The Status of the Scholarship of Teaching and Learning (SoTL) in New Zealand Universities: Three institutional case studies

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May 2009

Final Report to the Ministry of Education and Ako Aotearoa: The National Centre of Tertiary Teaching Excellence

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Acknowledgements

This project has involved collaboration with colleagues at Massey University and University of Canterbury. We are very appreciative of the willingness of staff at these universities, as well as at AUT University, to share their experiences, perceptions and views about the scholarship of teaching and learning. In doing so, they were manifesting a commitment to scholarly teaching. We also wish to acknowledge the support and assistance provided by Gordon Suddaby (Director, Centre for Academic Development and E-Learning, Massey University) and Dr. Billy O-Steen (University Centre for Teaching and Learning, University of Canterbury) who facilitated arrangements for gathering documents and undertaking interviews at their respective institutions. The project was feasible because of funding made available through the Teaching Matters Forum and administered by the Ministry of Education and Ako Aotearoa.

EXECUTIVE SUMMARY

The origins of this project lie in the decision, in 2005, to set a working group at AUT University which would identify initiatives that might be taken to promote and support staff engagement in the scholarship of teaching and learning (SoTL). The working group soon recognized that a 'stock-taking' exercise would need to be undertaken before appropriate initiatives could be identified, trialled and evaluated. In turn, this required development of a framework and processes for undertaking that investigation. As it was also appreciated that the inquiry would be strengthened if a bench-making component was included, participation of Massey University and the University of Canterbury was arranged[1]. Early planning for this project also coincided with the establishment of the Teaching Matters Forum Fund and an application for funding from this source was successful. The grant met the overheads for the initial stock-taking phase of the overall project.

The key objectives for phase one, which took into account the limited number of international precedents for such an exercise, included identification of policies, provisions and programmes that encouraged and supported SoTL; description of SOTL-related activities and products; comparison of aspects of SoTL evident in different faculties, disciplines and professions; identification of the experiences and views of staff who were or were not currently engaged in SoTL activities; and a review of criteria that might be used to evaluate the impact of SoTL initiatives on teaching and student learning. In conjunction with these objectives, an extensive review of literature on SoTL was undertaken.

The literature review provided the foundation for a discussion of the meaning(s) that might be attached to the concept of a scholarship of teaching and learning, possible relationships between SoTL and 'pedagogic research', and SoTL in the context of research assessment schemes such as the PBRF. The review also informed commentary on possible variations in SoTL across disciplines and other contexts; the case for enhancing engagement in SoTL; distinctions that may be made between excellent teachers, scholarly teachers and scholars of teaching; SoTL in the context of a professional development agenda for tertiary teachers; strategies for enhancing engagement in SoTL at national, institutional, faculty and individual levels; incentives and barriers to engaging in SoTL and criteria that might be used to evaluate the impact of SoTL and associated enhancement initiatives. The review also included a summary of features of the international infrastructure for SoTL (e.g. organizations, conferences, and publications).

The data gathering for the institutional case studies involved document content analysis, a questionnaire, semi-structured interviews, focus groups and a forum dialogue. Some data was gathered from the three universities; some was confined to AUT University. While the response rate to the questionnaire was lower that desirable, the data obtained from the structured interviews and focus groups extended and allowed triangulation of questionnaire data.

Key findings from the stock take are:

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[1] Some data was gathered from other New Zealand Universities with respect to the presence of statements in key institutional documents (e.g. strategic plan, learning and teaching plan, outstanding teacher award criteria) that signalled a concern to associate scholarship with teaching and learning.

1. While all institutions include statements in key institutional documents which denote a concern to associate scholarship and/or research with teaching and learning, there is considerable variation with respect to whether an elaboration of the institutions' perspective on the meaning and import of that association is also provided. We discern an increasing presence of SoTL-related rhetoric in these documents.

2. Within the three universities, there is clear evidence that there are a variety of well-established provisions, programmes and activities in place that are explicitly intended to encourage and support staff engagement in SoTL. These mainly originate from, and represent part of the work of, the central teaching development services within each university. There is considerable variation across the universities in the form that these 'enablers' take and some sharing of information about them does occur when academic developers have the occasions to meet with one another.

3. An analysis of the annual research publication records for each university over several years indicates that a small but significant number of teachers are actively engaged in SoTL and producing related publications. While the proportion of SoTL publications may appear relatively small when placed alongside research publications overall, the total number represents a major and important contribution to the knowledge base on tertiary learning and teaching. The immediate relevance of that work to a New Zealand context is an important consideration.

4. The analytic framework allowed a comparison to be made of various aspects of SoTL engagement for individual staff and to also consider possible variations across different faculties and disciplines. The findings revealed predictable variation in the 'degree of involvement' in SoTL. For the sample as a whole, while about one half read and responded to literature on learning and teaching, the proportion whose involvement also took the form of investigations of teaching and learning reduced to one third. A further reduction was evident when involvement represented communication with colleagues about personal investigations and ultimately subjection to a peer review process. There was a trend towards increasing involvement in SoTL during teachers' careers as years of experience increased and advancement in academic position occurred. This may reflect a priority accorded disciplinary research or their own postgraduate research by early career academics, although engaging in SoTL may be a manageable way into research for some academics. The latter was apparent at AUT University which acquired university status in 2000. Nearly two thirds of the respondents were from 'soft' and 'applied' disciplines rather than 'hard' and 'pure' disciplines. Epistemological differences as well as lack of familiarity with social science/education research may be an obstacle or deterrent for some teachers from the latter. An orientation towards a student-centred conception of teaching was also more evident in teachers engaged in SoTL investigations. With respect to future aspirations, a significant proportion hoped to move from their current degree of involvement towards activities associated with scholarly teaching and/or scholarship of teaching. Overall the data anticipates an increased proportion of teachers undertaking investigations of teaching and learning.

5. Four conditions featured most prominently in those respondents indicated would increase the likelihood of their engagement in SoTL activities: more time; more professional development opportunities related to SoTL; more collegial interaction and support associated with engagement in SoTL; a culture shift that would be

reflected in “a widespread emphasis on the necessity for tertiary educators to also be researchers of their educational practices and even further, publishers of educational research in their discipline”. A wide range of other personal and contextual factors were perceived as representing necessary pre-conditions for engagement in SoTL activities or that operated as associated ‘pull’, ‘drag’ or ‘push’ factors. For each respondent, these influential factors obviously played out in both complex and idiosyncratic ways to determine the extent and nature of their engagement in SoTL. AUT respondents also identified a range of initiatives that they wished to see adopted at institutional and faculty level that would, they believed, promote, support and reward both their own and colleagues’ engagement in SoTL.

6. Inherent in the design of the stock-take were decisions about potential indices for the presence and impact of SoTL within New Zealand universities. Reflection on those decisions together with insights gained from the literature review confirm that while a broad array of indicators is appropriate and necessary, impact on student learning must be the primary indicator. However, evaluating that impact presents significant challenges given the inherent complexity of the phenomenon to be focussed on. Complexity theory may be a foundation for future inquiries.

These findings provide a helpful snapshot of the presence of SoTL within New Zealand universities and within the everyday lives of New Zealand university teachers. They highlight the complexity of those lives and the environments within which they are lived which can make it challenging for teachers to become more scholarly teachers, and to be productive scholars of teaching. They also point to ways in which those environments may be made more conducive to the realization of these goals.

In the light of these findings, recommendation and suggestions are offered for three groups of stakeholders in the SoTL enterprise: national policy makers and associated government bodies; discipline and professional groups; institutional and faculty academic leaders.

THE CONTEXT AND CASE FOR THE PROJECT

Origins of the Project

One of the original applicants for the funding grant that supports this project (Neil Haigh) has had a longstanding interest, as an academic developer, in the general concept of *scholarship* and the related concept of a *scholarship of teaching and learning* (SoTL). That interest was sparked, in particular, by his encounter in the 1990s with the views of Ernest Boyer concerning these concepts: views that have had a major impact on higher education internationally. In a seminal publication – *Scholarship Reconsidered: Priorities of the Professoriate* - Boyer provided a thought-proving analysis of the concept of scholarship and its implications for the work of higher education institutions and the individual academic working within them. A central argument was that "the time has come to move beyond the tired old teaching versus research debate and give the familiar and honourable term scholarship a broader and more capacious meaning, one that brings legitimacy to the full scope of academic work" (1990, p.16). Boyer's elaborated meaning accommodated four distinct, but interrelated, scholarships: of *discovery*, of i*ntegration*, of *application*, and of *teaching (See Appendix One)*. Boyer viewed teaching as a scholarly enterprise because the 'work of the professor becomes consequential only as it is understood by others" (p.23) and teaching serves to both educate and entice future scholars. He also observed that "pedagogical procedures must be carefully planned, continuously examined, and relate directly to the subject taught" and "good teaching means that faculty, as scholars, are also learning" (about teaching and learning). Martin *et al.* (1998) subsequently observed that while "Boyer's comments on the scholarship of teaching are eloquent … they are not analytical. They do not spell out exactly what constitutes the scholarship of teaching". While there continue to be some differences in conceptualizations of SoTL, that meaning has now been teased out and clarified.

In 2000, Haigh provided an account of the impact that Boyer's views were having in higher education internationally and also described their impact on the agenda for his own academic development work. For example, he noted that many institutions were drawing on Boyer's views when defining their mission or raison d'être and consequentially their valuing of various forms of academic work. Conceptualizations of the relationship between teaching and research and how that relationship could be manifested in the everyday work of academics and their students were also influenced by Boyer's views as were the agenda of academic staff developers. For the latter, there was an emerging view that one dimension along which academics might develop involved a move from development based on reflection on practice to development that entailed adopting the a scholarly orientation to teaching, to development founded on personal engagement in the scholarship of teaching and learning. He identified a number of initiatives that he had facilitated and contributed to as the then Director of the Teaching and Learning Development Unit at the University of Waikato that illustrated the influence of views about the scholarship of teaching and learning on his everyday practice.

In 2005, he moved from his position at Waikato University to his current position in the Centre for Educational and Professional Development at AUT University. His role is now broadly defined as scholarship/research development and reflecting the concurrence of his own background and AUT University's institutional values, commitments and priorities, his position description includes the following key objectives:

- Initiatives to increase staff knowledge, and use, of scholarship of tertiary learning and teaching are designed and implemented.

- Research projects on learning and teaching issues are planned and implemented, and outcomes disseminated.

- Strategies are recommended for strengthening the nexus between research and teaching.

- Special projects and institutional research initiatives are established in conjunction with Faculty and Directorate teams to enhance learning, teaching and research.

At the outset of his appointment, he established a working group that had a brief to assist in the planning of initiatives that might be undertaken at institutional and faculty/school levels to help fulfil these objectives. While the working group was keen to assist the planning and implementation of such initiatives there was also a concern that there was a lack of comprehensive and sound information about the actual extent and nature of staff engagement in SoTL activities as well as the circumstances and conditions that might account for the current status of SoTL at AUT University. This prompted the view that a 'stock-taking' exercise should be undertaken to provide this information which was seen as necessary for future planning (Haigh, 2005).

The possibility of benchmarking AUT University with other universities was also considered. There was appreciation that comparable initiatives were being undertaken in other universities, locally as well as internationally, and there was a wish to learn from precedents that had been reported in literature. Those precedents included reports on comparable surveys and of initiatives that were being trialled and evaluated. Stock-taking surveys had been undertaken by a number of U.S. universities which are participants in a 'Campus Program' of the Carnegie Foundation for the Scholarship of Teaching and Learning (CASTL). The CASTL programme, initiated in 1998, supports universities that make a public commitment to the scholarship of teaching and learning. These surveys mapped progress in developing institutional support for SoTL and the impact of that support: an exercise that was intended to inform planning of further support by both the universities and CASTL. For an example of a 'Mapping progress' report (see http://www.indiana.edu/~sotl/download/mpr_0202.doc). Indices of progress that were surveyed included statements in public documents referring to SoTL; infrastructure (e.g. centre, committee) that explicitly supports SoTL; integration of SoTL within campus priorities and initiatives; changes in campus culture and practices attributable to attention to SoTL; student involvement in SoTL; staff engagement in SoTL; department support for SoTL; campus leader support for SoTL; funding and time support for SoTL; access to external support for SoTL; use of SoTL-related criteria in staff selection, tenure, performance review and promotion; faculty development opportunities associated with SoTL; positive changes in teaching and student learning attributable to SoTL initiatives; graduate student involvement in SoTL (eg as teaching assistants); the pattern of across the institution involvement in SoTL; collaboration in external SoTl activities; web-based support for SoTL; initiatives that have worked, not worked and associated lessons; untapped opportunities.

A similar survey was undertaken at Illinois State University, another university involved in the CASTL Campus Program. McKinney *et al.* (2003) used on an on-line questionnaire to obtain the views of a sample of faculty and administrators at Illinois State University in relation to their awareness of definitions of SoTL, involvement in SoTL, value and reward for SoTL and other attitudes towards SoTL. Approximately two-thirds of staff has used SoTL to improve learning and teaching, most held favourable attitudes towards SoTL but were neutral or negative about the extent to which SoTL was valued and rewarded on campus and most felt that engaging in SoTL would have a neutral or negative impact on their career.

They believed that students could be co-investigators in SoTL projects and saw funding as a key means to promote SoTL. McKinney, K. *et al.* (2008) reported on a follow-up survey conducted in 2007 survey. While response rates were a limitation of this survey, the overall trends were positive in relation to increases in staff awareness of the campus definition of SoTL and institutional commitment to, and support for, SoTL. Their personal views about SoTl were also more positive and they favoured more support for SoTL.

We also identified four instances of wider surveys of teachers' views in relation to their engagement in SoTL, including their perceptions of incentives and barriers to engagement in SoTL, that have been undertaken in other countries (e.g. Lynch *et al.*, 2002; Sample, 2004; Oakey *et al.,* 2004; U.K. Centre for Education in the Built Environment, 2005). While some of the findings from these investigations could be generalised to New Zealand universities, they also highlighted the need to take into account distinctive features of national environments, institutions, faculty/departments, disciplines, subjects and professions. Thus there were gaps to be filled and generalisations to be checked.

The only related investigation in New Zealand was a Ministry of Education commissioned investigation of "capacity and capability within the educational research community" (Findsen *et al.*, 2001). This project focused on education faculties/departments in tertiary education institutions which offered postgraduate level programmes and took into account the research activities of staff, the curriculum of programmes and research infrastructure and culture. The researchers concluded that "the level of research capacity and capability is modest by international standards – as far as we can judge" and that there was marked variation across the institutions surveyed.

We were aware that engagement in SoTL was already given a strong emphasis in academic staff development programmes within New Zealand universities and a review of research outputs from the various universities confirmed that a significant number of teachers were already active scholars of teaching and learning.

At the time when a programme of activities was being designed for this stock-taking project, the Teaching Matters Forum (TMF) projects scheme was instigated. While the original rationale for the project was better decision-making in relation to AUT University initiatives, it was recognized that insights that were gained were likely to be relevant to and beneficial for other institutions.

We were also mindful of Shulman's (2000) insightful as well as eloquent observations in relation to this agenda.

> I believe that in the long run advances in the scholarship of teaching cannot be sustained by the efforts of isolated scholars working alone or in loose networks. Institutions in which these scholars work must develop more formal structures that merge the institution's commitments to both teaching and inquiry. These institutions can then serve as platforms for the work of scholars of teaching, as sanctuaries for their efforts, and as forums for their scholarly exchanges. (p. 99)
>
> What shall we call those institutions of higher education that take both teaching and inquiry into teaching seriously? Shall we call them "teaching universities" to parallel the concept of teaching hospitals? That seems rather redundant. Perhaps we ought to call them the "new research universities." Unlike the old research universities, their scholarship and sense of responsibility is both external and internal, both expressive and reflexive. Those would be institutions to which we could entrust the responsibility for educating the next generation

> of university and college faculty in Ph.D. programs. And in the case of institutions without graduate programs, they would be those we would turn to as places that support new and current faculty in their ongoing investigations of teaching and learning. We could then close ranks behind a conception of the new research university— an institution that takes its work so seriously that it makes that work the most important focus of its own investigations. (p. 105)

Accordingly, with respect to the TMF project, the following general aims were formulated:

1. identify current policies, provisions, activities, products, experiences, views and criteria associated with the Scholarship of Teaching and Learning at AUT, Massey and Canterbury, (Year 1),

2. plan, in the light of 1, new initiatives intended to promote and support teachers' engagement in the Scholarship of Teaching and Learning, (Year 1),

3. implement selected new initiatives identified in 2, (Year 2),

4. evaluate the impact of these initiatives, using appropriate criteria, (Year 2).

Funding was approved for the aims proposed for Year One and the more specific objectives associated with those aims were defined:

1. identify the features of institutional policies, provisions and programmes that explicitly/implicitly encourage and support Scholarship of Teaching and Learning,
2. describe the status, and features, of Scholarship of Teaching and Learning activities and products,

3. compare the status and features of Scholarship of Teaching and Learning with respect to different faculties/disciplines/professions,

4. identify experiences and views of those staff who are and those who are not engaged in Scholarship of Teaching and Learning, and

5. identify criteria that can be used to evaluate the impact of Scholarship of Teaching and Learning initiatives on teaching and student learning, (Year 1).

Outcomes and findings associated with these objectives would be contrasted with those derived from relevant literature and conclusions and recommendations derived that would have relevance for New Zealand tertiary institutions, as well as AUT University.

There are three main sections in the report that follows.

In section one, the concept of a scholarship of teaching and learning is discussed further, and literature on a number of related issues reviewed, including

- scholarship
- SoTL and pedagogic research
- SoTL products – outputs
- SoTL, Pedagogic Research and the Performance Based Research Fund (PBRF)
- SoTL and the disciplines – and other contexts

- the case for enhancing engagement in SoTL
- distinguishing the excellent teacher, scholarly teacher and scholar of teaching
- SoTL and a professional development agenda
- strategies for extending and enhancing SoTL
- incentives and barriers to engaging in SoTL
- evaluating the impact of SoTL and SoTL-enhancing initiatives
- SoTL infrastructure: The international scene

In section two, the structure follows the objectives above and, for each objective, we describe the methods employed, present the findings and discuss relevant literature.

Finally, we draw on the ideas and information presented in sections one and two to provide recommendation and suggestions for future policy, provision and programme initiatives to strengthen the presence of scholarship of teaching and learning in the day to day lives of tertiary teachers and the institutional decision-making about teaching – learning and research/scholarship, in a New Zealand context.

PART ONE: THE SCHOLARSHIP OF TEACHING AND LEARNING (SoTL)

Conceptions of the Scholarship of Teaching and Learning

At the outset of the project, we identified the following as widely cited definitions of SoTL:

> The scholarship of teaching is problem posing about an issue of teaching or learning, study of the problem through methods appropriate to disciplinary epistemologies, application of results to practice, communication of results, self-reflection and peer review.
>
> (The Carnegie Foundation and American Association of Higher Education, 2001)

> The scholarship of teaching and learning is systematic and thoughtful investigation of student learning for purposes of improving practice and student success. Investigations are conducted by individual faculty or groups of faculty (and increasingly students) within their own classrooms or programs, often in multi-campus collaborations, with results made public for review and use beyond a local setting.
>
> (Carnegie Academy for the Scholarship of Teaching and Learning, 2006)

> Teachers who are more likely to be engaging in scholarship of teaching …. seek to understand teaching by consulting and using the literature on teaching and learning, by investigating their own teaching, by reflecting on their teaching from the perspective of their intention in teaching while seeing it from the students' position, and by formally communicating their ideas and practice to their peers.
>
> (Trigwell *et al.*, 2000, p. 164)

> a kind of 'going meta' in which faculty frame and systematically investigate questions related to student learning – the conditions under which it occurs, what it looks like, how to deepen it, and so forth – and to do so with an eye not only to improving their own classroom but to advancing practice beyond it.
>
> (Hutchings & Shulman, 1999, p. 12)

There are variations in the exact meanings associated with these definitions and this is an aspect of SoTL that continues be commented on, and for some is a source of concern. In 1996, Menges and Weimer concluded that "scholarship of teaching has become part of our educational jargon, used most regularly by those interested in upping the ante with respect to teaching. It has become an amorphous term, equated more with commitment to teaching than any concrete, substantive sense of definition or consensus as tho how this scholarship can be recognized"(p. xii). While Kreber (2002a) echoed this view in 2002 that "an amorphous and elusive term devoid of any clear meaning" (p. 164), by 2005, she stated that it "had gained much clearer contours over the past few years" (p. 391). However, whether that sense of increasing clarity and consistency in meaning amongst those who have had a longstanding interest in SoTL was shared by academics in general was unclear. An investigation by Nicholls (2005) suggests new lecturers were inclined to recognize a connection between scholarship and research, but not with teaching. More recently, Boshier (2009) identified continuing issues associated with the definition of SoTL as a primary factor contributing to it being a "hard sell" to tertiary educators. The issues include

vagueness as well as variability in definitions, lack of consideration of all the range of contexts within which teaching and learning occur (including non-formal), inappropriate attempts to disaggregate the four scholarships in Boyer's model that were originally conceived as having complex interrelationships, and a pre-occupation with commodfication, application and impact of outcomes that "reeks of performativity" (p.8). He contends that these issues account for difficulties operationalizing the construct so that it can inform institutional and individual decision-making and action. Boshier provides case studies of the latter with reference to decisions concerning tenure and promotion.

Notwithstanding some continuing variations in definitions, common to them is the notion that teachers will engage in some form of systematic inquiry or investigation into, and critical reflection on, aspects of students' learning and/or teaching with the intention (either explicitly or implicitly stated) of improving learning. A study by Kreber (2003) confirms that both 'experts' in SoTL and mainstream academic staff associate inquiry and critical reflection with SoTL. Such inquiries and reflection processes can embody features that will give them the status of scholarship.

The Concept of Scholarship

While Boyer's views on the nature of scholarship have been seminal, the meaning of the term has continued to attract scholarly attention. Arising directly out of Boyer's work, Glassick, Huber and Maeroff (1997) developed a set of standards and methods for assessing forms of scholarship, that have been particularly influential. They proposed that six criteria needed to be fulfilled before particular activities embodied the hallmarks of scholarship:

> **Clear Goals**: Does the scholar state the basic purposes of his or her work clearly? Does the scholar define objectives that are realistic and achievable? Does the scholar identify important questions in the field?
>
> **Adequate Preparation**: Does the scholar show an understanding of existing scholarship in the field? Does the scholar bring the necessary skills to his or her work? Does the scholar bring together the resources necessary to move the project forward?
>
> **Appropriate Methods**: Does the scholar use methods appropriate to the goals? Does the scholar apply effectively the methods selected? Does the scholar modify procedures in response to changing circumstances?
>
> **Significant Results:** Does the scholar achieve the goals? Does the scholar's work add consequentially to the field? Does the scholar's work open additional areas for further exploration?
>
> **Effective Presentation:** Does the scholar use a suitable style and effective organization to present his or her work? Does the scholar use appropriate forms for communicating work to its intended audiences? Does the scholar present his or her message with clarity and integrity?
>
> **Reflective Critique**: Does the scholar critically evaluate his or her own work? Does the scholar bring an appropriate breadth of evidence to his or her critique? Does the scholar use evaluation to improve the quality of future work?

Shulman (1998), drawing on the Glassick *et al.* framework, in turn proposed that

> For an activity to be designated as scholarship, it should manifest at least three key characteristics: It should be public, susceptible to critical review and evaluation, and accessible for exchange and use by other members of one's scholarly community. We thus observe, with respect to all forms of scholarship, that they are acts of mind or spirit that have been made public in some manner, have been subjected to peer review by members of one's intellectual or professional community, and can be cited, refuted, built upon, and shared among members of that community. Scholarship properly communicated and critiqued serves as the building block for knowledge growth in a field. (p. 5)

He contended that these criteria, which are associated with quality research – can also be manifest in high quality teaching, and signify a scholarly orientation to teaching.

A further representative institutional view of what constitutes scholarship in the context of academic work is offered by Iowa State University within its promotion and tenure policy document.

> All tenured and probationary faculty members are expected to engage in scholarship in their teaching, research/creative activities, and extension/professional practice. Scholarship is creative, systematic, rational inquiry into a topic and the honest, forthright application or exposition of conclusions drawn from that inquiry. It builds on existing knowledge and employs critical analysis and judgment to enhance understanding. Scholarship is the umbrella under which research falls, but research is just one form of scholarship. Scholarship also encompasses creative activities, teaching, and extension/professional practice. Scholarship results in a product that is shared with others and is subject to the criticism of individuals qualified to judge the product.
>
> (Iowa State University, 2008)

While Shulman's representation of scholarship is now widely adopted within the SoTL community, notions about what forms of activity are necessary or appropriate for scholars of teaching and learning to engage in do vary. Boshier (2009) for example, presents a trenchant critique of peer review, stating that "Peer review is error prone, discriminates against the most able and evokes the opposite of what is desired" (p.10). Notwithstanding this critique of what he describes "an uncritical and almost quanit reliance on peer review as the mechanism to detect scholarship" (p.13), he concludes that "None of this means that SoTL should jettison peer review. However, extreme caution is needed" and "SoTL advocates should consider alternatives" (p. 12). Such differing views also reflect possible distinctions and relationships between SoTL and educational-pedagogical research, reflection-based practice and evidence-based practice.

SoTL and Pedagogic Research

For some, the purposes and nature of the activities that would define SoTL would necessarily fall within the parameters of what would usually be defined as 'research' and would primarily be a manifestation of Boyer's 'discovery' variant of scholarship. For others, inquiries that are founded in reflection on evidence in relation to the practices of a teacher and their students' learning, are the essence of SoTL. The former stance is represented in the following discipline-specific definition of SoTL:

> SoTL involves systematic, literature-based inquiry into processes and outcomes involved in the teaching and learning of psychology. When appropriate, the activity must follow the standards and practices delineated by the scientific method (e.g. systematic observations, well-developed operational definitions, accurate statistical analyses). The activity generates a product that is peer-reviewed on the basis of whether that product contributes new knowledge to the field and/or invites conceptual replication and must yield a publicly presented product. (Gurung *et al.*, 2008, p. 252)

This definition would seem to be compatible with the expectations and conventions that some may associate with educational/pedagogical research – and SoTL could be assumed to be a synonym for that research. With the latter in mind, some commentators suggest that the apparent emergence of a new field of research/scholarship has primarily served political purposes: it has been a strategic move to address the widely and strongly held view amongst many academics that teaching had less status than research.

> The emergence of the now ubiquitous acronym SoTL is more the reflection of a political uprising than a new field.
>
> (Gurung et al, 2008, p. 250)

There are, of course, decades of research on learning and teaching in tertiary education contexts, including disciplinary-focused, unfortunately not always appreciated or acknowledged by those who are becoming scholars of teaching and learning. This reality was recently pointed out forcefully by Becker (2008), with particular reference to his own discipline of economics, who also highlighted the number of his colleague in senior academic positions at prestigious universities who were publishing in the disciplines mainstream and education-related journals on teaching and learning. A similar trenchant critique was offered recently by Boshier and Huang (2008) who consider that there are overlooked concepts and associated bodies of literature that need to be drawn on if learning is to be truly fore-grounded (they propose a scholarship of learning and teaching) in SoTL endeavours. Those fields include adult education, lifelong education and learning, androgyny or self-directed learning, farm-gate-intellectuals, communities of practice and learning communities.

SoTL, which conflates teaching and research/scholarship, could be considered a key strategy for addressing this perceived imbalance in the status accorded teaching and research. However, the continuing dialogue about possible distinctions and relationships between pedagogic research and SoTL (e.g. Elton, 2008) indicates that the motives for introducing the term go beyond this purpose.

More recently, Prosser (2008) defined SoTL as "evidence based critical reflection on practice aimed at improving practice" and he differentiated SoTL from research, investigations and evaluations and literature reviews.

Research: enhances our theoretical and/or conceptual understanding of teaching and learning; is firmly situated in its relevant literature and makes a substantial contribution to that literature and/or field;

Investigations and Evaluations: enhances our understanding of a local problem or issue, providing recommendations for policy and/or action; and

Literature reviews: collection and analysis of literature aimed at describing the various ways in which the object of the review is thought about with recommendations for practice.

Prosser contends that this conceptualization of SoTL foregrounds improving student learning as the fundamental purpose of SoTL, using reflection on evidence – about teachers' own practices. He argues that educational research is focussed on generic rather than specific contexts, and that SoTL can ensure that the latter (e.g. individual classrooms, individual teacher practices) are addressed. This implies that context is the main basis for distinguishing between pedagogic research and SoTL, if a distinction is to be made. While this is a contentious view of education/pedagogical research in general (consider action research, self-study research), Prosser does acknowledge that insights gained from educational/pedagogical research can inform SoTL inquiries that provide evidence for a practitioner's critical reflection on their own practices and their students' learning. For example, data gathering and analysis methods may be adapted for use in SoTL contexts.

> For me the main point of engaging in the scholarship of teaching and learning in higher education is to work towards 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. 3)

This emphasis on critical reflection is clearly evident in Kreber's conceptualization of SoTL.

> There seems to be a consensus that the scholarship of teaching is aimed at enhancing the quality (and recognition) of teaching and student learning …, should be informed by knowledge of the field, be inquiry-driven, involve **critical reflectivity** and include scrutiny by peers. (Kreber, 2005, p. 390)

> SoTL involves a deep knowledge base, an inquiry orientation, **critical reflectivity**, peer review, as well as sharing or going public with the insights and innovations resulting from the inquiry process. (Kreber, 2007a, p. 4)

> Following a cognitive-developmental perspective, the Scholarship of Teaching & Learning is understood as a process of knowledge construction whereby knowledge claims are validated through reflection on teaching experience and educational theory. These reflective processes can be documented and peer reviewed. (Kreber, 2006, p. 88)

Kreber draws on earlier work (Kreber, 1999; Kreber & Cranton, 2000) in which she developed a taxonomy related to reflective processes associated with SoTL. She proposes that three reflective processes (content, processes and premises) can be applied to the knowledge areas of curriculum (what are the goals and purposes for higher education and out teaching?), psychology (how do student develop and learn towards these goals?) and instruction (what teaching and instructional design processes are needed to optimize learning and development) - in ways that can be peer reviewed. The three reflective processes address three questions: Content reflection - *What's really the problem here and what do I need to do?* Process reflection - *How do I know that I am effective (or was conscientious) with what I do?* Premise reflection – *Why is it that I choose to attend to this problem? Is there an alternative?* (Kreber, 2006). She argues that it is through process and premise reflection that existing assumptions, conceptions and practices are questioned and

validated. Kreber (2005) has developed an extensive list, as follows, of activities that teachers might engage in, which would exemplify (be indicators) of engagement in SoTL

- Describing the instruction strategies one uses (content reflection/instructional knowledge – experience-based)
- Asking for peer review of a course outline (process reflection/instructional knowledge-experience based)
- Administering learning styles or other inventories to students (process reflection/psychological knowledge – research-based/experience-based)
- Reading books on the goals of higher education and comparing goals to those underlying the programmes offered in the department (process reflection/curricular knowledge – research-based)
- Presenting finings from classroom teaching experiments at teaching-related conference (process reflection/instructional knowledge – research-based).
- Experimenting with alternative teaching approaches and checking out results (premise reflection/instructional knowledge – experience-based)
- Explaining how and why goals have changed over time (premise reflection/curricular knowledge – experience-based)

In part, Kreber addresses the relationship between research and SoTL in terms of the need for teachers to direct their reflection to both their own teaching experience and theoretical knowledge derived from research. Reflection on experience can generate knowledge that will have utility with respect to the teacher's immediate situation and circumstances. In collaboration with researchers or through their own research, teachers can construct knowledge that will have relevance and utility. And, as teachers engage in reflection when they try out practices that are informed by theoretical, research-based knowledge, they can determine whether that knowledge is applicable in their context. The latter could represent engagement in the scholarship of discovery on teaching (i.e. pedagogical research).

Recently, Hutchings and Huber (2008), in a commentary on the place of theory in SoTL, offered a view that appears to include educational/pedagogical research while accommodating other forms of scholarly activity that don't have generation or evaluation of theory as a foreground agenda. The latter is usually considered a pre-requisite feature or raison d'être of research. While stating that "at the 'high end' at least, (SoTL) aspires not only to build on existing theory but also to generate new theory that feeds back into practice" (p. 236), they contend that

> …its purpose is not to generate or test theory. The purpose is to improve student learning. For that purpose, the 'big tent' holds. There is room for more and less ambitious in this tent. For work with more or less sophisticated designs. For work with more or less polish. For work with more or less theoretical background and import. (p. 241)

They emphasize the practical and on the ground character of SoTL focused on classroom practice and the improvement of student learning in specific contexts.

This view is endorsed by Kreber (2007a) who states that

> SoTL involves inquiry into particular questions relating to teaching and learning that often originate within one's own disciplinary context. While some of this work may eventually evolve into full-fledged pedagogical research, it is important also to recognize much more modest or small scale efforts aimed at critically reflecting on one's own classroom teaching and sharing what was learned with students and colleagues as a way of engaging with SoTL. (p. 5)

Again, she emphasizes that authenticity in relation to SoTL will be an imperative to act in the best on interests of students.

While there is a concern for dissemination of insights/findings into the public sphere, there is an implication that the inquirer's/reflector's own teaching practices, and therefore their own students' learning will be enhanced. SoTL is usually perceived as an activity that is not only intended to service or support the interests of other educators, which is often the case in educational/pedagogical research in general. The scholar has their own teaching practices in mind. There are, however, modes of research, in particular practitioner action research and self-study research, in which allow the researcher focuses their investigation on aspects of their own thoughts and actions (the researcher-practitioner).

Clearly, there are unresolved issues in relation to the conceptualization of SoTL, including in relation to the relationship between SoTL and pedagogic research, and dialogue about these matters is on-going.

Note: There are higher education conferences and a body of literature that explicitly focuses on pedagogic research. For example,

2nd International Pedagogical Research in Higher Education (PRHE) Conference, Liverpool, 2008

http://www.hope.;ac.uk/learningandteaching/prhe/index.php

Workshops are also offered in many institutions to assist staff to develop requisite research knowledge and skills. The latter are also offered as disciplinary initiatives (e.g. King, Gaskin, & Healey, 2003).

SoTL Products - Outputs

A further implication of the concept of a scholarship is that the products of SoTL that are accessible and exchanged need not be confined to those most typically associated with 'discovery' research', that is conference papers and journal articles. A presentation to students and colleagues in a departmental forum, a presentation to a Faculty staff meeting, a structured discussion with fellow academics completing a postgraduate tertiary teaching programme, or a submission in relation to an institutional learning and teaching plan could all constitute SoTL products. This view is widely shared and is reflected in the definition offered by McKinney (2004).

> The scholarship of teaching and learning goes beyond scholarly teaching and involves systematic study of teaching and/or learning and the public sharing and review of such work through presentations, performance, or publications.

This stance also implies that peer review is not confined to scrutiny of journal articles and conference papers. It can occur in other public settings when the teacher scholar presents and engages in dialogue with others about their insights (meetings, internet discussion, etc.).

SOTL, Pedagogic Research and the PBRF

Some of the dialogue about distinctions and relationships between SoTL and pedagogic research has been catalysed by debate about the status that pedagogic research is accorded in national research assessment regimes such as the UK Research Assessment Exercise (RAE) and the New Zealand PBRF.

From the perspective of the RAE,

> pedagogic research in HE … enhances theoretical and/or conceptual understanding of: teaching and learning processes in HE, teacher and learner experiences in HE, the environment or contexts in which teaching and learning in HE take place, teaching and learning outcomes in HE, the relationships between these processes, outcomes and contexts. (2008 Panel Criteria, p. 14)

In the RAE, discipline-based pedagogic research has been distinguished as a specific research category and "will be assessed by all subject panels on an equitable basis with other forms of research" (Research Assessment Exercise Report 5/99, para, 1.10). Further "reports of studies that provide descriptive and anecdotal accounts of teaching development and evaluations do not constitute pedagogic research … Pedagogic research is firmly situated in its relevant literature and high quality pedagogic research makes a substantial contribution to that literature" (p. 14). Notwithstanding this position, representations/submissions have been made to the RAE by tertiary education researchers that reflect some scepticism that equitable status is a reality. However, that the RAE panel was responsive is reflected in an elaboration of these core criteria (2006) http://www.rae.ac.uk/aboutus/policies/pedagogic/assess.doc

The core definition of research adopted for the PBRF regime is

> For the purposes of the PBRF, research is original investigation undertaken in order to contribute to knowledge and understanding and, in the case of some disciplines, cultural innovation and aesthetic refinement. It typically involves enquiry of an experimental or critical nature driven by hypotheses or intellectual position capable of rigorous assessment by experts in a given discipline. It is an independent, creative, cumulative and often long-term activity conducted by people with specialist knowledge about the theories, methods and information concerning their field of enquiry. Its findings must be open to scrutiny and formal evaluation by others in the field, and this may be achieved through publication or public presentation. In some disciplines, the investigation and its results may be embodied in the form of artistic works, designs or performances. Research includes contribution to the intellectual infrastructure of subjects and disciplines. It also includes the experimental development of design or construction solutions, as well as investigation that leads to new or substantially improved materials, devices, products or processes. (Tertiary Education Commission, 2006, p. 20)

In the PBRF documentation, which includes guidelines for the Education Panel (2006), there is no reference to pedagogic research as a specific area within education research. The numerous areas listed included teaching and learning and tertiary education. It is also noted that cross-referrals will come from other panels, which anticipates discipline-related research within the field of education.

These guidelines also acknowledge that much work in education is designed to inform professional practice and that such work may be deemed research if it fulfils the definition above "*The primary consideration is the scholarly significance of the output along with evidence of the quality assurance process*"(Tertiary Education Commission, 2006, p. 86).

Researchers in practice-related areas are advised to explain clearly how their research does fulfil the criteria through reference to theoretical approach, research methodology and/or underpinnings.

The following clarification is offered

> Descriptive reports of classroom research are not research. But an analytic account set in the context of other research, can be the basis of research. Curriculum documents are not of themselves research. However, a paper examining the intellectual processes involved in their development and the consultation of other research literature may be research. A standard text is unlikely to meet the requirements of the Definition of Research; but a text analysing, and or synthesizing the latest information in the filed covered, discussing controversies, guiding students understanding and underpinned with references is likely to count as research. (Tertiary Education Commission, 2006, p. 86)

The types of research output are anticipated to be journal articles, chapter contributions to books, books, conference presentations, research reports and proceedings, and theses. However, other output possibilities are written, oral, electronic, or creative works.

The introduction of the PBRF scheme has evoked considerable controversy and debate from all quarters of academia and, in particular, within the education field. The latter has been understandable given the outcomes of the first PBRF round in 2003. For education, the average weighted score was 39 out of 41, and a high proportion (nearly three-quarters) of 'PBRF eligible' staff were designated R – which could mean that they were not producing research outputs, or that the outputs that they were producing did not reach the standards associated with a 'C' quality category. However, many of the staff categorized as R would have been in non-university institutions and, off-setting this feature, was Education's achievement of the highest number of A ratings.

Subsequent to the 2003 round, there was vigorous dialogue within the tertiary education community about the impacts and implications of PBRF. The range of issues and concerns raised within the education community concerning PBRF are well represented in the report on a NZARE/NZCER sponsored PBRF Forum held in 2004 (Smith & Jesson, 2005). Concerns emphasized by contributors included (a) a definition of research that was too confining and exclusionary, in particular for research that had an applied or practice character: some staff wished all forms of scholarly activity to be deemed research, and (b) negative impacts on teaching commitment and quality. The status of research on teaching, including disciplinary research on teaching, and how it was assessed by the Education Panel did not received particular comment within the Forum record. However, related concerns have been voiced by groups such as university academic staff developers. A New Zealand academic also stated that he had observed within his own institution that "there is a clear negative effect (of PBRF) on commitment to teaching and learning. PBRF seems to totally ignore the importance of disciplinary based pedagogical publications" (Rowe & Bold, 2005). This paper also quotes the view of the institution's director of the teaching and learning centre.

> In my experience, NZ is far down the pecking order when it comes to actually understanding the scholarship of teaching. In NZ, the PBRF totally ignored the importance of disciplinary based pedagogical publications – but then in the UK we fought for ten years to have such publications recognized as having equitable value to traditional research papers. (p. 6).

Some of the concerns raised were addressed in the policy for the second round in 2006. They included an attempt at clarifying what constitutes (excellent) research in applied and practice-based research and associated indicators for assessing the impact of such research. Members of the 2003 Education Panel also offered advice on how the level of research quality might be improved by education staff (Alcorn et.al., 2004) which included

A further PBRF round was held in 2006, and along with most subject area, significant gains were made for Education researchers across the main indices of *research output* (+ 26.1% increase in average score), *peer esteem* (+51.1%) and *contribution to research environment* (+ 47.7%). Smart (2008) observed that in general,

> The staff in this study who had lower research quality scores in the 2003 Quality Evaluation would appear to have been more successful at improving their measured research quality and to have found it easier to progress up quality categories, compared with staff who achieved higher performance in 2003. In fact, progressing up the quality category scale became progressively less likely as the level of quality category allocated in 2003 increased, which suggests that there is a nonlinear relationship between measured research quality and the quality categories.

Notwithstanding these gains, Smart (2008) concludes that

> The results showed that a number of subject areas that have elements of professional training performed worse on average than other subject areas. Notable examples of this were 'Education' and 'Nursing'. 'Nursing' and to some extent 'Education' are also relatively new research disciplines in the New Zealand tertiary education sector which may be a factor in their performance.(p.6)

The import of the professional practice agenda of educationalists has been discussed by Middleton (2006) who explored the impact of PBRF on the 'professional identity formation. She concluded that "Education's 'other half', its professional and clinical dimension, is excluded, devalued, diminished and discouraged by the PBRF's requirement that all degree teachers be researchers and their 'outputs' subject to its surveillance and judgement. Education is charged with the advancement of knowledge and the development of intellectual independence in two spheres – research and professional practice. If it, and other, professional subjects are to perform this dual mandate, changes to the PBRF's eligibility requirements … are necessary. (p.509)

Needless to say, debate continues as the third round in 2012 is anticipated. For an indication of the current status of the review, see http://www.tec.govt.nz/templates/standard.aspx?id=588

SoTL and the Disciplines

The American Association of Higher Education definition acknowledges that methodologies and methods adopted by scholars of teaching and learning will be influenced by the epistemologies that they ascribe to – and that these may, in turn, be influenced by the discipline(s) that are the context for their scholarly work.

Discipline epistemologies shape views concerning the nature of knowledge including questions to ask about phenomenon, the evidence to be gathered to support views, how arguments should be developed and presented, and how ideas and information are to be communicated.

Other definitions also emphasize the significance of the disciplinary context:

> The scholarship of teaching involves three essential and integrated elements: engagement with the scholarly contributions of others on teaching and learning; reflection on one's own teaching practice and the learning of students *within the context of a particular discipline*; and communication and dissemination aspects of practice and theoretical ideas about teaching and learning in general and teaching and learning *within the discipline*. (Martin *et al.,* 1998)

> The scholarship of teaching involves studying, reflecting on, and communicating about teaching and learning, *especially within the context of one's discipline.* (Healey, 2003, p. 20)

And some definitions have been crafted that are specific to particular disciplines:

For example, Cutler (2006) proposes that:

> The historian who is a SoTL practitioner:
>
> - explains to students what historians do;
> - shows them how to use historical sources, insights, and tools;
> - provides constant and consistent feedback about the use of those sources, insights, and tools;
> - assesses teaching after the fact; and
> - shares discoveries about the relationship between teaching and learning in history. (pp. 70-71)

Benson (2001) identified 12 properties that he associated with SoTL in microbiology.

- It involves reflective analysis by the microbiology educator,
- It involves documentation and dissemination of a product that facilitates the learning of key concepts in microbiology,
- It involves appropriate review and critique by other microbiology educators,
- It builds on the work of other educators in the field of microbiology and other disciplines,
- It allows other microbiology educators to build and improve on it,
- It stimulates intellectual exchanges among microbiology educators,
- It is public; it is work that is shared with peers at all stages of its development,
- It is problem centric; it seeks to understand, solve, or advance knowledge about a problem in or related to microbiology,

- It is work that is embedded in the principles and foundations of microbiology and microbiology education,
- It involves practical engagement in teaching microbiology,
- It fosters connections within microbiology and to other disciplines,
- It maintains fidelity to; the field of microbiology, the communities microbiology educators share, the educators identity and sense of self, and most importantly, learning by students. (p. 2)

Within the wider body of literature on SoTL the significance of disciplines is generally accepted and is reflected in an explicit concern that disciplinary contexts be acknowledged by those engaging in SoTL and drawing on SoTL literature. Healey (2000), for example, has argued strongly that "for most academics, developing the scholarship of teaching will only bring about change in their priorities if it is embedded in disciplines and departments" (pp. 172-173). This view is founded on the evidence that academic staff are most likely to allocate their primary allegiance to their subject and its associated discipline(s) or profession rather than to the institution as a whole and that they perceive significant differences in the nature of the academic/scholarly activities that they engage in, when contrasted to those of colleagues in other disciplines/professions. Those activities may be deemed to reflect epistemological differences associated with disciplines or signify 'signature' differences between the professions in relation to the pedagogies that are adopted in professional education programmes. Shulman (2005) coined the term 'signature pedagogies' to acknowledge these contrastive approaches to learning and teaching might also be associated with education and training for different professions: "A mode of teaching that has become inextricably linked with preparing people for particular professions" (p. 9). Shulman proposed that signature pedagogies revealed the thought processes that are expected of the profession and the distinctive accountabilities that learners have in respect to their own learning, to one another's learning and to the teacher.

In turn this emphasis is reflected in the steadily increasing number of discipline specific academic journals that are an outlet for SoTL publications and various initiatives have also been implemented within disciplinary communities to raise the profile of SoTL, enhance its rigour and improve dissemination. For example, Barr (2006) reported that the American Society for Engineering Education was undertaking a 'year of dialogue' about SoTL which would address the common problematic issues associated with it. These included ensuring the quality of SoTL research, enhancing the effective application of the findings of that research and promoting the value of SoTL to ensure that it was accepted and recognised as legitimate scholarship. Pace (2007) similarly identifies significant shifts/changes in history teaching and learning that have been catalysed by the SoTL movement.

> Through the 1990s the teaching of history, like that of most other disciplines, remained primary a cottage industry, learned by example and practiced in isolation. Academic historians generally knew nothing about the teaching of their colleagues in the next office, to say nothing of that of their counterparts in other nations. The entire endeavour was seen as a practical matter, in which knowledge of the historical period under consideration constituted the only theory and personal charisma the primary qualification. New instructors began their careers with little or no access to the creative responses to the challenges of teaching history developed by their predecessors and no easy means for coming to understand the complex processes involved in the learning of history. There are abundant signs that this situation has begun to change. For many historians teaching is no longer a solitary virtue. Publications in the scholarship

> of teaching and learning (SoTL) now allow them to participate in the construction of a shared understanding of the pedagogy of history and to bring some of the systematic rigor, assumed in traditional research, to the realm of teaching. A new international society, website, and electronic newsletter are making this literature available to current and future history professors and are supporting the work of those who wish to contribute to it. In the process, new possibilities have emerged for thinking about the process of teaching history and its role in higher education that will be of interest to those in other disciplines as well. (pp. 329-330)

Similar initiatives have been taken in many other disciplines. For a listing of some organisations, journals and program that support SoTL in specific disciplines see a list maintained by Illinois State University – http://www.sotl.ilstu.edu/support

And, see Appendix Two for a list of publication outlets for the products of SoTL.

Witman and Richlin (2007) have made a survey of the status of SoTL in different disciplines on the basis of the recognition and presence of SoTL activities and products in associations, conferences and products. They were concerned to establish the degree of support and rewards for faculty engaging in SoTL. The findings were also aggregated in groups of Humanities, Natural Sciences, Social sciences and professions. While confined to a U.S. perspective, helpful snapshots are provided.

While a proponent of embedding SoTL in disciplinary contexts, Healey (2008) does see some limitations as well. An obvious one is the potential for those contexts to become silos for scholarship that neglects the value of other discipline as well as interdisciplinary perspectives and encounters. As Huber and Morreale (2002) have observed,

> Growth in knowledge also comes at the borders of disciplinary imagination… It is in this borderland that scholars from different disciplinary cultures come to trade their wares – insights, idea and findings – even though the meanings and methods behind them may vary considerably among producer groups. (p. 1)
>
> They endorse "reading – and raiding – across the fields" and "forums for cross-disciplinary conversations" (Huber & Morreale, 2002, p. 2).

There have also been calls for a broader focus for SoTL work.

> Although there is a tendency, at least in some quarters, to view SoTL exclusively as discipline-specific pedagogical inquiry into how students learn, it is increasingly recognized that it is equally important that SoTL engage with broader agendas and consider questions relating to the larger learning experience of students. (Kreber, 2007).

And, Huber and Hutchings (2005) have identified a number of other elements of classrooms that could be the 'contexts' for SoTL work

> The work of teaching occurs in an almost infinite set of contexts – contexts defined by discipline, student demographics, institutional type, pedagogical approach, and curricular goals, to name just a few of the elements whose permutations distinguish one classroom from another.

They also observe that while this is a distinctive and beneficial feature of SoTL (a focus on 'pedagogical particulars') that distinguishes it from most general or basic research on learning and teaching, there is a concurrent need to categorize projects in terms of similar contexts, themes, and questions so that a navigational map can be created and "a wilderness of unrelated projects and efforts" (Huber and Hutchings (2005, p. 36) is avoided.

Most recently, Boshier and Huang (2008) contend that "The 'L' part of SoTL is stalled because advocates are too focussed on the classroom in institutions. A broadened understanding of learning requires going off-campus. SoTL advocates need to get out of the office, descend from the hills and examine learning in natural settings." (p.647).

The case for enhancing engagement in SoTL

Also relevant to the conceptualization of SoTL, are views about its place within an agenda for the continuing education/development of higher education teachers. Why might/should individual teachers, academic/scholars and institutions become engaged in SoTL? And, what motivates individuals and institutions to commit to this engagement?

Advocates for SoTL propose a number of dividends or benefits for teachers, their institutions and students.

Shulman (2000) proposed three powerful arguments for advocating a serious investment in the scholarship of teaching and learning: Professionalism, Pragmatism, and Policy.

Professionalism: The most important reason for engaging in the scholarship of teaching is professional role and responsibility. Each of us in higher education is a member of at least two professions: that of our discipline, interdisciplinary or professional field … as well as our profession as educator. In both of these intersecting domains, we bear the responsibilities of scholars—to discover, to connect, to apply and to teach. As scholars, we take on the obligation to add to the core of understanding, skepticism, method and critique that defines our fields and their ever-changing borders. We also assume the responsibility for passing on what we learn … through teaching, social action, and through exchanging our insights with fellow professionals.

Pragmatism: … Such work helps guide our efforts in the design and adaptation of teaching in the interests of student learning. By engaging in purposive reflection, documentation, assessment and analysis of teaching and learning, and doing so in a more public and accessible manner, we not only support the improvement of our own teaching we raise the likelihood that our work is transparent to our colleagues who design and instruct many of the same students in the same or related programs. Active scholarship of teaching provides the teacher with a very different perspective on what he or she may have been doing for many years.

Policy: We in higher education are also enmeshed in webs of national, state and local policy….. Accrediting agencies are insisting on educational "audits" in which we provide evidence that we are achieving our stated goals and missions…. They (indicators) should be the result of carefully conceptualized, designed and deployed studies of teaching and learning in each of our fields, conducted by scholars qualified to pursue them. This kind of work cries out for a vigorous scholarship of teaching and learning engaged by discipline and field-specific scholars of teaching…. Unless we can provide relevant evidence of the processes and products of our pedagogies, we will find ourselves making empty claims and offering degraded arguments…. New forms of institutional research will be developed that

are learning-focused, domain-specific, and oriented toward analyzing the educative experiences and outcomes that institutions support or fail to support.

He has also contended that "an educator can teach with integrity only if an effort is made to examine the impact of his or her work on the students" (Shulman, 2002, p.vii). That obligation he considers to be "the pedagogical imperative" (p.vii).

Trigwell and Shale (2004) note three core aims for SoTL that are commonly identified:

> that it should be a means through which the status of teaching may be raised; that it should be a means through which teachers may come to teach more knowledgably, and that it should provide a means through which the quality of teaching may be assessed. (p. 524)

They add their view that enhancement of students' experiences of learning must be the 'first order' aim.

Kreber (2007) also identifies three potential and necessary 'rewards' that can ensure the relevance of SoTL. SoTL is rewarded within our disciplines and institutions because it is perceived as serious scholarship, it is rewarding for those who contribute to it (who may be students as well as teachers) and it enriches students' learning. She also sees it as a necessary process for exploring how to create the vital connection between the teacher and the subject, the teacher and students and students and the subject.

For Trigwell and Shale (2004), it is through SoTL that understanding and transparency in relation to how learning has been made possible can be achieved: how Kreber's vital connections are created such that a state of *pedagogical resonance* exists. That understanding requires consideration of areas of teacher knowledge (discipline, teaching and learning, teaching conceptions, context); practices (teaching, evaluation/investigation, reflection, communication, and learning) and outcomes (student learning, documentation, teacher learning, teacher satisfaction). These elements are represented in their model of the scholarship of teaching (p. 530).

Kreber (2005) considers the purpose of the scholarship of teaching movement through a sociological lens. SoTL is conceptualised as the intellectual, practical and critical work done by teachers that facilitates student development toward significant educational goals. The purposes and potential outcomes of SoTL also include self-management, personal autonomy and social responsibility, which are perceived as critical parts of lifelong learning, with extension to the purposes and goals of higher education and the university curriculum.

Some arguments are founded in the longstanding view that a nexus between teaching and research is desirable or necessary within university contexts. There is a legislative mandate for a nexus between teaching and research in New Zealand Universities.

> Their research and teaching are closely interdependent and most of their teaching is done by people who are active in advancing knowledge. (Education Amendment Act, 1990, p. 33)

Reflecting the significance of this mandate, the nexus has been a focus in the academic audits of universities that are conducted by the New Zealand Universities Academic Audit Unit (NZUAAU).

Arising out of investigation and debate concerning how this nexus can be realized are views about way a relationship can be manifest. For example the University of Sydney now makes a distinction between research-enhanced teaching, research based learning and scholarship of learning and teaching (University of Sydney, 2007):

Research-enhanced teaching: Teaching is informed by staff research. This includes the integration of disciplinary research findings into courses and curricula at all levels such that students are both an audience for research and engaged in research activity.

Research-based learning: Opportunities are provided for students at all levels to experience and conduct research, learn about research through their courses, develop the skills of research and inquiry and contribute to the University's research efforts.

Scholarship of learning and teaching: Staff and students engage in scholarship and/or research in relation to understanding learning and teaching. Evidence-based approaches are used to establish the effects and the effectiveness of student learning, teaching effectiveness and academic practice (University of Sydney, 2007)

The Research University Consortium *for the* Advancement *of the* Scholarship of Teaching and Learning (RUCASTL) offers the following helpful summary list of perceived benefits of SoTL for teachers, institutions and students.

For Teachers:

- Renews enthusiasm for teaching
- Consolidates teaching, research and outreach efforts
- Raises recognition of teaching
- Connects to sources of internal and external funding
- Leads to reflective and informed teaching practice
- Gives personal satisfaction

For the Institution:

- Builds new partnerships across campus
- Increases engagement of faculty, students, and staff
- Enhances the institution's reputation
- Documents educational effectiveness and student learning outcomes
- Increases student satisfaction and retention

For students:

- Models disciplinary research methods
- Prepares graduate students for the professoriate
- Promotes positive educational experiences
- Encourages active participation in the learning process
- Models the process of continuous improvement

Many institutions similarly identify the benefits that they anticipate. For example, as an outcome of two faculty forums held at the University of Iowa, the following were identified as benefits of engagement with SoTL:

Benefits for Faculty:

- Connects to a practical knowledge base;
- Energizes and renews enthusiasm for teaching;
- Helps to consolidate teaching, research, and outreach efforts;
- Raises the value of and recognition for teaching;
- Connects to sources of internal and external funding;
- Leads to reflective and informed teaching practice; and
- Gives personal satisfaction through accomplishments in scholarship and teaching.

Benefits for Students:

- Enhances learning through development of innovative methods and attention to outcomes and, in doing so, improves the curriculum;
- Models the processes of discovery for students;
- Helps to prepare graduate students for the professoriate;
- Promotes a more positive attitude about their educational experiences;
- Encourages students to be active participants in the learning process and enhances their ability to be life-long learners; and
- Prepares students for successful careers by modelling the process of reflective/continuous improvement.

Benefits for the Institution:

- Builds new partnerships across campus through a common interest in teaching;
- Increases the level of engagement of faculty, students, and staff;
- Enhances the institution's reputation;
- Documents the educational effectiveness of the institution and can change the culture of the institution; and
- Contributes to student satisfaction and better student retention.

(Centre for Excellence in Teaching, University of Iowa, 2001)

Excellent Teacher, Scholarly Teacher and Scholar of Teaching

A generally accepted distinction is made between the excellent teacher, the scholar of teaching and the scholar of teaching.

For example, Hutchings and Shulman (1999) contended that “all faculty have an obligation to teach well, to engage students, and to foster important forms of student learning” (p. 13). When they achieve this they are excellent teachers. Teaching becomes scholarly “when it entails, as well, certain practices of classroom assessment and evidence gathering, when it is informed not only by the latest ideas in the field but by current ideas about teaching the field, when it invites peer collaboration and review” (p. 13). Scholarly teaching is well-informed and reflective. The scholarship of teaching, in contrast, “requires a kind of 'going meta,' in which faculty frame and systematically investigate questions related to student learning - the conditions under which it occurs, what it looks like, how to deepen it, and so forth - and do so with an eye not only to improving their own classroom but to advancing practice beyond it" (p. 13).

> Scholarly teaching is what every one of us should be engaged in every day that we are in a classroom, in our office with students, tutoring, lecturing, conducting discussions, all the roles we play pedagogically. Our work as teachers should meet the highest scholarly standards of groundedness, of openness, of clarity, and complexity.. But it is only when we step back and reflect systematically on the teaching we have done, in a form that can be publicly reviewed and built upon by our peers that we have moved from scholarly teaching to the scholarship of teaching. (Shulman, 2004, p. 166)

Kreber (2002b) proposed a similar progression, this time including excellent teachers, expert teachers and scholars of teaching. The excellent teacher supports student learning in an effective/excellent way and recognizes that teaching is a scholarly activity as it calls for a good knowledge and understanding of both discipline and student learning. Excellent teachers would be deemed to\ know how to motivate their students, communicate concepts effectively and how to help students deal with learning difficulties. While they might derive their knowledge and know-how from formal research, collaborative inquiries, literature and/or practice/experience, they could rely only on active experimentation accompanied by reflection of experience. Expert teachers are excellent teachers, who “continuously seek out new opportunities to further their understanding of problems. It is precisely by identifying, analyzing, and solving problems that experts, over time, develop problem solving strategies that are *even more effective*. This desire to be *even more effective* underlies the motivation of experts.” (p. 13). The experts’ problem solving would be directed to developing pedagogical content knowledge having foundations in formal educational theory as well as personal experience. Literature would be consulted, reflection would be focused and in-depth and insights would be shared. The scholars of teaching would ensure that a public account of their problem solving was provided and was subject to peer review as a validation process.

Associated with these distinctions is an implied developmental agenda as the progression is also hierarchical: i.e. from excellent teacher to scholar of teaching.

A similar progression is inherent in a five stage model presented by Trigwell *et al.* (2000), which was founded in distinctions that academic staff were found to make with respect to their experience of SoTL, that is,

a. knowing the literature on teaching by collecting and reading the literature;
b. improving teaching by collecting and reading the literature on teaching;
c. improving student learning by investigating the learning of one’s own students and one’s own teaching;

d. improving one's own students learning by knowing and relating the literature of teaching and learning to discipline-specific literature and knowledge; and

e. improving student learning within the discipline generally, by collecting and communicating results of ones own work on teaching and learning within the discipline.

SoTL and a Professional Development Agenda

The distinction between excellent teacher, scholarly teacher and scholar of teaching allows for the conceptualization of a 'developmental' track for teachers as they journey towards the status of being scholars of teaching and learning. That agenda can be conceived as involving becoming, in the first instance, an excellent teacher, then a scholarly teacher, and ultimately a scholar of teaching.

For example, Gayle and Randall (2007) have proposed a three stage model of Faculty Development for SoTL based on anecdotal information gathered from staff, Weston and McAlpine's (2001) work, their own institution's conceptualization of scholarly learning and Shulman's (2003) Table of Learning. The stages, for which they offer helpful elaborated descriptions, involve learning about one's teaching, growth in scholarly teaching and growth in SoTL. They emphasize that teachers can demonstrate attributes associated with more than one stage concurrently and that their movement through these stages is contingent on their "ability to move beyond the discipline-specific strategies and tactics usually employed, her or his confidence in their capability to explore and implement new ideas, and the faculty member's commitment to bringing his or her theoretical knowledge and research skills to bear upon her or his teaching and student learning" (p. 2). Further, they suggest that while located in particular stages teachers typically "grapple with their readiness to engage in the next phase of development" and for each transition, the nature of the grappling changes. Thus, as teachers move from learning about to teaching to growth in scholarly teaching, they begin asking questions and framing hypotheses about their teaching, and take a more exploratory approach as a means of obtaining answers to those questions. Continuing training, conversations/sharing with colleagues, mentoring and leadership activities within their discipline and institution, accompanied by reflection, are foundations for their continuing development As the shift from stage two to three occurs, teachers 'problematize' their teaching and seek to determine the impact of the pedagogical choices that they are making on their students' learning. They are on the way to becoming scholars who both draw on literature and undertake their own scholarly investigations. In a final 'bridging phase' teachers begin the search for theoretical models, are aware of multiple approaches to investigating the effectiveness of learning and teaching and explore of the application of theories in their teaching contexts. Experimentation characterizes the final phase. Gayle and Randall have gathered data from 167 faculty members that validate aspects of this model.

This framework may be put alongside one used to characterize the journey from novice to expert (Dreyfus and Dreyfus, 1986). Five stages are differentiated (novice, advanced beginner competent , proficient, expert) with the movement of novices beyond their initial and necessary reliance on others 'rules' being contingent on their increasing capacity to engage in productive reflection on relevant aspects of learning and teaching occasions (so as to generate their own rules). That personal reflection can be further enhanced through consideration of other's insights and practices (characteristic of the competent practitioner) – and ultimately from personal investigation and problem-solving. This equates to a progression from rules to reflection to research (Haigh, 2006; Gossman, 2008; Smith, 2001), has also adapted the Dreyfus and Dreyfus model for SoTL development, and Cox, in turn has

further adapted it for aspects of development SoTL development that may occur in the context of faculty learning communities (Richlin and Cox, 2004).

There are related issues with respect to whether the goal of becoming a scholar of teaching should be one that all teachers aspire to or should seek to attain. And, will a scholarly disposition and active engagement in scholarship necessarily ensure that the teacher does provide the most favourable odds for their students' learning? There is no certainty and most teachers allude to a critical X factors such as the teacher's presence, mana, enthusiasm and authenticity that are not readily amenable to investigation, influence or control. However, scholarship does involve a concern for good evidence and argument and a mismatch between personal espoused theory and the reality of theory in action should be evident to the scholarly teacher. Will movement along this route be uni-directional and constant? Obviously not. There will always be occasions when teachers, with respect to an aspect of teaching, find themselves back in the status of a novice, reliant on some getting started rules provided by a colleague or academic developer – and there is the widely acknowledge phenomena that sometimes things get worse before they get better. The latter may occur as scholarship leads to new insights and associated practices, but their implementation is confounded by old 'habits' which continue to function. As Waering (1999) has observed that, it is "possible for teaching skills to go backward temporarily while scholarship goes forward: people ...[may] get self-conscious and confused as their knowledge increases, and take a while to digest new learning and put it usefully into practice" (Cited by Healey, 2000).

Benson (2001) conceded that "In my own attempts at the scholarship of teaching, not all of the ideas and things I have tried resulted in increased student learning. Many have had an effect, others have had no effect, and some event resulted in less student learning. This is analogous to my efforts in research (the scholarship of discovery), which focuses on achieving a better understanding of the antimicrobial agents present in Chinese herbal medicines" (p.2).

Strategies for extending and enhancing SoTL

There is an extensive literature now reviewing initiatives that may be taken to support SoTL. Those initiatives may be taken at international, national, disciplinary, institutional, Faculty/Department levels.

Note: We haven't attempted to reference the examples provided below – but can direct colleagues to international exemplars. A useful source is the proceedings of ISSoTL Conferences.

International/Regional

International bodies that promote and support SoTL:

- International Society for the Scholarship of teaching and Learning ISSoTL.
- Higher Education Research and Development Society of Australasia (HERDSA).
- Multinational Scholars Forum includes the National Teaching fellows (UK), the 3M fellows (Canada), the Carnegie Scholars (USA) and the Award programmes support by the Australian Learning and Teaching Council (Aus) and Ako Aotearoa (NZ).

National

- Government endorsement of SoTL in Tertiary Education plans and policies;
- Funding sources that can be drawn on for SoTL projects;
- National organizations that include in their purposes/mission promotion and support for SoTL:
    - Centres for Excellence;
    - National Teaching Fellows Scheme;
    - Higher Education Academy - U.K.;
    - Australian Learning and Teaching Council; and
    - Ako Aotearoa/National Centre for Tertiary Teaching Excellence (includes a scholarship of teaching project register and Academy of Tertiary Teaching Excellence – New Zealand.
- National Teaching Excellence Awards schemes that include engagement in SoTL in their criteria;
- Higher education sector or professional body standards for teaching that refer to scholarship and/or SoTL; and
- Professional development organizations that promote and support SoTL (e.g. Association of staff Developers of the Universities of New Zealand – ADUNZ; Tertiary Academic Staff Developers Education Network – TASDEN; Association of Tertiary Learning Advisors of Aotearoa New Zealand -ATLAANZ).

Disciplinary

Some disciplinary professional bodies have implemented initiatives to promote and support SoTL by their members, For example,

Geography.

Psychology.

History.

Biology Scholars Program.

Anthropology Network (UK).

Engineering (OZ).

American Society for Microbiology Scholars in Residence Program.

Research Institute for the Global Study of law Teaching and Learning.

Note: ISSoTL Interest Groups are being established that include discipline-based groups (History).

Institutional

- Mission statement includes reference to scholarship in the context of teaching and learning, as well as research.
- Research plans acknowledge/endorse the place of SoTL/pedagogical research.
- Institutional teaching and learning philosophy that recognizes SoTL.

- Learning and teaching plans acknowledge/endorse place of SoTL/pedagogical research.
- Position descriptions indicate engagement in scholarship in the context of teaching is an expectation-requirement.
- Programme/paper approval processes that require information about the extent to which research-led/informed teaching and learning are manifest, and how given effect.
- Institutional teaching-research awards schemes explicitly include engagement in SoTL as criteria.
- Institutional funding scheme to specifically support SoTL projects.
- Accredited Tertiary Teacher education programmes that focus on aspects of SoTL.
- Other professional development initiatives, undertaken by staff within institutional academic development centres intended to support SoTL (e.g. workshops, forum, mentoring, and consultation).
- Mentoring support for SoTL work.
- A publication (e.g. Newsletter) on SoTL.
- Publications that provide outlets for SoTL products.
- Positions established that include the brief to promote and support SoTL activity.
- Fellowships/secondments intended to provide opportunities for SoTL work.
- Web Repository of SoTL resources.
- Establishment of cross institution communities of practice/learning communities – that support various SoTL-related activities - mentoring, peer assisted reflection, reflective dialogue, peer review and critique, collaborative inquiries, collaborative self-study research, student – faculty conversations about aspects of learning and teaching, dissemination, writing syndicates and retreats, co-publishing.
- Explicit expectation that SoTL-sourced findings will be sought as evidence when considering-planning institutional initiatives.
- Dissemination of SoTL outputs (journal articles, conference papers and posters, reports, within submissions and discussion papers etc.).
- Use of teaching portfolios that include documentation of SoTL activities and outputs.
- Encouragement and support for attending SoTL conferences.
- Encouragement and support for SoTL-related activities in study leave programmes.
- Periodic stock-taking surveys to determine the status of SoTL within the institutions and explanation for current situation.

Faculty/Department

Most of the institutional initiatives may be designed and implemented at Faculty level.

Another helpful framework for categorizing initiatives to promote SoTL is offered by the RUCASTL cluster campuses.

Initiating:

- Introduce SoTL concepts,
- Tie to "Teaching as scholarly work",
- Create communities of practice,
- Offer workshops and consultations,
- Locate funding,
- Build into college teaching courses and faculty retreats.

Documenting & Rewarding:

- Build database of SoTL work by your faculty and graduate students,
- Offer campus poster and presentation sessions,
- Help fund faculty to attend the International Society of SoTL (ISSoTL).

Developing:

- Organise writing retreats,
- Provide a SoTL listserv,
- Work with library and academic units,
- Tie to campus mission/initiatives.

Sustaining:

- Serve on campus-wide committees,
- Build SoTL into campus promotion and tenure, merit programs,
- Ask SoTL scholars to submit to disciplinary journals and conferences.

  http://www.cfkeep.org/html/snapshot.php?id=36787052

Incentives and Barriers to engaging in SoTL

Incentives and barriers to academic staff engagement in SoTL are frequently noted in the literature. Representative studies of these helps and hindrances follow.

Lynch, Sheard, Carbone and Collins (2002) investigated the perceptions Australian university teachers in the field of ICT education (83 teachers in 29 universities) concerning the personal and organizational factors that influenced (drove or inhibited) their decision to engage in SoTL. The data, gathered during structured discussions in the course of mini-conferences indicated that there were two main domains of factors (individual and organizational) and that factors associated with these domains interacted. Individual factors included motivation and capability. Thus individual motivation towards SoTL was influenced by such individual factors as strength of career progression ambition and orientation to change and risk, as well as intrinsic or altruistic commitment to teaching. These personal factors could counteract low priority accorded teaching and SoTL by senior academic staff, the lack of reward for SoTL in promotion criteria and a perceived priority given to discipline specific research. For staff who chose not to engage in SoTL, their reasons were most likely to include the decision to focus on the most highly rewarded areas of scholarship activity, coupled with lack of time. Individual capabilities associated with both teaching itself and undertaking educational evaluation/research either allowed for or inhibited engagement in SoTL. Organizational factors included environment and resource related factors. The former included systems,

processes, values, agendas and orientation to change and risk that could either be supportive of or antagonistic to SoTL. Specific factors included risk aversion in relation to teaching innovations, space and timetabling arrangements, quality assurance processes, relative value placed on teaching and discipline specific research. Time and financial resources were further key factors. The researchers concluded that...

> [While] some exceptions were noted, the participants generally agree that the organizational domain of Australian universities was largely unsupportive of the pursuit of the scholarship of teaching. Similarly, in general, university ICT teachers were not thought to have the backgrounds and capabilities necessary for pursuing the scholarship of teaching, such as familiarity with literature on teaching and learning and skills in educational evaluation. However … participants agreed that scholarly activities and innovation in university teaching and learning do take place, largely driven by the intrinsic motivation of individuals. (Lynch *et al.*, 2002)

A Special Interest Group of the UK Centre for Education in the Built Environment (CEBE) (2004) surveyed the views of the members about pedagogic research. With academic department as the reference context, questions posed in questionnaires and semi-structured interviews focused on perceptions of potential barriers to research into pedagogy, the prevailing culture in relation to pedagogic research and support or encouragement for such research. Barriers identified included poor teachers and researchers not acknowledging the need for improvement, lack of incentives because positions were secure, number of students and workload, funding, the perception of pedagogical research as being second- rate research, career emphasis on research and an unwillingness to ask for and record feedback on how particular methods/techniques worked for students. Descriptors for the culture ranged from 'sceptical and low priority' to 'islands of interest' to 'open and receptive'. Encouragement and support was available in the form of some funding, time, staff development active teaching and learning groups.

Sample (2004) reported on a survey of 70 US academics from 21 campuses who were participating in the Visible Knowledge Project. Initiated by the Center for New Designs in Learning and Scholarship (CNDLS) at Georgetown University, the five year project sought improvement to teaching through a focus on student learning and faculty development in the context of technology-enhanced environments. Engagement in SoTL inquiries was at the heart of the project. At the outset of the project 24% of participants had not heard of SoTL and one third were only vaguely aware of it. At the three year point over 50% were actively engaged in SoTL projects and sharing their findings. A significant number were also taking initiatives to support SoTL at their own institutions, attending sessions on SoTL within their discipline and presenting and publishing their own SoTL work. Almost all had an increased concern to understand more about their students' learning, had made changes to the design of their courses and were thinking differently about the use of technology. Alongside these positive trends, participants considered the provision of funding for projects as crucial to their involvement, given their perception of limited intitutional endorsement and support for SoTL (73% disagreed that support was widespread; 83% thought promotion criteria did not reflect SoTL principles and 69% felt teaching award criteria were also inconsistent).

Oakey, Coates and Roberts (2005) have documented views of academics who participated in a conference workshop on SoTL. Factors that could act as barriers or incentives identified included time available, emphasis on research and publication in the discipline, 'brownie points' available for SoTL, personal interest and commitment, the professionalization of teaching in higher education and more supportive climate for teaching, a concern to achieve

integration in academic roles, perceived benefits for credibility, professional status, enhanced student learning.

More recently, Dobbins (2008) investigated factors that academics perceived as promoting or hindering their scholarly activities in relation to teaching in one faulty in a UK university. In this instance, the faculty awarded the status of being a Centre for Excellence in Teaching and Learning. As a broad purpose, such centres were established by the higher education Funding Council for England (HEFCE) to "reward excellent teaching practice and to invest in that practice further in order to increase and deepen its impact across a wider teaching and learning community" and "to promote and spread their good teaching practices". In this instance, the Faculty decided to give an emphasis to building the capacity of staff to engage in research on their students learning and their own teaching. While related initiatives saw increasing numbers of staff applying for funding to undertake such research, "for the majority of staff it remains a struggle to encourage them to focus on their own teaching practice to this degree." Staff were surveyed to determine whether the priority they were giving teaching had changed during the two years the centre had been in existence and to identify factors that accounted for any change. While just over 50% reported no change, nearly 40% indicated they were giving teaching greater priority. For the latter, five main factors were identified as accounting for their increased priority: increased involvement in professional development activities, including completing postgraduate programmes and teaching development activities; a wish to be able to respond adequately to the increasing number and diversity of students in a competitive environment; increased awareness of other initiatives within the sector and institution intended to encourage changed practice as well as ""debate, critique and reflection"; paradoxically, a response to the perception that management were giving teaching low priority; and the view that there was a general culture shift occurring that represented an increase emphasis on teaching. For the small (7.4%) who were giving decreased priority to their teaching, this was attributed to the need to take on additional administrative tasks; reduction in time that might be allocated teaching because of increasing demands in other areas of academic work; a perception that priority was being given to the funding benefits of increased student numbers and engendering a coping response to teaching.

Familiarity with and attitudes towards the range of research approaches adopted in social science/education/pedagogical research has been identified as a barrier for many academics. Wankat *et al.* (2002) identify differences between engineering research and educational research that they considered "pose significant challenges to engineering faculty intending to engage in the latter."(p. 5). They observe that, in contrast with engineering research, educational research deals with phenomena that are usually much more difficult to define precisely and often must be inferred as they cannot be observed. Further, it is more difficult to develop precise "metrics", instruments and procedures for measuring whatever is to be improved directly. They also note that...

> It is almost impossible to construct an educational research study in which potentially confounding variables can be clearly identified and their influence eliminated. Students are far more difficult to categorize than I-beams or transistors or even fruit flies, and the factors that influence their learning (including inherited traits, home environments, prior educational experiences, current knowledge and skill levels, learning styles, personality types and present life circumstances) are virtually uncountable. In consequence, a cause-effect relationship between a treatment and an outcome can never be unequivocally demonstrated and replicated. The only way to "prove" anything in education in education is to run many studies on large populations and point to the same

> broad results. This is not the kind of reasoning engineering professors are accustomed to employing in their research, however, and most are sceptical of it. A large part of the challenge of legitimizing the scholarship of teaching in engineering education involves overcoming this scepticism. (p.)

Wankat *et al.* (2002) identify several other factors that they consider act as impediments to acceptance of SoTL in engineering education including lower importance accorded teaching quality and engagement in SoTL in career progression decisions, limited response to literature on teaching and learning, the negative impact of occasions when academics who engage in educational research are not, themselves good teachers, weak financial support and the need for greater collaboration between engineering educators and academics who have established backgrounds in relevant theory and research methods. They also note the challenges associated with the latter – "the difficulties can be particularly formidable when the collaborations are between engineers and social scientists, who frequently have different vocabularies, priorities and conceptions of research." Acknowledging the same challenges in relation to interdisciplinary and interprofessional encounters, Haigh and Haigh (2007) also observe that...

> A related practical obstacle may be the time that practitioners can readily give to learning agenda. Given the ever-increasing amount and complexity of knowledge that they must acquire, they may reasonably consider that the time required to maintain their currency in the discipline(s) that they perceive most directly inform their practice precludes them from participating in extended formal educational programmes. The expectation that they gain some familiarity with other disciplines may seem unreasonable. Certainly, it is easy to underestimate what is involved in gaining insights into a small facet of other disciplinary knowledge and there is truth in the observation that "A little learning is a dangerous thing; drink deep or taste not (Pope, 1704). (p. 609)

Similar challenges and consequential scepticism have been noted for other disciplines. For example, Coppola and Jacobs (2002) observe that "Chemical education research and the scholarship of teaching and learning suffer from the same methodological prejudices" (p.13). And, De Welde and Seymour (2008) identified further 'resistances' that may be encountered in relation to the effective dissemination and uptake of SoTL–based innovations in learning and teaching, as well to engagement in SoTL in undergraduate chemistry education. On the basis of interviews of staff in ten institutions, they identified a range of extrinsic and intrinsic sources of resistance often associated with perceived or inherent risks in classroom innovation and strategies that scholars of teaching and learning might adopt to over come them.

Forms of extrinsic resistance included student resistance and cultural resistance. Students' resistance might represent a 'normative' student behaviour or arise out of their concerns about risk, loss of personal control or exposure (learning capabilities) arising out of the introduction of new learning and teaching methods. Cultural resistance might take the form of inflexibility that follows from an aversion to the unpredictability that is associated with change, reward and support systems that are antagonistic to SoTL and innovation, and colleague resistance that is founded in their concern about challenges to their existing practices. Intrinsic resistance can be founded in concerns about the loss of current practices that are perceived as successful, disturbance to sense of professional identity because of new parameters to role, fears about loss of control over aspects of students' learning, fears about loss of control over content coverage and fear of failure in a risky situation.

There are a number of other studies that also document resistances that may be encountered when academic staff seek to make changes arising out of SoTL activities. For example, Hockings (2005) documents a number of difficulties and associated obstacles that she experiences when collaboratively working with a colleague to help him move towards a more student focused approach in aspects of learning, teaching and assessment. The collaboration included a SoTL inquiry using an action research methodology. Five conditions were identified that negatively effected achievement of this goal and prompted the teacher's reversion to teacher-focused approaches: student culture, class size and diversity, colleagues' views about appropriate assessment, workload and an emphasis on bureaucracy, "quality' and accountability. In turn, Hocking identified options for addressing barriers at the individual, institutional and school manager level. Similar obstacles were noted in a New Zealand study that had a SoTL dimension. Scott, Buchanan and Haigh (1997) identified resistances encountered in relation to moves to pursue a stronger student independence agenda in a large first year management course. They included an institutional teaching and learning culture that was relatively conservative, the difficulty of disturbing students' existing conceptions of the goals for university learning and appropriate ways of engaging in learning, and a pre-occupation with maintaining and increasing student enrolments that "in part may be met by the decision to avoid doing anything that could provoke a negative reaction from some students and from colleagues. Carnell (2007) has also highlighted the significance of a 'performativity' culture which requires teachers "to organise themselves as a response to targets, indicators and evaluations" (Ball, 2003, p. 215), and which is "based on rewards and sanctions" (Carnell, 2007, p. 33). This culture may clash with one that is supportive of SoTL and "inhibit the further development of new ideas in teaching and learning" (Ibid, p. 34). As a means of collective resistance to such a culture, Carnell proposes the formation of learning communities that include students as well as teachers who become co-learners, engaged in the collaborative construction of knowledge about learning, through dialogue. "A community of learners helps resist pressure t behave in ways that inhibit effective learning" (Ibid, p. 39).

Notwithstanding the need to acknowledge such scepticism and resistance, there is also reassuring evidence in many fields this it is dissipating, as reflected in the establishment and growth of professional organizations and centres, publications and conferences within most disciplinary fields that endorse and provide a context for SoTL.

For example in engineering education:

***Organizations*:**

Australasian Association for Engineering Education,

The American Society for Engineering Education,

European Society of Engineering Education.

Publications:

Journal of Engineering Education (The Journal of Engineering Education serves as an archival record of scholarly research in engineering education),

International Journal of Engineering Education,

Australasian Journal of Engineering Education,

British Journal of Engineering Education,

European Journal of Engineering Education,

Engineering Education,

International Journal of Mechanical Engineering Education,

International Journal of Electrical Engineering Education,

Computer Applications in Engineering Education,

Disseminating Innovation,

Scholarship and Transformation in Learning,

Assessment and Teaching of Engineering,

Education for Chemical Engineers.

Centres:

Higher Education Academy Engineering Subject Centre,

Engineering Centre for Excellence in Teaching and Learning (UK),

National Academy of Engineering sponsored Centre for the Advancement of Scholarship on Engineering Education,

National Science Foundation sponsored Centre for the Advancement of Engineering Education,

National Centre for Engineering and Technology Education,

UNESCO International Centre for Engineering Education.

Other related initiatives:

US National Science Foundation Engineering Education Scholars program,

Rigorous Research in Engineering Education Community of Practice,

National Engineering Education Research Colloquies,

Working Group on Engineering Education Research (European Society of Engineering Education).

Conferences:

Annual Conference for the Australasian Association for Engineering Education,

International Conference on Innovation,

Good Practice and Research in Engineering Education,

American Society for Engineering Education Annual Conference.

There are also increasing numbers of case studies of initiatives at disciplinary, institutional and faculty level that confirm that there are strategies for successfully addressing these challenges. Roxa, Olsson and Martensson (2007) and Olsson and Roxa (2008) provide examples for a Faculty of Engineering at Lund University in Sweden and many others are readily available for other disciplines.

The challenge associated with the perceived need for staff engaged in SoTL to become fluent consumer and contributors to social science/educational research has also been rebutted. It is argued that each disciplines epistemologies and modes of inquiry can used for the purposes of SoTL. Huber and Moreeale (2002) make this case strongly in their book *Disciplinary Styles in the Scholarship of Teaching and Learning* which also provides examples of processes associated with different disciplines that have been used for SoTL work. For example, Bass and Linkon (2008) make this case in relation to literary academics/scholars. Stierer and Antionou (2004) also propose the use of hybrid methodologies that blend those drawn from general educational research and discipline specific research.

Evaluating the impact of SoTL

Surprisingly, there is not a particularly extensive literature on this important consideration.

Ciccone (2008) has identified 10 "areas of impact" that members of the Carnegie Foundation for the Advancement of Teaching have recently identified, with the intention of stimulating further discussion about this important issue.

1. The scholarship of teaching and learning contributes to important agendas and initiatives in higher education.
2. The scholarship of teaching and learning changes how teachers teach and contributes to our knowledge of the factors that make change happen.
3. The scholarship of teaching and learning changes how we understand and talk about learning.
4. The scholarship of teaching and learning has direct and indirect effects on student learning and success.
5. The scholarship of teaching and learning contributes to our knowledge of the conditions that affect the exchange and improvement of pedagogy.
6. The scholarship of teaching and learning strengthens development programs for higher education professionals.
7. The scholarship of teaching and learning informs changes in the policies and procedures of the institution.
8. The scholarship of teaching and learning affects the culture of academic life.
9. The scholarship of teaching and learning leads to changes in how we define and evaluate scholarship.
10. The scholarship of teaching and learning is growing and evolving as a movement.

(Ciccone, 2008, p. 13)

Ciccone (2007) has also proposed a typology of impact that includes *locus* (individual, programme, discipline, institution), *nature* (e.g. new insight, tool, direction, initiative) and value (e.g. student-centeredness, first year programming.

The stock-taking surveys previously reviewed implicitly or explicitly identified a number of potential indices for gauging the impact of SoTL-related initiatives and activities in the various areas identified by Ciccone and various indices are considered in the literature in general.

It is frequently emphasized in the SoTL literature that the intended primary impact of SoTL is enhanced student learning.

> Enhancement of students' experiences of learning must be the 'first order' aim. (Shale and Trigwell, 2005)

This criteria can be considered from two perspectives: (a) An examination (and synthesis) of individual case studies of teachers implementing insights/findings derived from their own, or others, SoTL activities and concurrently investigating impacts on their students' learning, and (b) investigations of the relationship between staff involvement on SOTL, at Institutional/Faculty/Discipline (etc) levels and impacts on both their teaching thoughts and actions and aspects of their students' learning experiences and performances.

An example of the latter is evident in the work of Brew and Ginns (2008) who have developed a Scholarship of Teaching index which consists of a set of questions which are responded to by members of an academic department. The questions focus on teacher preparation (e.g. participation in a postgraduate tertiary teaching programme, the application of educational research), teaching awards and publications and presentations on teaching and learning). For example, Faculty may make staff completion of a postgraduate qualification in tertiary teaching mandatory for new staff, establish a contestable research fund for research on learning and teaching and have a teaching award scheme that include engagement in SoTL as a criterion. Scores are aggregated and correlated with measures of students' perception of the learning experience. In turn the aggregated scores become the basis for an allocation of funding to departments that takes into account staff contributions to teaching quality through their engagement in SoTL. Evidence accumulated from use of this measure Brew and Ginns has also been offered to substantiate a relationship between engagement in SoTL and better student learning experiences as assessed using the Student Course Experience Questionnaire (SCEQ). The SCEQ includes five scales (Good Teaching, Clear Goals and Standards, Appropriate Workload, Appropriate Assessment and Generic Skills) and a further item allows students to rate their overall satisfaction with the quality of their degree programme. Over a three year period (2002-2004) positive shifts were apparent in the aggregated scores for all Faculties and this was paralleled by positive shifts in Faculty aggregated scores on the SCEQ for the period 2001 to 2005. The authors suggest, as an explanation for the positive correlations that,

> the scholarship of teaching and learning becomes a process of bringing into light aspects of thinking and action in relation to teaching and student learning that otherwise would lie hidden. … it is in this way that the scholarship of teaching has the capacity to develop teacher professionalism. (Brew & Ginns, 2008, p. 543)

There can be major methodological challenges in providing convincing evidence for the impact of engagement in SoTL activity on student learning. Self-initiated SoTL work needs to be disentangled from the multitude of other influences that inevitably shape the thoughts and actions of teachers and their students. These challenges have been identified in a recent New Zealand Teaching and Learning Research Initiative funded project (Haigh *et al.*, 2006; Haigh & Naidoo, 2007). The agenda in one of the institutional case studies associated with this project included encouraging and helping a teacher adopt a more scholarly orientation

and become engaged in scholarship and educational research. The realization of that agenda over a three year period was accompanied by positive changes in aspects of students learning experience and performance. In this investigation, we sought to identify the multiple sources of influence on the teacher's thoughts and actions, one of which was a working relationship with academic developers who imbued their collaborative work with the teacher with a scholarly orientation and engagement in scholarship.

SoTL Infrastructure: The International Scene

That SoTL has become a become a concept and activity that is firmly embedded within the fabric and life of higher education institutions is evident in the establishment of several national and international bodies that promote and support SoTL; conferences that explicitly focus on SoTL and academic journals that are specifically defined as outlets for SoTL publications.

Organisations:

ISSoTL – The International Society for the Scholarship of Teaching and Learning

The mission of the International Society for the Scholarship of Teaching and Learning (ISSoTL) is to foster cross-disciplinary and intercultural inquiry into the character, conditions, and possibilities for powerful learning and teaching at the post-secondary level and to disseminate application of these educational practices.

Recognizing the importance of parallel efforts within each discipline, within the scholarly community, and within earlier levels of education, ISSoTL actively encourages those efforts. Further recognizing the fundamental importance of enriching new lines of inquiry and of insights and generalizations that can apply across disciplines, ISSoTL actively encourages cross-disciplinary conversation and synergy. ISSoTL is especially interested in expediting the flow of new findings and applications across national boundaries and in fostering collaboration among scholars in different countries. http://www.issotl.org/

Carnegie Academy for the Scholarship of Teaching and Learning (CASTL)

CASTL is a major initiative of The Carnegie Foundation. Launched in 1998, the program builds on the conception of teaching as scholarly work proposed in the 1990 report, Scholarship Reconsidered, by former Carnegie Foundation President Ernest Boyer, and on the 1997 follow-up publication, Scholarship Assessed, by Charles Glassick, Mary Taylor Huber, and Gene Maeroff.

http://www.carnegiefoundation.ord/general/index.asp?key=21

The CASTL Program seeks to support the development of a scholarship of teaching and learning that: fosters significant, long-lasting learning for all students; enhances the practice and profession of teaching, and; brings to faculty members' work as teachers the recognition and reward afforded to other forms of scholarly work.

Currently, the CASTL Program is working with a wide variety of institutions (campuses, collaborative centres and organisations, scholarly societies, etc.) to broaden the reach and depth of the scholarship of teaching and learning. These efforts are focused on the CASTL Institutional Leadership Program and the CASTL Affiliates Program and are intended help institutions explore the place of SoTL in their settings, and undertaking activities that provide support and recognition for ongoing inquiry into evidence-based improvement of student

learning. They also facilitate the coordination and collaboration of participating institutions (clusters) in order address specific themes important to the improvement of student learning, as well as the development and sustainability of a scholarship of teaching and learning. Themes include:

Building Scholarship of Teaching and Learning Communities,

Building Scholarship of Teaching and Learning System-wide,

Cognitive Affective Learning and the Scholarship of Teaching and Learning,

Communities of Practice Pooling Educational Resources to Support Scholarship of Teaching and Learning (COPPER),

Cross-Cutting Themes in the Scholarship of Teaching and Learning,

Expanding the Scholarship of Teaching and Learning Commons,

Graduate Education: The Integration of Research, Teaching, and Learning,

Integrating the Scholarship of Teaching and Learning into Institutional Culture: Philosophy, Policy and Infrastructure,

Liberal Education: Core Curriculum,

Mentoring Scholars of Teaching and Learning,

Student Voices in the Scholarship of Teaching and Learning,

and Undergraduate Research and the Scholarship of Teaching and Learning.

As previously noted, there are a number of regional and national bodies that explicitly include in their mission, supporting SoTL: HERDSA, STLHE, POD, SEDA, HEA, Ako Aotearoa, Australian Teaching and Learning Council (previously Carrick Institute).

Conferences:

There are numerous conferences that provide an outlet for the products of SoTL work. Some are generic in terms of disciplinary/professional focus; others are associated with specific disciplines, profession.

Conferences that explicitly focus on SoTL are:

- The annual conference of International Society for the Scholarship of Teaching and Learning.

  2009 – http://www.issotl.org/conferences.html#future)
- The annual Midwest Conference on the Scholarship of Teaching and Learning.

  2009 – http://www.iusb.edu/~ucet/sotl.shtml
- The The SoTL Commons: A Conference of the Scholarship of Teaching and Learning.

  2009 - http://academics.georgiasouthern.edu/ijsotl/conference/2009/index.htm
- Scholarship of Teaching and Learning Academy Conference.

2009 - http://www.emich.edu/sotlacademy/

- National Conference on Innovations in the Scholarship of Teaching and Learning at the Liberal Arts Colleges.

  2009 - http://www.wabash.edu/sotl/

- SoTL Academy: A Closer Look.

  2009 - http://www.emich.edu/sotlacademy/

- The London Scholarship of Teaching & Learning (SoTL) 6th Annual International Conference.

  2009 - http://www.health.heacademy.ac.uk/news-events/eventsbox/sotlconf/

Conferences that specifically focus on pedagogic research have also been established recently.

- Annual Higher Education Pedagogic Research Conference. http://staffcentral.brighton.ac.uk/clt/events/rc2009/index.html
- International Pedagogical Research in Higher Education (PRHE) conference. Journals

Publications

Journal of Scholarship of Teaching and Learning (JoSoTL): a forum for the dissemination of the Scholarship of Teaching and Learning in higher education for the community of teacher-scholars. The journal which is published under the auspices of the International Society for the Scholarship of Teaching and Learning (ISSOTL), promotes SoTL investigations that are theory-based and supported by evidence. JoSoTL's objective is to publish articles that promote effective practices in teaching and learning and add to the knowledge base.
http://www.iupui.edu/~josotl/

Note: ISSOTL also published The International Commons, a newsletter which contains a range of articles, announcements, brief articles and reports etc.

International Journal for the Scholarship of Teaching & Learning: an open, peer-reviewed, international electronic journal published twice a year by the Center for Excellence in Teaching at Georgia Southern University. This journal publishes articles, essays, and discussions about the scholarship of teaching and learning (SoTL) and its applications in higher/tertiary education today. All submissions undergo a double-blind peer-review process. The Editorial Review Board of IJ-SoTL is strong and international in scope, and the goal is for submissions, published papers, and the readership to be truly international.

http://www.georgiasouthern.edu/ijsotl/

MountainRise: an open, peer-reviewed, international electronic journal published twice a year by the Coulter Faculty Center for Excellence in Teaching & Learning at Western Carolina University

http://mountainrise.wcu.edu/

PART TWO: INSTITUTIONAL CASE STUDIES

Objective One:

Identify the features of institutional policies, provisions and programmes that explicitly/implicitly encourage and support Scholarship of Teaching and Learning.

The Data

The data gathered in relation to this objective included:

- Statements in national and institutional policy, plan and report documents that would denote an awareness of multiple forms of scholarship, including the scholarship of teaching and learning and a commitment to encouraging, supporting and rewarding staff engagement in the scholarship of teaching and learning.

- A record of provisions, programmes and specific activities that represented steps taken to realize that commitment.

Data Gathering and Analysis Methods

National and Institutional Statements:

To determine the extent of awareness and commitment to SoTL as reflected in national and institutional documents, a content analysis of five key public documents was undertaken. The analysis focused on key words that it was considered would reflect consideration of scholarship and its relationship with teaching and learning. Those documents included the following:

a. National: Ministry of Education – The Tertiary Education Strategy 2007-2015; Statement of Tertiary Education Priorities 2005-2007.

b. Institutional: For all universities as at November 2006, institutional charters and profiles, annual reports for 2004 and 2005, and strategic plan. (Waikato University Vision Statement for 2005-2015 was included).

c. International benchmarking. For comparative purposes the strategic plans of 12 Australian universities were also analysed.

Forty one documents were obtained for the New Zealand universities. Each document located was converted to a format suitable for submission into Nvivo qualitative analysis software. The analysis involved the identification of incidences of phrases related to this project. Once submitted, root word searches were conducted. For example a search for words with research as the route used the term researc* (the * denotes a wildcard that matches zero or more letters, numbers, or other special characters). Teac* and scholar* were also searched for. Table 1 below shows the incidence of words related to scholar (scholarly, scholarship, etc) in the three selected documents. This level of reporting has allowed for the coding of words within each of the documents and these occurrences were further coded to clarify their context and meaning. This method was chosen for its practicality in the light of the volume of documents available. At the same time we recognized that a potential limitation of the Nvivo search method is that words/phrases may be used that equate with the meaning of SoTL, but which do not include the term scholarship (or research).

Table 1: Incidence of 'scholar' root words in selected documents

Scholar*	AUT University		Auckland University		Waikato University		Massey University	
	References	Coverage	References	Coverage	References	Coverage	References	Coverage
Current Profile	18	3.4%	5	17.9%	11	0.9%	16	2.4%
Current Charter	3	1.2%	12	14.9%	3	4.0%	4	7.2%
Annual Report 2005	11	3.1%	51	1.2%	9	36.0%	36	2.5%
	Victoria Wellington University		Canterbury University		Lincoln University		Otago University	
	References	Coverage	References	Coverage	References	Coverage	References	Coverage
Current Profile	22	4.3%	25	7.7%	9	0.9%	21	1.3%
Current Charter	5	9.6%	13	13.4%	3	0.8%	7	1.4%
Annual Report 2005	21	5.8%	11	5.0%	34	1.6%	28	1.6%

Note: The percentage coverage figure relates to the quantity of each document that relates to the word root scholar. Each incidence is expanded to cover the paragraph it is included within; the count of words within each paragraph is then aggregated and stated as a percentage of the whole document.

This analysis extended to a coded content analysis of word occurrence within paragraphs in each of the documents. The screen print below illustrates the frequency of coding to identified themes. For example the figure shows that three main subdivisions in the use of scholarly have been found, 'scholarships for students', 'used as the concept of scholarly' and 'other', the second theme being further subdivided into seven further sub-themes. It is worth noting that word incidences can, and have, been coded to more than one theme.

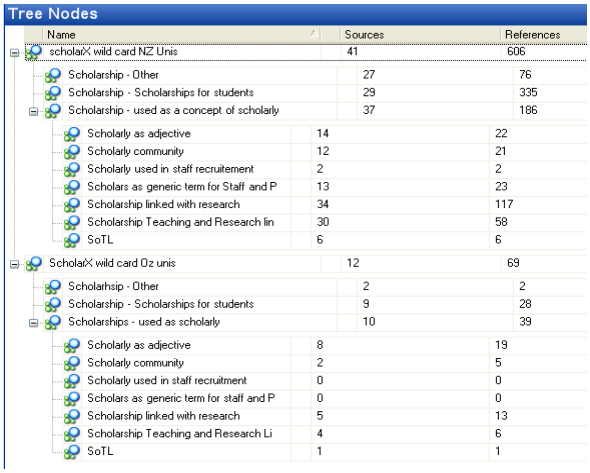


Figure 1: Coding of 'scholarship' themes in university policy documents

Subsequent to this initial analysis, the learning and teaching policy/plans for the New Zealand universities were reviewed (at the end of 2008). The Nvivo was not used for this. For the three in-depth case study institutions, policy and plan documents were also revisited at this time to determine whether there had been any changes that would provide evidence of change in text that would indicate increased awareness and commitment to SoTL within the timeframe of the project.

Provisions, Programmes and Activities:

Information was gathered by the co-researchers at each of the three case study institutions concerning provisions, programmes and specific activities that indicated steps were actually being taken to encourage, support and reward staff engagement in SoTL.

Findings

Document Statements; Initial Review 2006

National - Ministry of Education:

The Tertiary Education Priorities (2005-2007) document states that

> Excellence in research underpins effective teaching, generates knowledge and innovation, and helps drive economic goals (6) and "As part of providing for a successful learning experience, it is important that tertiary teachers are up to date with developments in their field and this includes knowledge of research. There should be a close relationship between research and teaching." (11) (Ministry of Education, 2005)

In the Tertiary Education Strategy the first reference occurs, in such a document, to scholarship in relation to teaching.

> Research provides for the development of ideas, and teaches students to think using research methodologies and analytical reasoning. **The scholarship of teaching, and links between research and teaching more generally, must be strengthened and the government will support this, particularly through the distinctive contributions of universities** (emphasis added). (Ministry of Education, 2007, p. 25)

We note that members of the New Zealand Branch of The Higher Education Development Society of Australasia (HERDSA) made a submission during the consultation round on the Tertiary Education Strategy that advocated endorsement and support for SoTL

i.e.

> We strongly support the expectation that the tertiary education sector continue to deliver a broad and balanced portfolio of basic, strategic and applied research and are particularly pleased to see that the this portfolio includes the scholarship of teaching (and learning) and that strengthening links between research and teaching is also proposed. The consultation document states that "The TES **could** emphasize strengthening" such scholarship and these links. We contend that the TES **should** emphasize strengthening them because they are fundamental to building teaching capability and improving learning outcomes. This agenda is the raison d'etre for HERDSA and its services and activities for members have provided the stimulus, as well as the opportunity, for many New Zealand teachers to become engaged in, as well as engage with, the scholarship of learning and teaching. We appreciate the increased Government funding now available for research through the TLRI fund, and that will also become available with the establishment of the National Centre for Tertiary Teaching Excellence but consider that it is relatively modest given the range of local questions/issues that should ideally be addressed through research and the number of educators who wish to and could undertake such research. In a research project funded by the Teaching Matters Forum and about to get

> underway, circumstances and conditions that make it more or less likely that tertiary educators engage in the scholarship of teaching are being investigated. Preliminary work indicates that lack of funding is a major obstacle and the PBRF regime can be a disincentive (Smith and Jesson 2005).
>
> (Haigh and Stein, 2006)

Within the institutional documents, the most frequent use of the terms scholarship / scholarly was in reference to student financial support (335 times in 29 source documents).

Predictably, the second most frequent use was in association with the term research

e.g.

> The quality of research is also reflected in the work and study accepted for publication by publishers of scholarly books and editors of learned journals.
>
> (University of Otago Annual Report, 2005, p. 50)

> Private funding will continue to be a significant source of revenue to support research and scholarship.
>
> (Lincoln University's 2006 Profile: p. 29)

> In the pursuit of academic excellence, Massey University will encourage research, scholarship and creative work in its chosen disciplines.
>
> (Massey University Charter, p. 5)

For the New Zealand universities, there were 117 instances in such usage in 34 of the 41 NZ sources.

Only one of the documents analysed offered a definition of scholarship. This was provided by the University of Otago in its graduate profile, included in Otago University's 2006-2008 Profile, "scholarship: a commitment to the fundamental importance of the acquisition and development of knowledge and understanding" (University of Otago, 2006, p. 33).

The two coding themes, 'scholarship teaching and research link' and Scholarship of Teaching and Learning', were of most interest to this project. Within these broad uses there is room for interpretation of meaning. As can be seen in Figure 2, six references to scholarly teaching or SoTL occurred in the analysed documents (eleventh line of the listed nodes). These references have been extracted and presented in Table 2.

Table 2: SoTL references in institutional documents

Auckland University Annual Report 2005	In 2005 the Centre (for Professional Development) designed and gained approval to introduce a Postgraduate Certificate in Academic Practice, a CUAP accredited programme for academic and related staff. This certificate will promote a scholarly approach to teaching and learning, aiming to strengthen capacities and revitalise commitment to teaching roles.
AUT University Charter 2005	Through its applied research the University seeks to create, extend and apply knowledge, develop intellectual independence and inform society. While the University fosters a culture of creativity and research excellence, and relevant and up to date scholarship provides the context for all teaching and learning, the University has focused its research effort into key areas, being …..
Massey University Annual Report 2005	Teaching innovation and excellence continues to be supported through the University's Fund for Innovation and Excellence in Teaching (FIET), and a variety of award programmes celebrate the success and commitment of individual staff to teaching scholarship
Victoria University of Wellington Annual Report 2004	It also makes research available to the wider community for mutual benefit, and provides research and scholarship for the purpose of informing the teaching of courses.
Victoria University of Wellington Annual Report 2005	The University provides for the advancement of knowledge and the dissemination thereof by teaching and research by offering courses leading to a wide range of degrees, diplomas and certificates. It also makes research available to the wider community for mutual benefit, and provides research and scholarship for the purpose of informing the teaching of courses.
Victoria University of Wellington Strategic Plan 2005	Learning and Teaching Victoria University seeks to recruit, retain, and support the success of its domestic and international students and to enhance its national and international reputation. Distinctiveness, international quality academic programmes, research-led teaching, stimulating learning environments, and measurable student learning outcomes, are critical to achieving those aims. Effective strategies for teaching and learning, quality enhancement, and staff development are key to assuring Victoria University's status as a leading Australasian university. In this context it is worth noting that (*one point from six*): • such teaching and learning-focused research – known internationally as the Scholarship of Teaching and Learning – has the potential to improve student retention, satisfaction, success and further the development of Victoria University's hallmark graduate attributes of Leadership, Creative and Critical Thinking and Communication.

Document Statements: Follow-up Review 2008

As the documents initially subject to analysis did not include institutional teaching and learning policy and plan statements, these were reviewed at the end of 2008. Strategic plans were also revisited if more recent versions had been prepared. As a further possible indicator of a policy-level commitment to SoTL, the criteria adopted for institutional teaching excellence awards were also examined.

a. Teaching and Learning Policy/Plans

Within the University of Otago Teaching and Learning Plan, 2005-2010 the concept of *research informed learning* is adopted (*Learners at the University of Otago are informed by research and scholarship; they are encouraged to recognize the insights offered by current research and to value the example set by their research-informed teachers*). The plan also elaborates on the University's Profile Objective 27 – To recognize and promote interdependence between teaching, research and professional practice.

> University teachers who reflect on the task of teaching know how to draw on the learning and understanding stored in their own and others' research activities and relevant professional practice. Teaching, research and professional practice all depend on continuing interaction with knowledge, and all are processes where critical analysis, synthesis, action and self-development are essential. The values of university-based research parallel the values of university teaching and both inform the values of professional practice.

The University of Canterbury is currently developing a new Teaching and Learning Plan that will build on earlier investigations of the link between Teaching and Research (e.g. Spronken-Smith *et al*., 2000). The authors of the associated report identified five aspects of the link that could be related to institutional commitments within current strategy documents: They included research-informed teaching and engagement in and application of, educational/pedagogical research.

The University of Lincoln has a Teaching and Learning statement which is currently being evolved into a Teaching and Learning Plan. The current statement makes reference to maintaining and reinforcing the teaching and research linkage, but does not refer to research/scholarship of teaching and learning as one way of achieving that linkage. It is noted that "as part of an on-going professional development programme, staff are exposed to a range of informative articles on teaching techniques, learning style differences, and other educational issues" (a prompt for scholarly teaching)

Victoria University adopted a Learning and Teaching Policy in 2006 that states as a principle "The University will support teacher inquiry into learning and teaching and the sharing of the results of this inquiry with others in their communities of practice" (p. 2) and makes a commitment to supporting teachers in their practice by "encouraging the scholarship of learning and teaching" (p.??). These statements are echoed in a Learning and Teaching Support Functional Plan (2005-2007) which also states that "Where possible, approaches to learning and teaching used at Victoria University are based on research-based evidence" (p.??). Professor Tom Angelo, the former Director of the university's University Teaching Development Centre was a strong advocate for SoTL as reflected in a discussion paper advocating, as an initiative, Research-led Learning and Teaching (Angelo & Asmar, 2005).

The Massey University Teaching and Learning Policy (as at 2006), indicates a commitment to qualifications that are research-led and that reflect an interdependence of research and teaching. Similar goals are elaborated in a more recent Strategy document (Massey University: Defining the Road to 2020).

> Our teaching programme will be informed by research (5)
>
> Massey wants its teaching to be defined by learner focused research-informed learning…(8)
>
> We will enhance the connections between research and the classroom by encouraging students, at all levels, to be involved in the research process (10)

The University of Auckland prescribes that all Faculty have a Teaching and Learning Plan which is submitted to a Teaching and Learning Quality Committee. It has not been possible to review these plans.

AUT University's current Learning and Teaching Framework and an associated Action Plan do not include any explicit references to scholarship or research in the context of teaching.

However, the university's strategic plan (2007-2011) includes the following key strategic theme:

> AUT will conduct excellent research, advancing knowledge and practice in its areas of expertise **and supporting its higher education programmes**. (p. 5)
>
> Our research will facilitate a climate of academic inquiry and debate. **Our research will reflect Boyer's notion of scholarship** and will cover the spectrum from embracing discoveries and innovations for their own sake to **supporting our curriculum** so that our students are leading practitioners in their professions. (p. 8)

While the Learning and Teaching Framework does not directly acknowledge or elaborate on this theme, the university's Research Development Plan (2007-2011) does align with this view of scholarship which was first formally articulated in a report that was a preface to the development of this plan:

> At the core of AUT University's Research Development Plan is the concept of scholarship as teaching and learning, engagement, integration and discovery. As defined by the American Association for Higher education, scholarship implies a philosophy of research and education that transcends the antiquated content/process, theory/practice, teacher/student dichotomies that have traditionally shaped higher education. Within this philosophical tradition, research , education and the development of activities of tertiary institutions are informed by scholarship … Underpinning the wide spectrum of research activities and programmes in which the University is developing a leadership role, is the concept of scholarship which transcends teaching and learning, engagement, integration and discovery.
>
> (AUT University: University Research Framework and Trends, 2005)

At the end of 2007, AUT University formally made a commitment to *research-led teaching* and this phrase was first used in the AUT University Investment Plan 2008-2010. This document also notes, as a goal, "To align more strongly the links between research and teaching" and makes reference to "the philosophy of scholarship which underpins AUT University's distinctive approach to research-led education". An elaboration of the meaning and import of the term has yet to be made.

b. Institutional Teaching Award Criteria

Some institutions have aligned their internal criteria with those used for the National Tertiary Teaching Excellence Awards which are administered through Ako Aotearoa.

Those criteria do not refer specifically to research or scholarship in the context of teaching and learning. They may, however, be implicit in the following criteria statements under the heading Professional development and leadership

> The nominee shows on-going commitment to his/her own teaching and has been proactive in contributing to the development of effective teaching practice and/or the development of colleagues – either within his/her organisation or in a wider context: currency has been maintained in terms of both subject area/discipline and in teaching practice; and teaching methods and

> ideas are shared with colleagues either internally or externally, with evidence of positive impact on their practice.
>
> (Criteria and Guidelines for Tertiary Teaching Excellence Awards, 2009)

Massey University and the University of Otago have adopted the National Award criteria for their institutional awards.

Auckland University offers two awards: Sustained Excellence in Teaching; and Early Career Excellence in Teaching. A specific criterion is "Evidence of teaching scholarship" (p.??) with examples being contributions to the scholarship of teaching and learning, such as articles or conference papers, and presentations of teaching methods and/or teaching innovations.

The criteria for the AUT University's 'distinguished teacher award' were amended during 2007.

They now include:

> Establishing a nexus between teaching and research that enhances students learning, including through engagement in the scholarship of teaching and learning
>
> Teaching which is constantly and demonstrably evolving in keeping with current and emerging theory and practice, and which is innovative and creative, and demonstrates reflection on practice.
>
> (AUT University, 2008)

Victoria University explicitly identifies

> Scholarly activities that have influenced and enhanced learning and teaching - Which may include: showing advanced skills in evaluation and reflective practice; participating in and contributing to professional activities related to learning and teaching; coordination, management and leadership of courses and student learning; conducting and publishing research related to teaching; demonstrating leadership through activities that have broad influence on the profession.
>
> (Victoria University, 2007)

The five criteria associated with Canterbury University Teaching Awards include

> acknowledged leadership in the teaching of a discipline and research and development in teaching and learning, A Teaching Medal is also awarded. Criteria for the latter and other aspects of teaching awards processes are currently being reviewed.

While the Excellence in Teaching Awards documentation, for Lincoln University, states that research and development in teaching and learning are included in the diverse activities of **teaching**, specific award criteria to not refer to research or scholarship in relation to teaching.

To provide a comparison twelve Australian universities' current strategic plans were also investigated in the same way. A similar set of results were found. The words scholarly /

scholarship are used frequently in relation to financial support for students. The terms are also used to describe the nature of research in 5 of the 12 sources. Only one of the twelve Australian universities searched includes a SoTL reference - the University of New South Wales Strategic Plan states as one of the university's strategic goals that "[UNSW will] Promote and support the scholarship of teaching and learning at UNSW as pivotal to the integration of scholarly research, teaching and learning" (University of New South Wales, 2005, p. 11).

Programmes, Provisions and Activities

There is obvious truth in the statement that *actions speak louder than words*. While there may be a rhetorical commitment to SoTL, it needs to be accompanied by specific provisions and practices that will enable the realization of that commitment. Establishing teaching award criteria that include SoTL-related criteria is one of those actions. For the three case study institutions (AUT University, Canterbury University and Massey University), the co-researchers compiled a record of provisions, programmes and specific activities for the period 2007-2008 that would represent evidence of action.

Provisions:

AUT University:

- SoTL explicitly informs, and is a focus for, work done by staff of the Centre for Educational and Professional Development in three interlinked portfolios (teaching, flexible learning, scholarship and research development) (see http://www.aut.ac.nz/staff/cepd/research_and_scholarship/scholarship_of_learning_and_teaching/

- The position descriptions for two members of staff explicitly refer to SoTL-related responsibilities.

  Position One

  Develop initiatives that will increase staff knowledge, and use, of scholarship of teaching and learning in higher education.

  - *Initiatives to increase staff knowledge, and use, of scholarship of tertiary learning and teaching are designed and implemented.*
  - *Research projects on learning and teaching issues are planned and implemented, and outcomes disseminated.*
  - *Strategies are recommended for strengthening the nexus between research and teaching.*

  Position Two

  Support the enhancement of postgraduate supervision, and staff engagement in the scholarship of learning and teaching

  - *Contributions are made to provisions for staff development in the scholarship of teaching and learning.*
  - *Liaison with other universities to maximise staff opportunities to engage in the scholarship of teaching and learning.*

- Faculty-based contestable funding is available to support SoTL projects.

- A *Resources to Enhance Learning and Teaching* (RELT) fund requires staff to include an evaluation strategy. This was introduced, in part, to encourage staff to undertake SoTL inquiries in relation to/end on to their projects.

Canterbury University

> While the specific label of 'SoTL' does not explicitly appear in all literature related to the *University Centre for Teaching and Learning (UCTL)*, the Director and the three academic staff members within the Centre have begun to use 'SoTL' to describe their research-led academic development. As stated in a UCTL brochure entitled, *Learning First*, its work is: "Academic development is the core of the Centre's activities with staff who specialise in good p*ractices in teaching, learning, e-learning, and in*struction. This support is research-led and practically focused". And this perspective is reiterated by the Director in a further publication. "Connecting research and teaching is the ro*le of the Univ*ersity Centre for Teaching and Learning. … The skills of effective teaching can be acquired, developed and enhanced through collaborative conversations with colleagues, through a study of the research into teaching and learning, and through practice, reflection and feedback….UCTL is contributing to the international field of the Scholarship of Teaching and Learning with the centre's research and projects being showcased in Australasia, Europe and North America" (Coleman, 2008, p30).
>
> See http://www.comsdev.canterbury.ac.nz/canterbury/Canterbury0801.pdf

- Teaching Development Grants are offered as contestable funding. Grants are typically awarded for academic staff to engage in SoTL projects such as: attend discipline-based education research conferences and implement and research new teaching strategies and resources.

Programmes and Activities:

AUT University

- References to scholarly teaching and the scholarship of teaching and learning are made in many workshop sessions, which emphasize drawing on the products of SoTL and adopting a rigorously reflective and research-based approach to teaching.
- SoTL-related Workshops:
  - Who should I be? An excellent teacher, a scholarly teacher, a scholar of teaching?
  - Getting started with research (often anticipate SoTL projects)
  - Designing a learning and teaching research project.
  - Designing links between teaching, learning and research into curriculum.
  - Engaging in Research-led Teaching: Issues and Options.
  - Designing an evaluation strategy for a RELT (Resources to enhance learning and teaching) project.
- A Forum on *The Scholarship of Teaching and Learning at AUT University*.
- Sessions and consultation on the teaching-research linkage by the HERDSA Visiting Scholar Professor Mick Healey (for academic staff and academic Managers).

- Consultation and advice for individual staff and staff teams to assist their design of SoTL projects.
- The Graduate Diploma in Tertiary Teaching programme emphasizes reflection as the primary activity for developing teaching effectiveness and includes a paper on *Enhancing Professional Practice Through Research*.
- Development and Dissemination of Resources (e.g. a list of publication outlets for SoTL)
- CEPD staff are engaged in SoTL projects and have presented at various conferences (e.g. TLRI). ISSoTL, HERDSA, TERNZ.. Projects include an extended investigation of teaching and learning enhancement initiatives in a first year Hospitality Fundamentals paper.

Canterbury University

- Multiple session courses for new academics, *Canterbury in Context: An Orientation Programme for New Academic Staff*, and PhD students, *Aiming at Academic Careers*, involve SoTL through the sharing of higher education research.
- Topic-specific and research-led sessions on: Assessment, Course Design, Learning Spaces, and Technology.
- Within the Postgraduate Certificate and Postgraduate Diploma in Tertiary Teaching, there is a considerable emphasis on SoTL with a goal of the Diploma being to facilitate academics into becoming members of the SoTL community of practice.
- Hosted speakers from both within New Zealand and overseas. Recent speakers have been Professor Mick Healey (UK) to discuss research-led teaching and Dr. Judy Miller (US) to discuss her work in Inquiry-Based Learning.
- Academics within UCTL are engaged in SoTL through research, dissemination, and contributions to a variety of professional organizations. Recent SoTL-related research projects include: a Teaching and Learning Research Initiative grant with a Law class, *Unlocking Student Learning* and a Teaching Matters Forum grant, *Inquiry-Based Learning in Undergraduate Education* with a Communications Disorders class, an Engineering class, and a Sociology class. Recent SoTL-related presentations have been made at SoTL Commons, Association for Experiential Education Conference, Higher Education Research and Development Society of Australasia Conference, New Zealand Association for Research on Education Conference, Australasian Society for Computers in Teaching and Learning Conference, and Tertiary Education Research in New Zealand Conference. Recent SoTL-related articles have been published in include: *International Journal of Learning*, *Kairos*, *Human Resource Development International*, *New Zealand Journal of Adult Learning*, and the *Journal of Experiential Education*.

Discussion

The analysis of various high-level institutional planning documents indicates that all universities give due attention, as legislatively required, to the teaching-research nexus. However, they vary considerable in terms of the extent to which they explicitly associate scholarship and research with teaching and learning, and consider that relationship a manifestation of the nexus. Our analysis revealed that statements about scholarship and research in this context vary considerably in their level of generality-specificity, comprehensiveness and detail.

There is some evidence that as new institution policy and plan documents are formulated, references to this relationship become more evident. This is certainly the case for use of variants on the phrase 'research-led'. This may reflect both regard for the Tertiary Education Strategy expectations in relation to SoTL as well as the teaching-research nexus link in general and/or the on-going endeavours of academic development staff to advocate for scholarly teaching and SoTL, as well as the impact of activities that they have undertaken to encourage and support them. This may also be reflected in the greater likelihood that institutional documents having an operational and action plan component will refer to scholarly teaching and SoTL (in less ambiguous and more precise terms).

As is evident in the profile of provisions, programmes and activities evident at the three case study institutions, much SoTL-related action is occurring, not withstanding the status of the rhetoric. That this situation applies across all of the universities is confirmed when academic developers report on their initiatives and on-going work at the annual meeting of the Association of Staff Developers of New Zealand Universities (ASDUNZ). To date, however, there has been no systematic effort made to collate and review those activities across the university sector as a whole, with the purpose of sharing good practice. A more extensive investigation and critique might be a productive sequel to this project.

While there is sometimes cynicism about the impact that rhetoric can have on the everyday realities of practice, undeniably it legitimates particular practices and can provide invaluable leverage when change is being promoted and driven. Academic developers and many of their teaching colleagues who value and engage in SoTL would certainly appreciate a clear and elaborated institutional stance on it place in their own and students' academic work of staff. They would also wish to see aligned statements in relevant policy areas, including probation, appointment, promotion, study leave, teaching awards.

There are many precedents internationally now for universities which have made their position very clear and have a set of closely aligned policy and process documents for the guidance of staff.

Objective Two:

Describe the status, and features, of Scholarship of Teaching and Learning activities and products.

The Data

In relation to this objective, we focused on SoTL products that took the form of publications reported in the three case study institutions' annual research outputs records. As noted in the preceding review, these forms of publication and presentation do not encompass all of the possible variants for work that is representative of scholarship. They are reports on products that have the status of peer-reviewed research. Other forms of products and other forms of dissemination are possible in relation to scholarly activity

Data gathering and analysis methods

The annual research outputs reports were obtained for the years 2000 – 2005. As indicated in Table 3, some reports were not available.

Table 3: Availability of annual university research outputs reports

University \ Year	2000	2001	2002	2003	2004	2005
AUT University	✓	✓	✓	✓	✓	✓
Massey University	✓	✓	✓	✓	na	na
University of Canterbury	na	✓	✓	✓	✓	✓

The reports were read and SoTL products identified based on an interpretation of publication titles. Research outputs produced within Schools of Education that related to pre-tertiary education were excluded. The ratio of SoTL to total research outputs was calculated for the period 2000-2005 (Table 4) and on an annual basis (Table 5).

Table 4: Total and proportion of university SoTL outputs (2000-2005)

	Total Outputs (from years in Table 3.1)	SoTL Outputs (subject to refinement – likely to decline)	Proportion SoTL to total
AUT	6679	603	9.0%
MU	17998	498	2.7%
CU	10307	180	1.7%
Totals	34984	1281	3.6%

Table 5: Total annual research and SoTL outputs (2000-2005)

All Outputs	2000	2001	2002	2003	2004	2005
AUT University	691	896	1006	1202	1196	1688
Massey University	4115	5120	4559	4204	na	na
University of Canterbury	na	1809	1894	1706	2299	2599

SoTL Outputs	2000	2001	2002	2003	2004	2005
AUT University	90	90	95	144	125	53
Massey University	105	120	129	137	na	na
University of Canterbury	na	33	30	26	20	35

SoTL Outputs % of Total	2000	2001	2002	2003	2004	2005
AUT University	13.0%	10.0%	9.4%	12.0%	10.5%	3.1%
Massey University	2.6%	2.3%	2.8%	3.3%	na	na
University of Canterbury	na	1.8%	1.6%	1.5%	0.9%	1.3%

A further general categorization of the SoTL products was attempted on the basis of their apparent association with output subject categories, clinical education, e/on-line learning and teaching, high technology (e.g. artificial intellignce), language/literacy, teaching material production and evaluation, and 'other'. Table 3.4 presents the results of that analysis. A further analysis was made according to type of publication (e.g. authored book, chapter in book, conference paper or poster) Table 6shows the result of the latter analysis for the SoTL products for each institution annually.

Table 6: Categories of SoTL output by year of publication

		Year of publication							
University	Output Type	2000	2001	2002	2003	2004	2005	Grand Total	% of Uni
AUT	Authored book (AB)	1	2				1	4	0.7%
	Chapter in book (CB)	3	4	2	1	14	4	28	4.7%
	Conference contribution (CC)	62	65	67	96	76	32	398	66.7%
	Edited book (EB)			2	2	2		6	1.0%
	Journal article (JA)	16	15	20	32	20	13	116	19.4%
	Monograph	2		1	1	3		7	1.2%
	Oral presentation (OP)				9	10	2	21	3.5%
	Report for external body (RE)		1	1			1	3	0.5%
	Scholarly edition (SE)	3						3	0.5%
	Technical Report	3	3	2	3			11	1.8%
AUT Total		90	90	95	144	125	53	597	
MU	Authored book (AB)			3	2			5	1.0%
	Address to professional body (AP)	43	55	46	57			201	40.9%
	Chapter in book (CB)	4	4	5	17			30	6.1%
	Conference contribution (CC)	28	27	28	18			101	20.6%
	Extension Activity (EA)	8	5	5	7			25	5.1%
	Edited book (EB)	2	2	2	9			15	3.1%
	Interview (IN)	1		2				3	0.6%
	Journal article (JA)	12	22	26	21			81	16.5%
	Monograph	3	3	6	2			14	2.9%
	Oral presentation (OP)	3	1	3	2			9	1.8%
	Report for external body (RE)	1	1	3	2			7	1.4%
MU Total		105	120	129	137			491	
UC	Authored book (AB)			1				1	0.6%
	Chapter in book (CB)		3	1	4	1	4	13	8.1%
	Conference contribution (CC)		13	13	5	8	17	68	42.5%
	Edited book (EB)				1			1	0.6%
	Journal article (JA)		13	10	10	7	11	55	34.4%
	Monograph		4					4	2.5%
	Oral presentation (OP)			1		1	1	3	1.9%
	Report for external body (RE)			1		2	1	4	2.5%
	Submissions			2	2			4	2.5%
	Technical Report			1	4	1	1	7	4.4%
UC Total			33	30	26	20	35	160	
Grand Total		390	486	508	614	290	176	2496	

There are some limitations to these analyses. It had been hoped that specific publications could be examined to both ensure the validity of the selections and to categorize other features, but time precluded this. Ideally, the time span would have been extended, but the publication of these reports occurs some time after the years in which the research was published and presented. Monitoring of this kind could be attempted by Ako Aotearoa.

The Findings

While the data indicates quite variable patterns between the three universities and overtime, and the proportion of SoTL products to research products overall is relatively low (except AUT University), the overall number of SoTL products produced in the period surveyed is significant. 1281 contributions have been made to the knowledge base for learning and teaching in New Zealand universities. It would be possible to isolate other specific fields for research where equivalent data would be found.

For AUT University, the number and proportion of SoTL products is higher, which can be accounted for in terms of its more recent status as a university. Staff in institutions that are transiting in status from an Institute of Technology to a University often regard SoTL as a way into research – and SoTL may be promoted for this purpose as well. There may be motivational as well as pragmatic reasons for making the early focus of research on learning and teaching. That 66.7% of AUT University SoTL contributions take the form of conference contributions could also be attributed to this factor. The decline in the proportion of SoTL products at AUT University is in part a reflection of the predictable increase in disciplinary research.

The higher weighting on conference contributions rather than journal articles may in part reflect a concern to disseminate directly to colleagues in a defined context and/or the level of experience of staff in engaging in SoTL. As the latter increases, publications in journals, in particular discipline journals may increase. Of note in the Massey data is the 40.9% of contributions that are addresses to professional bodies. In contrast, 34.4% of contributions at Canterbury University are in the form of journal articles. This may reflect that institution's expectations for staff scholarship.

Discussion

The results of the analysis are very encouraging as they indicate that New Zealand academics are already very active and productive in SoTL. Gaps in data did not allow us to establish whether there was a consistent trend of increasing numbers of SoTL products of this type, and this could be a focus for further investigation. We also did not investigate the number of academics who have produced these products. We know from inspecting the records that some are very productive in SoTL while maintaining a strong record of disciplinary research. However, it would be reasonable to expect that SoTL work will increase as institutional endorsement of SoTL increases along with sources of funding for SoTL work. The new sources of funding available through Ako Aotearoa are obviously intended to achieve this objective.

At the same time, as has been made apparent in prior research, there need to be a range of other conditions in place as well to support SoTL.

Objective Three:

Compare the status and features of Scholarship of Teaching and Learning with respect to different faculties/disciplines/professions.

Objective Four:

Identify experiences and views of those staff who are and those who are not engaged in Scholarship of Teaching and Learning.

Data:

There were several sets of data gathered in relation to these two interrelated objectives.

For staff in the three case study institutions, the data included:

- the number of SoTL products produced by each Faculty,
- degree of involvement in SoTL,
- anticipated and hoped for change in involvement in SoTL (in 2 years, in 5 years),
- explanations for anticipated and hoped for change,
- existing and possible incentives and disincentives for change,
- advantages/disadvantages of engaging in SoTL.

For staff at AUT University, data included:

- 'degree of involvement' in SoTL,
- relationship between degree of involvement and
    - years of teaching experience
    - level of academic position
    - highest academic qualification
    - teaching discipline (soft/applied, soft/pure, hard/applied, hard/pure)
    - teaching conceptions
- anticipated and hoped for change in involvement in SoTL (in 2 years, in 5 years),
- explanations for anticipated and hoped for change,
- existing and possible incentives and disincentives for change,
- change in involvement and
    - years of teaching experience
    - teaching discipline
- perceptions of factors promoting and hindering involvement in SoTL,
- advantages/disadvantages of engaging in SoTL.

Data Gathering and Analysis Methods

Data was gathered using four methods: questionnaire, semi-structured interview, focus group and the collation of responses in a Forum on SoTL.

Within the questionnaire a 6 level *degree of involvement in SoTL* scale was used, based on the work of Trigwell, Martin, Benjamin and Prosser (2000), as follows in Table 7:

Table 7: Degree of engagement in SoTL scale

Degree of SoTL Engagement	***Description of SoTL position***
1 (practical experience)	My teaching is informed by the teaching that I have experienced as a learner and by my own practical experiences.
2 (read literature)	I read literature on teaching and learning in order to build my own knowledge of teaching and learning.
3 (read literature to improve teaching)	I read literature on teaching and learning with the intention of applying ideas to improve my own teaching practice. I have been able to achieve this on more than one occasion.
4 (read literature to improve teaching and research)	I read education literature with the intention of applying the ideas to improve my teaching practice and my students' learning. My reading informs my research into improving my teaching.
5 (read general literature to improve learning and research)	I read both general education literature and literature about teaching and learning in my discipline(s). My intention has been to apply ideas from these two sources in order to improve my own teaching practice and my students' learning. My reading informs my research into improving my teaching.
6 (read general and discipline literature to improve learning and research)	By reading literature on teaching and learning I have informed and changed my teaching practice in order to improve student learning. My reading has informed research into my teaching and my students' learning. My research has been made public in some way (seminar, paper, conference, etc).

Respondents were asked how frequently they engaged in the activities associated with each stage description (at least weekly, at least monthly, once or twice per year, not applicable) and to identify the description that most closely described them.

For the purposes of differentiating disciplines, we used a four category taxonomy developed by Becher (1994), which is widely used for similar purposes.

Table 8: Discipline categories (Becher, 1994)

Category	*Disciplines*	*Description*
'hard-pure'	Pure sciences (e.g. physics)	Cumulative, atomistic (crystalline/tree-like), concerned with universals, quantities, simplification, resulting in discovery/explanation.; Competitive, gregarious, politically well-organized, high publication rate, task-oriented.
'hard-applied'	Technologies (e.g. mechanical engineering)	Purposive, pragmatic (know-how via hard knowledge), concerned with mastery of physical environment, resulting in products/techniques.; Entrepreneurial, cosmopolitan, dominated by professional values, patents substitutable for publications, role oriented.
'soft-pure'	Humanities (e.g. history) and pure social sciences (e.g. anthropology)	Reiterative, holistic (organic/river-like), concerned with particulars, qualities, complication, resulting in understanding/interpretation.; Individualistic, plurastic, loosely structured, low publication rate, person-oriented.
'soft-applied'	Applied social sciences (e.g. education)	Functional, utilitarian (know-how via soft knowledge), concerned with enhancement of [semi-] professional practice, resulting in protocols/procedures.; Outward-looking, uncertain in status, dominated by intellectual fashions, publication rates reduced by consultancies, power-oriented.

Source: (Becher, 1994)

The conception of teaching item differentiated teachers according to their perception that their teaching orientation was predominately towards (a) the transmission, to students, of concepts and/or knowledge, or (b) helping students develop or change their conceptions. This is a distinction based on the work of Prosser and Trigwell (1999) and it contrasts a teacher-focused (transmission model) or a student-focused (conceptual change model) approach.

The questionnaire was administered to all AUT University academic staff (full time, part time, permanent and contracted). In total, 1001 questionnaires were sent out using internal mail and 124 useable forms were returned (12.4%). A two week window for completion of the questionnaire was given and there was one follow-up prompt for return of forms. Data was analysed using SPSSX.

In order to obtain more in depth information about degree of involvement in SoTL, anticipated change in future involvement, reasons for anticipated change and factors helping and hindering engagement in SoTL, semi-structured interviews were held with 9 randomly selected staff.

The indicated questions for these interviews were:

Q1 Literature on SoTL suggests that there is a continuum of positions individuals can occupy. Where would you currently place yourself on the continuum (scholarly to engage in scholarship)?

Q2 Where would you like to be in two years and five years?

Q3 Can you offer an explanation for your desire to change position (or not)?

Q4a What incentives exist for you to change position / engage in SoTL?

Q5b What disincentives exist for you to change position / engage in SoTL?

Q6a Would your answers to Q2 change if the incentives / disincentives were different?

Q6b How? Why?

Q7 What advantages/disadvantages do you see in engaging in SoTL

The interview transcripts were content-analysed for relevant themes and categories.

Five focus group interviews (n = 31) were subsequently held with staff at the three universities (AUT=3, Massey=1, Canterbury=1). The following diagram (Figure 2) was the stimulus for the focus group dialogue.

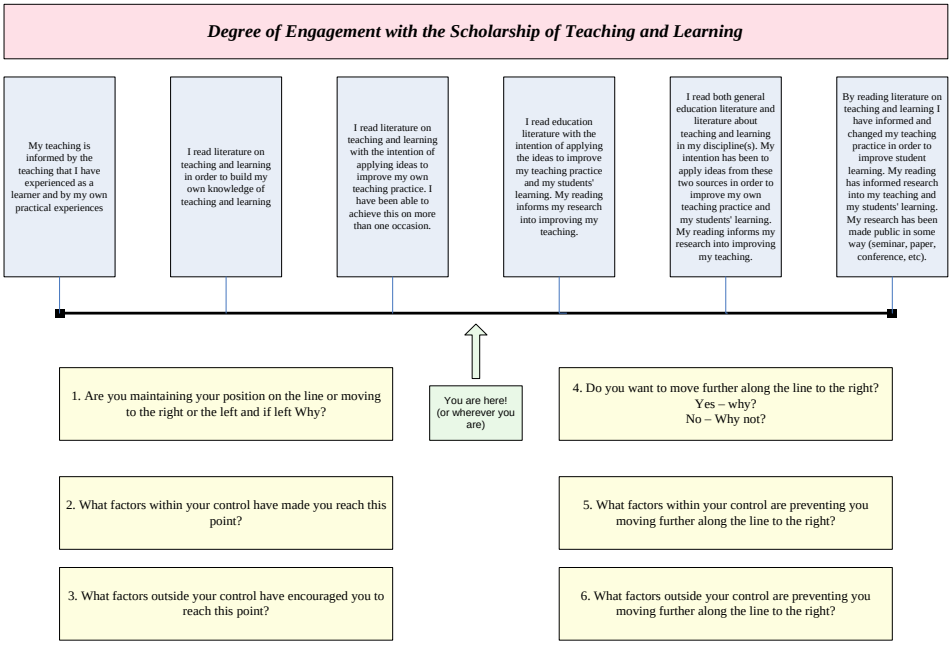


Figure 2: Focus group dialogue stimulus

By the completion of the interviews and focus groups, data saturation was reached.

During a Forum on *The Scholarship of Teaching and Learning at AUT University,* the participants were asked for their views about incentives and barriers to SoTL at AUT University and desirable future initiatives to support SoTL.

Ethics approval for these data gathering methods was obtained from the AUT University Ethics Committee.

The return rate for the questionnaire was disappointing and further avenues for eliciting responses were not available at the time. We can only conjecture about possible reasons. As noted below, it may be that staff who were already active in relation to SoTL were most likely to respond. Others, for whom it wasn't a significant feature of their academic lives may have perceived less value in contributing their views. Staff in the social science area may have also been more likely to perceive questionnaire-sourced data as valuable. However, the use of interviews, focus groups and the Forum dialogue did compensate where the data complemented and extended that obtained using the questionnaire. The multiple methods also allowed for triangulation, and all methods had both strengths and limitations in relation to providing complete and comprehensible data.

The Findings

Drawing on the questionnaire data, Table 9 indicates how time was allocated to each of the six SoTL-related activities by the respondents.

Table 9: Percentage of responses for degree of SoTL engagement categories

	Do very often (at least	***Do often (at least***	***Do infrequently (once or***	***Not applicable***

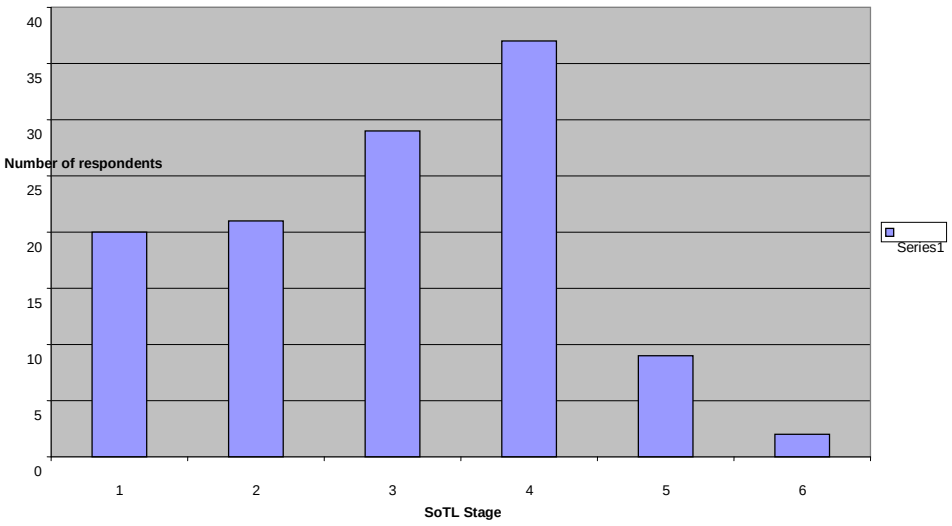
	weekly)	*monthly)*	*twice per year)*	
Q6: I collect and read the literature about teaching in my discipline.	29.0%	32.3%	35.5%	1.6%
Q7: I have communicated the results of my research efforts into teaching and learning to my colleagues (peer reviewed).	8.1%	11.3%	48.4%	26.6%
Q8: I try to improve my students' learning by investigating the learning that takes place within my classes.	32.3%	32.3%	26.6%	4.0%
Q9: I try to improve my teaching in response to my consideration of the literature about the teaching of my discipline.	18.5%	37.1%	34.7%	4.8%
Q10: I try to improve my students' learning, in response to literature I have read, by investigating the learning that takes place within my classes.	13.7%	33.9%	41.1%	4.8%
Q11: I collect and read the literature about teaching in general.	7.3%	25.0%	54.0%	9.7%
Q12: I have communicated the results of my research efforts into teaching and learning to my colleagues (non-peer reviewed).	5.6%	20.2%	50.0%	20.2%

Percentages do not add up to 100 due to missing responses.

At least two thirds of respondents quite frequently read literature about teaching in their discipline and 55% are often responsive to that literature in terms of their own teaching. A similar proportion is also engaging in investigations within their own classrooms, often in response to reading literature. One quarter communicate with their colleagues about their investigations, with a little fewer also communicating through a peer review process. This data suggests a relatively high level of engagement the levels with a predicable fall off for the stages that involve communication with colleagues and, ultimately, peer review. It also suggests that the respondents were not likely to be representative of the population of academic staff as a whole. Set against the data on published SoTL products, this seems likely and needs to be kept in mind when interpreting other data.

With respect to identification of the stage description that the respondents believed was most was representative of them, a parallel profile was obtained (Table 10).

Table 10: Perceived most representative degree of SoTL engagement category



While over one third are undertaking investigations (Stage 4), the proportion who are communicating the outcomes to their colleagues declines considerably. Overall, 60% could be regarded as scholarly teachers and 40% are scholars of teaching and learning. The previous data, however, indicates that some may be taking initial steps into the latter category.

We examined, in turn, a number of possible relationships between level of engagement and aspects of respondents' careers. While the low questionnaire response rate and low cell numbers precluded chi square analyses, there are some patterns in the data that are 'talking points' and prompts for further investigation.

Table 11 presents the data (number of respondents) in relation to degree of engagement (most representative level) and years of teaching.

Table 11: Years of teaching and degree of SoTL engagement

	Degree of Engagement with SOTL					
Years Teaching	***1***	***2***	***3***	***4***	***5***	***6***
0 – 4	1	1	5	2	0	1
5 – 9	4	9	4	1	1	1
10 – 14	4	4	2	8	1	0
15 – 19	3	4	6	5	3	0

20 – 24	3	2	5	7	2	0
25 +	5	1	7	14	2	0

A trend towards increasing involvement in classroom investigations of learning and teaching is evident (stages 4-6). 20% of respondents in the 0-9 years of experience range were engaged in classroom investigations, 42% of the 10-19 years experience respondents were and this increased to 53% for the 20+ years experience range. At the same time, the only two respondents with peer reviewed SoTL products were in the first 0-9 years of their experience. It is possible that early career staff are giving a priority to their disciplinary research in order to become established scholars in that context and this may make it difficult to accommodate a further strand of scholarship.

Table 12 shows the relationship between degree of engagement (again most representative level) and level of academic position.

Table 12: Academic position and degree of SoTL engagement

	Degree of Engagement with SoTL					
Academic position	***1***	***2***	***3***	***4***	***5***	***6***
Lecturer	3	6	7	2	3	1
Senior Lecturer[1]	11	12	18	28	4	1
Professor[2]	6	3	4	7	2	0

[1] Includes Principal Lecturer

[2] Includes Associate Professor

There is a relatively consistent trend of most active engagement at each stage for staff at the senior lecturer level. When staff in lecturer and senior lecturer positions are compared, there is a shift (27% - 45%) in level of engagement in investigations. It is noteworthy that 18% of the sample were either in Associate Professor or Professor positions and 40% of this groups were engaged in such investigations. They might be expected to be good role-models for other staff within their discipline and Faculty.

Table 13 presents data relating degree of engagement in SoTL with highest qualification.

Table 13: Highest academic qualification and degree of SoTL engagement

	Degree of Engagement with SoTL					
Highest	***1***	***2***	***3***	***4***	***5***	***6***

qualification						
Bachelors[1]	0	3	3	1	1	0
Masters	9	8	13	23	4	1
Doctorate	6	7	11	12	3	1
Others[2]	5	3	2	1	1	0

[1] Includes Bachelors with honours

[2] Graduate diploma and trade certificates

As a relatively new university, many staff are undertaking postgraduate research degree programmes and this is reflected in the data. Over 50% had either bachelor or masters level qualifications. The commitment to gaining doctoral qualifications, very strongly encouraged and supported by The University, could be a constraint on their engagement in SoTL activities that were particularly time consuming.

Table 14 presents data concerning the relationship between the discipline classification of respondents (Becher Taxonomy) and their level of engagement in SoTL.

Table 14: Teaching discipline and degree of SoTL engagement

	Degree of Engagement with SoTL					
Discipline	***1***	***2***	***3***	***4***	***5***	***6***
Soft Applied	14	9	11	27	5	0
Soft Pure	2	4	2	6	2	0
Hard Applied	1	5	8	3	2	2
Hard Pure	3	2	5	0	0	0

The data indicates that nearly three-quarters of the respondents came from disciplines designated soft and that over three-quarters were from applied disciplines. This is not unexpected if one considered potential barriers that may arise from epistemological differences associated with hard and soft disciplines (that account for unfamiliarity with, and possible attitudes towards, social science/education research) and the possible effect of a disposition towards applied rather than pure research. At the same time, the data indicates that there are staff in the *Hard Pure* category who are encountering and drawing on literature on learning, even if they are not currently disposed to themselves investigating the same phenomena. The data also raise questions concerning appropriate strategies and methods for drawing them into such scholarship.

Table 15 presents data concerning the relationship between respondents' conception of teaching and level of engagement.

Table 15: Conception teaching and degree of SoTL engagement

	Degree of Engagement with SoTL					
CoT	***1***	***2***	***3***	***4***	***5***	***6***
Transmission	7	5	15	8	2	1
Thinking	10	16	11	24	5	1
Both	3	0	1	4	2	0
Unknown	0	0	2	1	0	0

Clearly, teachers who conceived teaching as helping students develop or change their conceptions (student centred) were more strongly represented in the sample (58%). One third had a transmission (teacher centred) conception. 10 respondents indicated that they felt both approaches were represented in their teaching. For some of the more student centred teachers, a shift from the transmission conception may have occurred, that was prompted by their scholarly activities in relation to learning and teaching – and that sustained their subsequent engagement. Certainly a greater proportion of staff who held the student-centred conception were engaged in investigations of learning and teaching (45% vs 29%). This suggests that facilitating this shift may engender attitudes conducive to SoTL.

Table 16 shows the degree of engagement in SoTL that respondents indicated that they would like to have two and five years subsequently.

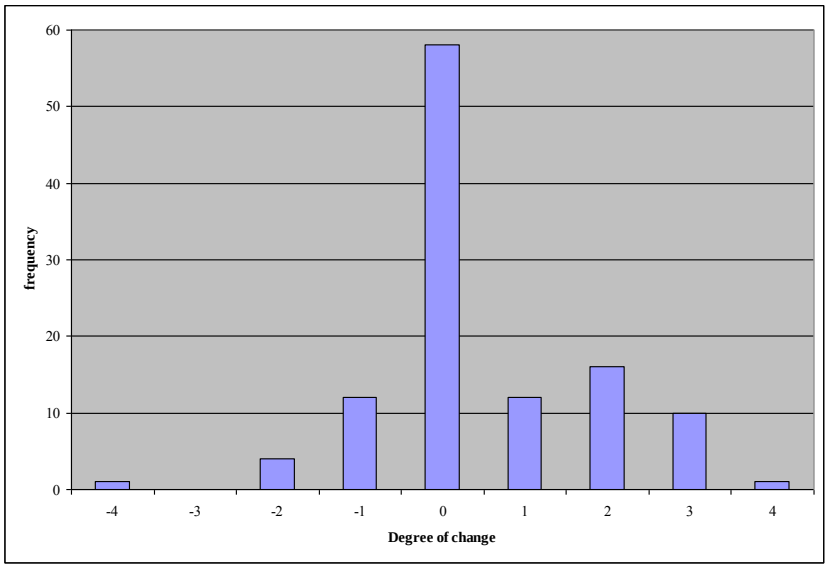
Table 16: Desired level of future engagement in SoTL

	Degree of Engagement with SoTL					
Situation	***1***	***2***	***3***	***4***	***5***	***6***
Now	20	21	29	37	9	2
In 2yrs	11	23	14	54	14	2
In 5yrs	7	16	14	71	6	2

Overall this data suggest a shift (a) towards activities associated with scholarly teaching (from level 1 to 2+) and, in turn, a movement from scholarly teaching activities (2 and 3) to activities associated with scholarship of teaching (from levels 2 and 3 to 4+). 71 respondents suggested they would like to be at position 4 in 5 years and they comprise 10 who would make that move from level 1, 14 from level 2, and 8 from level 3. However, there is no clear evidence of a concurrent concern to also communicate insights gained from personal investigations and a broadened reading agenda to colleagues who might subject them to peer review.

Table 17 shows the anticipated direction and degree of change in SoTL engagement envisaged by respondents as represented by the number of levels moved either 'up' the scale or 'down' the scale.

Table 17: Anticipated direction and degree of change in SoTL engagement over 5 years



Regression is anticipated by some respondents (n=17) and for approximately half of the sample (58), no change is contemplated. This pattern is also presented in Table 18.

Table 18: Anticipated direction and degree of change in SoTL engagement

	Anticipated degree of Engagement with SoTL in 5 years					
Current Engagement	***1***	***2***	***3***	***4***	***5***	***6***
1	**5**	3	0	10	1	0
2	0	**6**	0	14	0	0
3	2	5	**12**	8	1	0
4	0	1	2	**32**	1	1
5	0	0	0	5	**3**	0
6	0	1	0	1	0	**0**

The relationship between change in degree of engagement (as reflected in the number of levels respondents would wish to move from their present position) and years of teaching is shown in Table 19. There is no clear relationship evident.

Table 19: Years of teaching and anticipated direction and degree of change in SoTL engagement

	SoTL Engagement change now to 5years								
Years Teaching	***-4***	***-3***	***-2***	***-1***	***0***	***+1***	***+2***	***+3***	***+4***
0 – 4	0	0	1	3	2	0	2	1	0
5 – 9	1	0	0	0	6	3	8	1	0
10 – 14	0	0	1	1	10	1	3	3	0
15 – 19	0	0	1	4	10	3	1	0	1
20 – 24	0	0	1	2	12	1	1	2	0
25 +	0	0	0	2	18	4	1	3	0
Totals	1	0	4	12	58	12	16	10	1

Data was also gathered on the factors that respondents considered would "help you change position". (Note: this question should have been modified as it indicates that we anticipated that movement would invariably be in a positive direction, if not no change.) All of the responses obtained are provided in Appendix …

Four key factors that respondents considered would be helpful are:

More Time: Limited time was the factor identified most frequently as a significant obstacle. The time demands of other competing tasks and overall workload were a significant obstacle.

> *Time! - lots more time!*
>
> *Time! It is hard enough keeping up with my own practice discipline knowledge and research programme so that the education side often gets left behind.*
>
> *Less teaching – timetables are so full there is no time for research, reading the literature let alone the application into the classroom*
>
> *More time, research assistants so that I can spend more student focused time*
>
> *More time for actual research and writing in order to be able to formalize findings for presentation to others.*
>
> *More time to spend on this task. I have a sense that I will be able to focus on these tasks once I have completed my DHSc*

Five respondents indicated that their own postgraduate programmes limited their capacity to engage in SoTL activities and their intention to do once the programme had been completed.

> *Completing my PhD early would help me move to "D" sooner. At present my publications are necessarily PhD related. Early completion mainly depends on being given TIME (teaching relief).*

Scholarship priorities may also shift through a career.

> *My focus is on getting to grips with a significant research area. I do teaching well enough that it does not need any real focus at the moment.*

More Professional Development Activity and Opportunities: A number of respondents referred to various forms of professional development as avenues for enhancing engagement in SoTL. There some interesting comments on aspects of those professional development options

> *Attending seminars – rather than reading.*
>
> *Probably information (on-line or face to face seminars) on teaching and learning in general rather than on specific context based subjects*
>
> *Additional courses on teaching philosophy skills*
>
> *I would like to see the possibility of using the Centre for Educational and Professional Development (CEPD) short courses as part of qualifications for graduate certificates/diplomas*

The provision of "best practice" examples derived from the literature. Simply not enough time to read the literature. Can CEPD translate innovative findings into a more 'user friendly' abbreviated format?

More collegial interaction and support: The benefits of such support were acknowledged by a number of respondents and this is compatible with the notion of that SoTL occurs in the public domain and involves sharing with colleagues as well as obtaining their peer review

Informal exchanges enhance the ability to achieve B and D

Meeting with and discussing with other staff members what approaches they have taken and what has worked for them

More discussion with colleagues in my teaching discipline as to issues (trends, research, themes etc) that relate to teaching engineering to undergraduates.

On-going support, collegial collaboration – co-presenting / research. The continued development of a research group within my school.

Mentored support from CEPD and a small group facilitated by CEPD.

Going to workshops/seminars helps, but I wonder whether an education/teaching coach/supervisor/mentor might work better.

Maybe get scaffolding from the CEPD research person.

More support by colleagues and senior staff

As a specific area of support, (qualified) help with research was noted: "knowing how to do research, knowing how to turn my reading and self-inquiry into research that can be published, knowing where to publish." and "more pointers to educational research but it must be specific to the highly technical and mathematically challenging engineering topics I teach."

Two respondents observed that such support was not likely to be forthcoming from their department because "research on teaching/education is a very low priority in my department…. This is unlikely to change given the clinical nature of the programme", and "[I am] encouraged to focus on a discipline not teaching the discipline". The latter may be deemed a priority for an early career academic. Another respondent noted "recognition of research as important to their role" as a factor that would enable more engagement in SoTL.

More Institutional Support: there were a few instances of institutional factors that could be influential. These included appropriate incentives, time of teaching for those on a teaching pathway, more support by senior staff, and institutional workload recognition.

Cultural Shift

A more pervasive shift in orientation and culture was identified by one respondent who stated:

What would partly help is a widespread emphasis on the necessity for tertiary educators to also be researchers of their educational practices and even further, publishers of educational research in their discipline – this is a major shift of frame.

Factors that would support and hinder engagement in SoTL were revisited in the interviews and focus group sessions. The analysis of data revealed four categories of factors

a. Personal narrative: It became apparent that respondents had a perspective on personal attributes and capabilities that they felt they need to have before positive movement along the continuum of excellent teacher to scholarly teacher to scholar of teaching could occur. Effectively these were pre-conditions.

b. 'Pull' Factors: These factors would motivate teachers toward and into SoTl activities.

c. Drag Factors: These factors represented the hindrances to such activities.

d. Push factors: These are factors that either promote engagement in SoTL or deflect people away from it. Some factors may potentially have both effects (e.g. the Performance Based Research Fund scheme). (4a is described in the table below).

These influencing factors obviously accumulate and interact in complex ways. They may be internal or external to the teacher, be consonant or dissonant, more or less stable and vary in the extent to which they are open to teachers' influence or control. The complexity of influence and impact is represented in Figure 4.

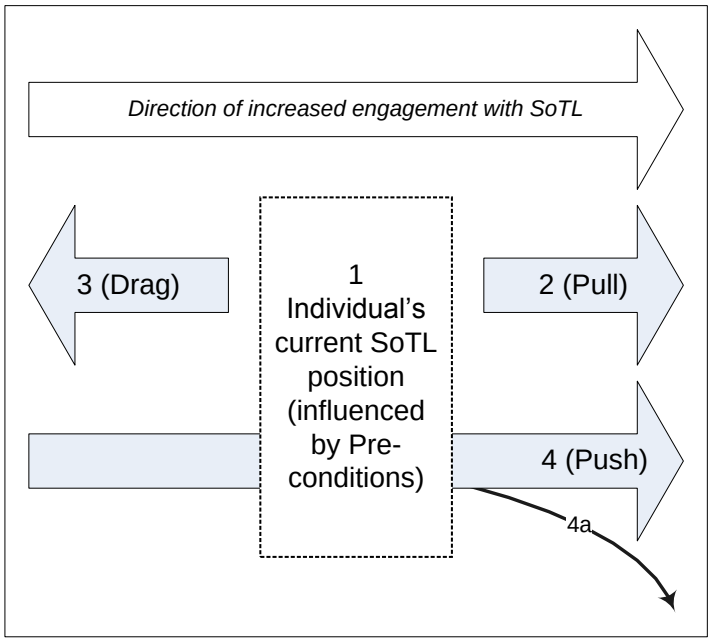


Figure 4: Categories of factors influencing SoTL engagement

The specific factors associated with these four categories are identified in Table 6.1.

Table 20: Factors that influence individual engagement in SoTL

1. Personal narrative (Internal – Pre-conditions)
A conditional place, factors need to be in-place before positive movement can take place. ▪ Life stage ▪ Career stage ▪ SoTL research confidence ▪ Personal perception of agency ▪ Confidence (for example skills set / sense of own questions) ▪ Comfort / capability (at plateau level to move on – conditional steps)
2. Pull factors – (External) Enablers
Internal Personal interest in a research area (stems from practice). External Search for evidence to support teaching, curriculum decisions / prove teaching strategy efficacy.
3. Drag factors (External) - Obstacles
Lack / absence of SoTL research culture/history (mentoring / energising effect of pairs or small groups) or culture of enquiry. ▪ Culture (non- value for teaching cf research existed prior to PBRF but exacerbated by PBRF)* ▪ Lack of time (set aside time, reduce teaching load) 'physical and mental time' Overload – shutdown* ▪ Conflicting priorities (especially teaching including preparation, assessment also administration, computer up-skilling)* ▪ Limited funding (seed funding) ▪ NZ psyche – confidence to ask questions / play on the world stage ▪ Notion of research not being of interest to a wide audience

- Publication delay
- Poor quality lack of immediate application for readings in SoTL of discipline (different standard of judgement for SoTL readings – immediate utility – if no use, all SoTL then judged as useless.
- Focus of disciplinary knowledge e.g. Demands of staying up to date with rapidly changing subject area knowledge
- Getting stuff off the ground – overcoming inertia
- Demands of proposal writing
- Ethics (delay, complexity of application process, negative experiences / negative perception

4. Push factors (External) – Obstacles

- PBRF (*4a* represents divergent push of discipline research) clarity about PBRF process *
- Postgraduate situation (allies with pull internal interest)

Factors marked with an * are those where a particularly high frequency of responses were recorded.

We note that in future research it would be helpful to construct rich case studies from such data.

The final set of data related to these factors was gathered at a SoTL Forum with AUT University staff, during which we reported on our findings, including the data previously summarized. The forum provided a further opportunity to have such factors identified. It also provided an opportunity for our colleagues to identify initiatives for supporting SoTL that would have immediate relevance to AUT University and their own teaching, learning and research contexts

Ethics

The ethics process is perceived by many as somewhat "long winded, picky and obstructive".

Suggestions:

- ✓ Streamline ethics decision making process for SoTL research to create an environment of trust.
- ✓ Provide support to assist staff in SoTL ethics applications

Time

The teaching and administration time demands at AUT University hinder any research initiatives.

Suggestions:

- ✓ Use money as the resource to buy time for SoTL research.
- ✓ Provide CEPD administered and monitored SoTL research funding source of money.

Expertise and Employment

Suggestions:

- ✓ Every faculty should employ on the basis of whether employees can help others learn.
- ✓ In every Individual Development Plan (IDP) discussion ask teaching staff about their commitment to enhancing teaching scholarship and practice.

Research Funding

Staff felt that some staff lacked funding application expertise and that non-degree teaching staff were not given support to research the teaching of their papers / programmes.

Suggestions:

- ✓ Provide practical support to staff when they are applying for SoTL research funding.
- ✓ Encourage staff in any discipline of programme level to apply for SoTL research funding.

Policy

Many barriers to SoTL research were perceived, including discipline research and transmission teaching bringing individuals the highest rewards. SoTL and teaching generally were not valued in the same way as discipline research.

Suggestions:

- ✓ Provide support to staff when they are applying for SoTL research funding.
- ✓ Develop specific AUT University ways of rewarding SoTL outputs, especially those that are not 'discovery' outputs.
- ✓ Find ways of factoring research application writing into workloads.
- ✓ Recognise SoTL work as a part of the promotion and hiring process.
- ✓ Include policy statement about value of SoTL work in University investment plan.

Excellence in Teaching Award Recipients as Resources

Excellence award winners are an under-utilised resource. Ways need to be identified by which current and past excellence award winners can assist in the SoTL process.

- ✓ Develop a system where new teachers observe and reflect upon the practices of award winners.
- ✓ Display award winners' posters prominently in the University.
- ✓ Provide more opportunities to have conversations about teaching.

General Ideas

Suggestions:

- ✓ Hold more Forums about education, learning and teaching.
- ✓ Endeavour to create SoTL learning communities (by discipline or ethnicity e.g. SoTL work by staff interested in Chinese (staff and student) dimension to AUT University).
- ✓ Lobby to change PBRF process which deferentially rewards SoTL work compared with 'pure' discipline research.

- ✓ Universal equity across AUT University in all disciplines for research i.e. time (half day per week or 1 day fortnight of dedicated work time to achieve SoTL work resulting in its application and/or publication.
- ✓ Ensure faculty management staff support staff in SoTL work.
- ✓ CEPD facilitate cross-discipline groups of teachers discussing and researching "difficult' areas that students face in learning in the particular discipline. CEPD assist the teachers to write up their learning/research/to become scholars of teaching/learning (see De-coding the Disciplines).
- ✓ Include AUT University staff SoTL research into a publication (An AUT University journal perhaps or section in AUT University News).
- ✓ Find ways to reward a SoTL approach to teaching and learning.
- ✓ Provide support mechanisms, mentors for example, for staff who wish to engage in SoTL work.
- ✓ Allow staff to use IDP funds to attend SoTL conferences, or SoTL strands in discipline conferences.
- ✓ Develop SoTL retreats for staff.
- ✓ Promote SoTL resources available via the library.
- ✓ Develop an AUT On-line SoTL site. Facilitate SoTL discussion groups, e-portfolios, IT in teaching and learning ideas, etc.
- ✓ Develop AUT University annual SoTL conference (peer reviewed, poster sessions, etc).

Discussion

The data summarized above provides a helpful snapshot of the place of SoTL in the lives of a sample of New Zealand university teachers, their aspirations in relation to future engagement in SoTL and a detailed account of factors that are likely to promote, support and reward that engagement.

It emphasizes the need for teachers to believe that scholarship in relation to teaching and learning is a beneficial, if not necessary, element of the professional practice of teaching. SoTL should not be a prescribed activity.

It conveys a sense of the complex and at often conflicting everyday environments that university teachers work in and that can make pursuit of SoTL problematic on a practical front. The nature of those environments with respect to the influences that bear on teachers have been highlighted in several recent studies, including two underway at AUT University (Haigh & Naidoo, 2007; Jiao, 2008).While the helps and hindrances identified resonate with those in other comparable studies, they also reinforce the need to rake into account the national, institutional, faculty, discipline etc. contexts in which teacher teach. The stock-taking tools used in this, and other similar investigations, could be used for this purpose.

The data also indicates initiatives that could pull and push teachers towards SoTL and enable their movement along the excellent to scholarly to scholar continuum. Those initiatives would need to be aligned with the distinctive features of teachers' contexts. Achieving that alignment in one New Zealand University was the original purpose for this investigation. Thus, while we can provide a smorgasbord of possible initiatives based on our own research, that of others, they need to be carefully chosen for particular contexts. A related issue to

consider is the aspirations for teachers in relation to SoTL for individual teachers, a Faculty, a discipline/profession. For example, what proportion of teachers might one ideally or realistically expect to achieve scholar of teaching and learning status.

Objective Five:

Identify criteria that can be used to evaluate the impact of Scholarship of Teaching and Learning initiatives on teaching and student learning.

Data:

The data gathered in relation to this objective was drawn from two sources:

- The literature review that included a section on *Evaluating the impact of SoTL and SoTL-enhancing initiatives: What indicators?*

- the decisions that we made in relation to the design of this investigation. Some of the data gathered represented impact indicators for initiatives that are already in place within the three universities. In particular, that data concerned the status of staff in relation to a SoTL agenda and evidence of SoTL work as represented in published pedagogical research and other self-reports of SoTL activity. The presence of certain initiatives (policies, provisions, programmes and specific activities) also represents impact of decisions to promote and support SoTL.

The literature review and our own reflections indicated that a broad scope of indicators needs to be considered and we endorse the framework offered by Ciccone (2008). We also support the view that the primary indicator should be impact on student learning. As previously noted, we acknowledge that tracing and verifying the impact of SoTL-related initiatives and activities on student learning can be very challenging.

PART THREE: RECOMMENDATIONS AND SUGGESTIONS

We offer recommendation and suggestion for three groups of stakeholders in the SoTL enterprise:

National Policy Makers (Government Bodies)

1. Adopt the concepts (and terms) of scholarly teachers and scholars of teaching and learning when defining teachers who have the desirable attributes for teaching in higher education contexts.
2. Highlight the international currency and significance of these concepts.
3. Emphasize that being a scholarly teacher and/or a scholar of teaching are ways of fulfilling the legislative mandate for an interrelationship between research (and learning) and teaching.
4. Ensure that pedagogical research has equivalent status to all research on other phenomena.
5. Acknowledge that SoTL activities, that do not meet the criteria that define research, are likely to be inherently valuable, not only for the individual teacher and their students, but to the wider community of tertiary teachers. They are important activities that are essential to an agenda of continuing enhancement of teaching and learning in higher education contexts.
6. Recognize the priority need for SoTL work that addresses learning and teaching matters distinctive to New Zealand higher education contexts.
7. Ensure that provisions are in place and maintained to ensure effective promotion, support and reward for SoTL (e.g. Ako Aotearoa; National Teaching Excellence Awards, funding sources for SoTL).
8. Ako Aotearoa to actively promote SoTL, and become a repository of resources that can assist teachers to understand the concept, its implications for their teaching and to engage in SoTL activities.
9. Ako Aotearoa to provide a repository of resources that will assist institutional and faculty leaders to select and plan initiatives that will support SoTL.

Discipline and Profession Groups

1. Recognize and promote the value of building, though SoTL, a discipline/profession relevant learning and teaching knowledge base.
2. Maintain familiarity with initiatives within the discipline internationally to support SoTL and look for opportunities to establish international collaborations.
3. Confirm the (equivalent) status pedagogical research in the discipline.
4. Endorse, establish, publicize and support a variety of fora and publications for the dissemination of SoTL outcomes.
5. Where appropriate, establish mentor/coaching schemes for teachers getting underway with SoTL. These may involve links with experienced educational researchers/scholars of teaching and learning.

6. Make use of the infrastructure provided by Ako Aotearoa to facilitate discipline and profession focused SoTL activities.

Institutional and Faculty Academic Leaders

1. The recommendations above are all relevant to Institutional and Faculty academic leaders.
2. Clarify (though dialogue) the meanings that are to be associated with the concepts of scholarly teaching and the scholarship of teaching and learning, and the consequential implications for areas of policy such as research/scholarship, teaching – research nexus, professional development, career-related decision-making (appointment, promotion, performance goal-setting and review, rewards).
3. Using framework and methods such as those used in this project, undertake periodic reviews of the actual status of SoTL to determine whether rhetoric and reality align.
4. Seek information about the initiatives that can be taken to promote, support and reward SoTL at institutional and faculty levels.
5. Identify appropriate 'impact criteria' for particular initiatives and systematically monitor impacts.

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APPENDIX ONE

Boyer's Four Scholarships

In a seminal and frequently cited publication - *Scholarship Reconsidered: Priorities of the Professoriate* - Boyer presents a thought-provoking analysis of the concept of scholarship and associated implications for the work of the academic. Central to his views is the thesis that "the time has come to move beyond the tired old teaching versus research debate and give the familiar and honourable term scholarship a broader and more capacious meaning, one that brings legitimacy to the full scope of academic work." That elaborated meaning accommodates four distinct, but interrelated, scholarships:

Scholarship of Discovery:

This comes closest to what is usually meant by 'basic research'. It is scholarship that involves "commitment to knowledge for its own sake, to freedom of inquiry and to following, in a disciplined fashion, an investigation wherever it may lead" (p.17). Such scholarship "contributes not only to the stock of human knowledge but also to the intellectual climate of a college or university. Not just the outcomes, but the process, and especially the passion, give meaning to the effort" (p.17).

Scholarship of Integration:

This is "serious disciplined work that seeks to interpret, draw together, and to bring new insight to bear on original work" (p.19). Giving meaning to isolated facts, putting such facts into perspective, fitting research into larger intellectual patterns, making connections across the disciplines, placing the specialities in larger contexts are all activities that Boyer associates with this mode of scholarship. "It is through connectedness that research is ultimately made authentic" (p.19).

Scholarship of Application:

This work, which also requires rigour and accountability, constitutes service to others which calls for the application of special fields of knowledge and associated professional skills. In the course of this service, new understandings may also arise as "theory and practice vitally interact and one renews the other" (p.23). Boyer believes that "such a view of scholarly service - one that both applies and contributes to human knowledge - is particularly needed in a world in which huge, almost intractable problems call for the skills and insights that only the academy can provide" (p.23).

Note: Boyer (1996) subsequently substituted the term engagement for application.

i.e.

> .... The academy must become a more vigorous partner in the search for answers to our most pressing social, civic, economic and moral problems, and must reaffirm its historic commitment to what I call the scholarship of engagement."
>
> The scholarship of engagement "means connecting the rich resources of the university to our most pressing social, civic, and ethic problems, to our children, to our schools, to our teachers, and to our cities. Campuses would be viewed by

both students and professors not as isolated islands, but as staging grounds for action.

Scholarship of Teaching:

Boyer views teaching as a scholarly enterprise because the “work of the professor becomes consequential only as it is understood by others” and teaching serves to both educate and entice future scholars. “It is inspired teaching that keeps the flame of scholarship alive.” (p.24).

APPENDIX TWO

Scholarship of Teaching and Learning Publications

Here is a list of journals that contain literature on tertiary education, learning and teaching. They fall into four categories:

- General,
- Higher Education – General,
- Higher Education – Subject/Discipline Specific
- Higher Education – SoTL Specific

General

There are many journals in the social sciences (in particular, Education) that include articles on tertiary education, learning and teaching. Examples are:
American Educational Research Journal
Assessment in Education: Principles, Policy and Practice
Curriculum Studies
Curriculum Inquiry
International Journal of Life-Long Education
International Journal of Qualitative Studies in Education
Journal of Adult and Continuing Education
Journal for Open and Distance Education and Educational Training
Journal of Philosophy of Education
Studies in the Education of Adults
The Journal of Experimental Education
Review of Educational Research
The Journal of Educational Research

Cognition and Instruction
Cognitive Psychology
Contemporary Educational Psychology
Educational Psychology
Instructional Science
Journal of Adult Development
Journal of Educational Psychology
Language and Cognitive Processes
Learning and Instruction
Memory and Cognition
The British Journal of Educational Psychology
Theory and Psychology

Australasian Journal of Educational Technology
British Journal of Educational Technology
Computers and Education
Educational Technology
Electronic Learning

Journal of Computer Assisted Learning
Journal of Research on Computing in Education
Interactive – Learning with Information Technology
Interactive Learning Environments

Asia-Pacific Journal of Teacher Education
Distance Education
Teaching and Teacher Education
Teachers and Teaching: Theory and Practice
The Journal of Classroom Interaction (in storage)
The Australian Journal of Education
The Australian Journal of Teacher Education
The Journal of Teaching Practice

Higher Education – General

Active Learning in Higher Education
Assessment and Evaluation in Higher Education
Australian and New Zealand Journal of Vocational Education Research
Canadian Journal of Higher Education
Christian Higher Education
Chronicle of Higher Education
College Composition and Communication
College Teaching
European Journal of Vocational Training
Higher Education
Higher Education Perspectives
Higher Education Policy
Higher Education, Research and Development
Higher Education Review
Higher Education Quarterly
Innovations in Education and Teaching International
Innovative Higher Education
Interdisciplinary Journal of Problem-based Learning
International Journal for Academic Development
International Journal of Sustainability in Higher Education
International Journal of Teaching and Learning in Higher Education
International Journal of Vocational and Technical Education
International Journal on E-Learning
Internet and Higher Education
Journal of College Student Development
Journal of College Student Retention
Journal of Computing in Higher Education
Journal of Effective Teaching
Journal of Excellence in Higher Education
Journal of Faculty Development
Journal of Further and Higher Education
Journal of Graduate Teaching Assistant Development
Journal of Higher Education
Journal of Higher Education Policy and Management
Journal of Marketing for Higher Education
Journal of Online Learning and Teaching
Journal of the First Year Experience and Students in Transition

Journal of University Teaching and Learning Practice
Journal of Vocational and Technical Education
Journal of Vocational Education and Training
Journal of Vocational Education Research
Journal on Excellence in College Teaching
Learning and Teaching in Higher Education
New Directions for Higher Education
New Directions for Student Services
New Directions for Teaching and Learning
Pedagogy: Critical Approaches to Teaching Literature, Language, composition and Culture
Perspectives: Policy and Practice in Higher Education
Planning for Higher Education
Practical Experiences in Professional Education
Quality in Higher Education
Reaching Through Teaching
Research in Higher Education
Research in Post-Compulsory Education
Review of Higher Education
Studies in Higher Education
Teaching in Higher Education
Tertiary Education and Management
The International Journal for Academic Development
The Journal of College Student Development
The New Academic

Higher Education – Subject/Discipline Specific

There are a number of subject/discipline-specific journals. Some of the following include articles from the pre-tertiary sectors (Primary, Secondary).
Academic Medicine
Accounting Education
Advances in Health Sciences Education
Advances in Physiology Education
Art, Design and Communication in Higher Education
Arts and Humanities in Higher Education
Art Education
Biochemistry and Molecular Biology Education
Bioscience Education
British Journal of Music Education
Cell Biology Education
Chemical Educator
Chemical Engineering Education
Chemistry Education Research and Practice
College Composition and Communication
Communication Education
Computer Applications in Engineering Education
Computer Science Education
Computers and Education
Discourse: Learning and Teaching in Philosophical and Religious Studies
Education in Chemistry
Educational Studies in Mathematics
Engineering Education
Environmental Education Research

European Journal of Dental Education
European Journal of Engineering Education
Focus on Health Professional Education: A Multi-disciplinary Journal
Geographical Education
Gerontology and Geriatrics Educator
Global Journal of Engineering Education
Health Education Research
International Journal of Art and Design Education
International Journal of Construction Education and Research
International Journal of Electrical Engineering Education
International Journal of Engineering Education
International Journal of Mathematical Education in Science and Technology
International Journal of Mechanical Engineering Education
International Journal of Marketing Education
International Journal of Multicultural Education
International Journal of Music Education
International Journal of Science Education
International Journal of Science and Mathematics Education
International Research in Geographical and Environmental Education
International Review of Applied Linguistics in Language Teaching
International Review of Economics Education
Issues in Accounting Education
Journal in Statistics Education
Journal for Research in Mathematics Education
Journal of Accounting Education
Journal of Aesthetic Education
Journal of Agriculture Education
Journal of Applied Research for Business Instruction
Journal of Architectural Education
Journal of Art and Design Education
Journal of Biological Education
Journal of Business Education
Journal of Chemical Education
Journal of College Science Teaching
Journal of Computers in Mathematics and Science Teaching
Journal of Continuing Education in Nursing
Journal of Continuing Education in the Health Professions
Journal of Criminal Justice Education
Journal of Dental Education
Journal of Education for Business
Journal of Economic Education
Journal of Engineering Education
Journal of English for Academic Purposes
Journal of Environmental Education
Journal of Financial Education
Journal of Food Science Education
Journal of Geography in Higher Education
Journal of Geoscience Education
Journal of Health Administration Education
Journal of Hospitality, Leisure, Sport and Tourism Education
Journal of Informatics Education Research
Journal of Information Systems Education

Journal of Information Technology Teaching
Journal of Legal Education
Journal of Legal Studies Education
Journal of Management Education
Journal of Marketing Education
Journal of Moral Education
Journal of Nutrition Education and Behaviour
Journal of Nursing Education
Journal of Physical Education, Recreation and Dance
Journal of Planning Education and Research
Journal of Political Science Education
Journal of Postgraduate Medicine
Journal of Professional Issues in Engineering Education and Practice
Journal of Research in Music Education
Journal of Research in Science Teaching
Journal for Research in Mathematics Education
Journal for Research in Mathematics Teaching
Journal of Research in Science Teaching
Journal of Science Education
Journal of Social Work Education
Journal of Teacher Education
Journal of Teaching in International Business
Journal of Teaching in Social Work
Journal of Teaching in Travel and Tourism
Journal of Teaching Physical Education
Journal of Teaching Writing
Journal of Technology Education
Journal of Veterinary Medical Education
Journalism and Mass Communication Educator
Labour Education
Language Learning Journal
Language Teaching
LATISS - Learning and Teaching in the Social Sciences
Law Teacher
Mathematical Thinking and Learning
Mathematics and Computer Education
Mathematics Education Research Journal
Mathematics Teaching
Medical Education
Medical Teacher
Nurse Educator
Perspectives: Teaching Legal Research and Writing
Pharmacy Education
Physics Education
Physics Teacher
Psychology: Learning and Teaching
Review of Research in Nursing Education
Research in Drama Education
Research in Science and Technological Education
Research in the Teaching of English
Schole: A Journal of Leisure Studies and Recreation Education
Statistics Education Research Journal

Studies in Art Education
Teaching and Learning in Medicine
Teaching and Teacher education
Teaching Business Ethics
Teaching Educational Psychology
Teaching English as a Second Language or Foreign Language
Teaching Ethics
Teaching Geography
Teaching History: A Journal of Methods
Teaching of Psychology
Teaching Philosophy
Teaching Sociology
Teaching Statistics
Teaching Theology and Religion
The Accounting Educators Journal
The Chemical Educator
The Journal of Legal Studies
The Health Educator
The History Teacher
The Law Teacher
The Physical Educator

Higher Education – SoTL Specific

Journal of Scholarship of Teaching and Learning (JoSoTL): a forum for the dissemination of the Scholarship of Teaching and Learning in higher education for the community of teacher-scholars. The journal which is published under the auspices of the International Society for the Scholarship of Teaching and Learning (ISSOTL), promotes SoTL investigations that are theory-based and supported by evidence. JoSoTL's objective is to publish articles that promote effective practices in teaching and learning and add to the knowledge base.

The journal is designed to encourage all instructors to engage in the discussion of the Scholarship of Teaching and Learning, and to become involved in the sharing of knowledge and learning about the teaching-learning process. Any report about an investigation into what works (or doesn't work) for a particular teaching-learning context will be considered for publication. Those submissions that include reflective commentary about the result of the investigation will be considered of greater value to our readership and more appealing for publication. The journal shall also consider submissions that offer opinion, thoughtful reflection, commentary, or theoretical ideas related to SOTL

http://www.iupui.edu/~josotl/

Note: ISSOTL also publishes The International Commons, a newsletter which contains a range of articles, announcements, brief articles and reports etc.

International Journal for the Scholarship of Teaching & Learning: an open, peer-reviewed, international electronic journal published twice a year by the Center for Excellence in Teaching at Georgia Southern University. Publishes articles, essays, and discussions about the scholarship of teaching and learning (SoTL) and its applications in higher/tertiary education today. All submissions undergo a double-blind peer-review process. The Editorial Review Board of IJ-SoTL is strong and international in scope, and the goal is for submissions, published papers, and the readership to be truly international.

http://www.georgiasouthern.edu/ijsotl/

MountainRise: an open, peer-reviewed, international electronic journal published twice a year by the Coulter Faculty Center for Excellence in Teaching & Learning at Western Carolina University

http://mountainrise.wcu.edu/