishing, peer review becomes the refereeing of articles submitted to journals. For Shulman (1999) and others it is the way to distinguish scholarship from non-scholarship. But why do SoTL advocates celebrate peer review when there is scant evidence it works?

Peer review is error-prone, discriminates against the most able and evokes the opposite of what is desired. Despite its sacred nature ‘it does little to improve papers’ (McCook, 2006, p. 28). Almost every well-published scholar has horror stories about reviewers who, under the cloak of anonymity, made unreasonable or self-serving demands, misread work and defended the status quo. According to Forsdyke (2007) ‘to put an original idea on a grant application is akin to professional suicide. People suffering the affliction of originality must either bring this deviant trait to order or get out of scientific research.’

Peer review is conservative so research grant applications and journal articles promising only an incremental advance along recognizable or established lines are safer than opting for originality. Miramax pulled their money away from Peter Jackson’s outrageous plan to simultaneously make three big films (the *Lord of the Rings* trilogy). Even after persuading New Line Cinema to pay off Miramax and take on the project, Jackson was ridiculed. There were still grumbles after he made millions of dollars and won 13 Oscars (Sibley, 2006). It was the same when New Zealander Richard Pearse was first to fly a heavier-than-air aircraft. Even after beating the Wright Brothers he was ridiculed and, even now, doubts cloud his legacy (Oglivie, 1994).

When Benny Lexcen suggested attaching a winged-keel to the underbelly of the *Australia II* America’s Cup boat, his boss dismissed the idea as yet another crazy ‘Bennyurism’. To John Bertrand (1985), skipper of *Australia II*, it looked like a ‘mad keel ... a bloody rocket under my cockpit.’ The skipper could easily have had Lexcen fired. Seeing the keel, Bertrand exploded with ‘scorn, derision and cynicism’. ‘When I saw the model I just about died ... Jesus Christ! Holy shit!’ he said, gazing at the keel, the test tank and then at Lexcen ‘who was like a little boy let loose in a toy shop’ (Bertrand, 1985, p. 85).

On September 26, 1983 *Australia II* won the America’s Cup. The boat was hauled-out so spectators and despondent US sailors could see the ‘mad keel’. After 132 years in New York, the America’s Cup was off to Australia. In the America’s Cup, there is no second. Lexcen had realized listening to peers was a guaranteed way to lose the contest.

Many original thinkers had brilliant ideas dismissed by peers. Were they alive today, Charles Darwin, Gregor Mendel and Albert Einstein would almost certainly be mauled by peers. They would have problems publishing their work and find it tough to get grants.

As well as rejecting originality, peer reviewers also fail to recognize slipshod theorizing, flawed methodology, incorrect statistics and conclusions wildly at variance with data (McCook, 2006). Peer reviewers are also sometimes compromised by office politics. In SoTL promotion cases, they let through candidates supplying mediocre curriculum or unoriginal teaching materials as ‘evidence’ of ‘scholarship’.

The *Medical Journal of Australia* explored alternatives such as pre-publication peer review on the Internet and post-publication comments from readers. In 2006 *Nature* was sufficiently moved by aggravation concerning peer review to try open process (<http://www.nature.com/nature/peerreview/index.html>). Authors could choose to have submissions posted on a server where anyone could post feedback, provided they were willing to identify themselves. In much the same way, as part of a search for accountability, the *British Medical Journal* now requires reviewers to sign their reports.

When research is being evaluated, peer reviewers are usually other researchers. It is not the same with teaching, where the peer reviewer is often from another discipline (e.g. Medicine) and knows little about educational theory and practice. Despite problems, SoTL advocates seem to have few (if any) worries about peer review. Because Boyer, Shulman and others considered it the best way to identify scholarship, disciples uncritically followed their footsteps. This is a faith, not science-based approach to scholarship. The hazards of peer review are among reasons making SoTL a hard sell at the university. Consider these incidents.

Cultural collision

At the University of British Columbia in Canada, Dan Pratt staked his reputation on teaching and was up for promotion. A senior peer reviewer – a department colleague – came to his class. Afterwards the reviewer wondered if breaking graduate students into groups and having them discuss questions constituted proper teaching. The peer reviewer was from a cultural context where give-’em-hell lectures were the norm. He felt the teacher should ‘teach’. Group work was not teaching. After the class his first words were, ‘Do you think your students are getting their money’s worth?’

The candidate for promotion was so infuriated he devoted the next 20 years to elaborating a broad-based typology of teaching perspectives (Pratt, 1998). Still smarting, he competed for, and won, a coveted teaching prize. Today, years after these events, the peer reviewer has retired and Pratt is a full Professor enthusiastically arguing the case for broad-based and multifarious approaches to teaching.

Oppressions of the status quo

The situation just described was paralleled by what happened to Ray Cattell, the distinguished Illinois psychologist. As a mathematically inclined researcher, Cattell took advantage of the ability of early computers to crunch multiple (rather than single) variable data and landed on crystallized and fluid intelligence as a way of explaining intellectual development over the life-span. Throughout his lengthy career, he authored or co-authored 55 books, about 500 journal articles and 30 standardized tests.

Cattell (1950, 1957a, 1957b) developed trait theory and the respected Sixteen Personality Factor (16-PF) approach to measuring personality. Unlike deductive theories claiming personality consisted of two variables – neuroticism/stability; extraversion/introversion (Eysenck, 1953) or three variables – id, ego and superego (Freud,

1920), Cattell's (1950) multivariate analysis of data secured from many people suggested human personality consisted of 16 factors or traits.

At the time, journal editors were accustomed to small-scale correlation studies involving few variables or experimental designs with one treatment variable. There was bewilderment when Cattell submitted studies involving many variables, thousands of correlations and detail on unfamiliar phenomena such as eigenvalues, scree tests, rotated factor loadings and communalities.

Not many editorial consultants understood Cattell and, after too many rejection letters, he decided to start his own journal (*Multivariate Behavioral Research*). Cattell's (1966) editorial in Vol. 1, No. 1 was an attempt to educate others about the potential of multivariate analysis and a rebuke of peer review and mediocre journal editors.

Extreme caution needed

Peer reviewers sometimes mistakenly think conversational, engaging, plain (or jargon-free) writing is not scholarly. They also resent criticism of their own work. Sometimes journal editors insist writers cite articles from the journal where they want to be published. It is often a condition of publication. Certain editors dislike authors who challenge orthodox wisdom. But what most threatens peer reviewers is original work. Peers are often reluctant to recognize originality because they have a vested interest in maintaining the status quo.

Peer review takes time and yields few rewards. Hence, fatigue arises from being too often asked to do peer reviews. Sometimes an editor will ensure rejection (or acceptance) by choosing hard (or soft) reviewers. Reviewers react more favourably to papers citing their work. Careless reviewers reward work that is mediocre, methodologically inept or contains no hint of originality. When a fake error-filled paper was put in the *Annals of Emergency Medicine*, reviewers failed to spot two-thirds of its major problems (McCook, 2006, p. 30).

With the intensification of work, a collapse of collegiality and increasing tendency of faculty or academic staff to act like entrepreneurs, peers sometimes have a vested interest in impeding the progress of others. As demonstrated in controversy over who discovered HIV, jealousy, professional rivalry or desire for monetary reward lurks in the commodified and competitive world of higher education (see Shilts, 1987). Because of office gossip, conference comments or other unintended clues, blind reviews are often fully-sighted.

None of this means SoTL should jettison peer review. However, extreme caution is needed. As alleged supporters of scholarship, SoTL advocates should consider alternatives. Why? Because peer review too often produces the wrong result and is among reasons making SoTL a hard sell.

Conclusion

This article does not disparage SoTL. Rather, the purpose was to highlight problems impeding its development. Each impediment makes SoTL a hard sell, particularly in research-intensive universities. Taken together, they constitute a formidable problem for those wanting to counter the marginalization of SoTL (Schroeder, 2007).

First, there is a persistent tendency to use scholarship of teaching as a synonym for other activities. Second, Boyer's definition was conceptually confused. Third, it is

difficult to operationalize. Some advocates aggregate SoTL elements and portray them as overlapping and interacting. Others disaggregate them and try to operationalize (and derive indicators) for each one separately. Fourth, much discourse concerning SoTL is anti-intellectual and located in a narrow neoliberalism. Fifth, there is an uncritical and almost quaint reliance on peer review as the mechanism to detect scholarship.

Schroeder (2007) claims that selling SoTL to colleagues depends on aligning it with institutional priorities. But aligning SoTL to institutional priorities will not rectify problems identified above. It would be better to understand attempts to build SoTL are linked to big, difficult and contested discussions about the purposes of the twenty-first century university.

Scholarship of teaching and learning is down but not out. Like an old racehorse, there is always the possibility of a comeback. In the meantime, faculty or academic staff with doubts about SoTL might be better off using the traditional three-legged route (research, teaching, service) to promotion. If they plan to build a case on SoTL, they should understand Boyer's (1990) model was built on shaky foundations and has not improved with age.

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