The Role of SoTL in Classroom Innovation

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Abstract

The Scholarship of Teaching and Learning (SoTL) is being promoted as an activity for teaching-focused academics in the UK. However, support for SoTL is not a priority for most institutions, and formal provision for such support may not extend beyond the postgraduate certificate in higher education that is offered for new academic staff. This paper examines the experiences of SoTL of a group of twenty-one Life Sciences academics from a range of UK universities. It explores the role that SoTL has to play in developing classroom innovation in a structured and scholarly manner, and the consequences to both teaching staff and students, if SoTL is not supported as an academic activity throughout the careers of teaching-focused academics.

Keywords: faculty development, scholarship of teaching and learning, self-reflection

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Introduction

The Scholarship of Teaching and Learning (SoTL) (Boyer, 1990; Glassick, Huber, & Maeroff, 1997; Shulman, 2011) is being promoted as a scholarly activity for teaching focused academics in the UK. However, the dominant discourse in higher education (HE) in the UK supports research, while teaching and learning is perceived to take second place within the academy. There has been a series of initiatives and policy reports which have sought to address this: the Dearing Report (1997) and Browne Report (2010) both sought to promote a postgraduate certificate in teaching and learning in higher education (PGCert) as a standard qualification for teachers in HE.

In addition, the Higher Education Academy (HEA) offers a professional recognition scheme through its UK Professional Standards Framework (*The UK Professional Standards Framework for teaching and supporting learning in higher education*, 2011). Both the number of academic staff holding a PGCert and the number of Fellows of the HEA are required as Key Information Sets ('About Unistats - Unistats', n.d.) to help inform students when they make their decisions on which universities to apply to.

Accordingly, the introduction of a PGCert and the increase in Fellowships through the HEA have encouraged academics, particularly those with a teaching

focus, to develop their engagement with, and understanding of SoTL. However, the support that is offered to academic staff often falters post-PGCert. Communities of Practice (Wenger, 1998; Wenger & Wenger-Trayner, n.d.) may have a part to play in offering support to Teaching Focused Academics in developing their engagement with SoTL post PGCert.

Models of Scholarship

In order to understand how SoTL can help with classroom innovation, and the importance of support for SoTL activities post-PGCert, it is useful to consider different models of scholarship. The first of these models is that proposed by Trigwell, Martin, Benjamin & Prosser (2000). This model outlines four dimensions of scholarship; *Informed, Reflection, Communication and Conception*. Within each dimension are four levels of engagement, outlined in Table 1.

Table 1 Trigwell et al's (2000; p.163) Model of Scholarship

Level	Informed	Reflection	Communication	Conception
1	Uses informal theories of teaching and learning	Effectively none, or unfocused reflection	none	Sees teaching in a teacher-focused way
2	Engages with the literature of teaching and learning generally		Communicates with departmental/faculty peers (tearoom conversations; departmental seminars)	
3	Engages with the literature; particularly the discipline literature	Reflection-in-action	Reports work at local and national conferences	
4	Conducts action research, has synoptic capacity and pedagogic content knowledge	Reflection focused on asking what do I need to know about x here, and how will I find out about it?	Publishes in international scholarly journals	sees teaching in a student-focused way

Trigwell et al's (2000) model outlines the relatedness of understanding pedagogic literature and education theory, reflection on one's practice, communication of the evaluation of research on practice, and the conception of teaching.

A second model of scholarship that is useful to examine concerning the development and integration of SoTL is Antman and Olsson's (2007, p. 288) model of theory and practice (Figure 1).

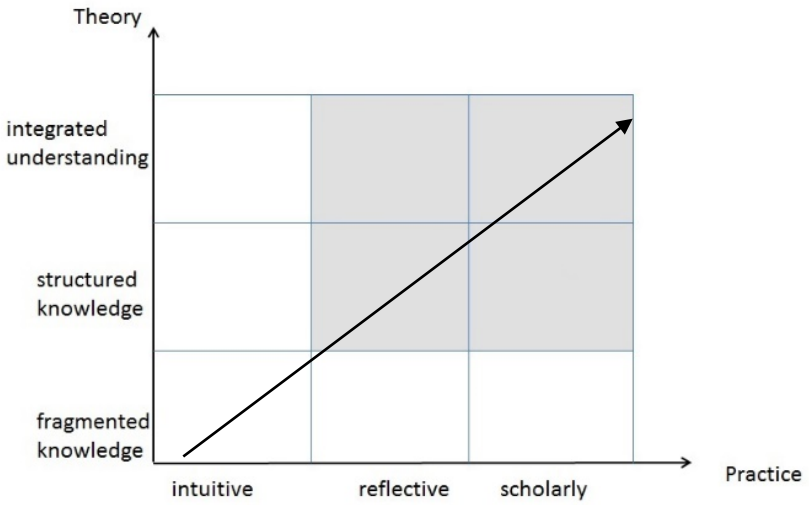

Figure 1 Antman & Olsson's (2007, p.288) model of scholarship (adapted)

Antman & Olsson's model concentrates on the relationship between Theory and Practice, with the trajectory from bottom left to upper right representing the optimum developmental journey where an integrated understanding and scholarly practice are achieved.

This paper sets out to explore teaching-focused academics' (TFA) engagement with SoTL, utilising the models of Trigwell et al (2000) and Antman and Olsson (2007). Twenty-one Life Science academics in universities around the UK were interviewed, and asked about their engagement with SoTL. TFAs' responses were analysed, and categorised into three groups.

Group 1: Novice SoTL Scholars

Group 1 is composed of some early career TFAs who have just recently completed, or are in the process of completing their PGCert. They are all female, and are likely to have made the decision to switch from a postdoctoral research career, into teaching and learning in HE. Group 1 TFAs derive their community of practice locally.

I think that the more that you get to know the odd person, you start, you know you go over and say hi to them and they're with a circle of people and also they introduce you to other people, em, and then I think because I teach not just within… Life Sciences but in nursing as well, so I go to things like the Teaching Committee meetings for that, and that's a really good way that you meet people again outside your immediate circle. So, yeah, I think there's actually a lot of networking at [institution].

Group 1 TFAs have an awareness of pedagogic literature, and are already involved in small-scale pedagogic research projects, usually as part of their PGCert.

So I thought, I will go and I will read some papers, so I did and it changed my focus of what I was going to do for my PGCAP. So I would say, yeah, amazingly enough, never thought I'd say it about my PGCAP but literature informs what I do (laughs) in terms of teaching! I mean, it's not, it's definitely not the highbrow level, no, it's at a level that is, you know, fairly basic, but it's at a level!

As a result of carrying out small-scale research projects, Group 1 TFAs also present their work at local events.

I'm going to this little teaching conference we've got here where I'll present some of the ideas. They'll be presented in terms of – this is what we're planning to do, we haven't actually done it yet, but then the intention is to then, once we've got it up and running, to share those experiences with others and try to get more people engaged.

Presenting at these conferences gives Group 1 TFAs confidence in what they are doing, and strengthens their sense of community.

Group 1 TFAs, probably as a result of their PGCert, are developing a reflective, student-centered approach to learning.

So I guess it makes you a little bit more sympathetic, because every day you get inundated with emails from students so you, you maybe get to appreciate the inner workings of a student's head, in terms of what's going on and you're the one they contact if things aren't going right with the course.

In summary, and with reference to Trigwell et al's (2000) model of scholarship, Group 1 TFAs engage with the literature of teaching and learning generally (Informed dimension 2), communicate work at local events (Communication dimension 2/3), reflect on their practice and how to improve it (Reflection dimension 3/4) and are working towards a student-centered conception of teaching and learning (Conception dimension 2/3).

Group 2: Established SoTL Scholars

Group 2 is composed of mid- and late-career TFAs, both male and female, who have ten or more years of teaching experience in HE. They are well established in their careers and many have senior positions within their institutions. Only some of the Group 2 TFAs have completed a PGCert, as they may have begun their teaching careers before the outcomes of the Dearing Report (1997) were fully implemented. However, this group is proactive in their development within teaching and learning, with several of them indicating completion of a Masters or Doctorate in Education.

Group 2 TFAs derive their community of practice both internally and externally. For some, their primary community of practice is with a group of like-minded colleagues, who they may have known since their early days as a teacher in HE.

It was one of the most useful things because when I first arrived the people I met there in that first week or so, they're people I still talk to. And what's useful there is that you find that the problems are similar no matter what your discipline. So it doesn't matter if you're an English lecturer or a psychology lecturer, or an engineer, you're confronted with the same problems—how to improve learning, and how to lecture in a full lecture theatre and how to do small group teaching

Group 2 TFAs are also likely to extend their communities of practice beyond their immediate context, the most popular external community of practice being supported by the Higher Education Academy's Centre for Bioscience.[1]

Oh, it's huge, I mean, I, it's, I don't think I could have got as far as I had, had I not kind of said I want to be a bioscience rep, having met yourself and the other people, you know, [person] especially as well, [person], you know, working with those sorts of

[1] It should be noted that the Centre for Bioscience closed in 2010, although the community is still alive.

people very, that whole sort of subject area, that's been huge, and I think I value that massively.

The external community of practice is seen as most important for Group 2 TFAs in extending and supporting their development.

Group 2 TFAs exhibit an interesting behavior with regards to engagement with pedagogic literature. They confine themselves to disciplinary pedagogic literature, and avoid mainstream literature and theory. They are aware of this behaviour, explaining that they do it because of a general fear of the language used in pedagogic literature, and distancing themselves from the humanities, as they see it as foreign to them.

With terror, I think, is the answer. I, things like Bioscience Education, fantastic, and I will sort of drop into that occasionally and have a look and pick up some good ideas. The more sort of heavy duty pedagogic literature, I find pretty heavy going myself, and I think that's partly, and I think this was sort of reflected when we did the introduction to teaching and learning type course that everybody has to do, and to my mind there was a definite split between the sciences and the humanities, you know, for the humanities, ped-r speak came very naturally, because I suppose it's qualitative rather than quantitative research and a lot of the terminology was familiar to them.

Despite this self-imposed restriction on engagement with literature, Group 2 TFAs are prolific with both their pedagogic research projects, and communication of the results. They contribute to national and international conferences, write peer-reviewed journal papers for discipline-specific pedagogic journals, and also contribute to and write SoTL books.

So, I wrote a book, for example, on science communication, and that took up a lot of time, and I've got a large [funding body] *grant now which is to develop school/university partnership programmes and there's research in that, we've got some interesting data that's just come through about what school children consider research to be.*

The other talks at the London international conference for the Society of Learning and Teaching. Eh, and got a book chapter out of that, a paper there, and so that's the London one, but there's also the international scholarship society for teaching and learning, that was held in Liverpool arena a couple of years ago.

In terms of reflection on practice, TFAs are well-developed in this area, asking questions about the evaluation of their practice, and how it affects student learning.

It was all just about making it better and easier for them to learn, and then it started to become, well, how do I know this is having any impact? How do I know that they're actually learning any better or any more?

Similarly, Group 2 TFAs' conception of teaching is very much student-centred, representing a development over time, compared to early-career TFAs.

I can see this from the perspective of the student and so I can sympathise with the students I can sympathise when they get bored and I can sympathise when it just gets too fast, or when it's too much, and so I try to design my teaching from the students' point of view. I'm not sure I always get it right, obviously, but that's a point where I'm coming from, and normally it works quite well.

In summary, Group 2 TFAs' engagement with SoTL (Trigwell et al., 2000) has developed over time, with engagement with literature; particularly the discipline literature (Informed dimension 3), publishing in scholarly journals and books, and reporting at national conferences (Communication dimension 3/4), reflection at Level 4, and a student-centred conception of teaching and learning (Conception dimension 4).

Group 3: Missing SoTL Scholars

Group 3 is composed of Early career TFAs who are not engaging in a positive way with their PGCert, or Late career TFAs whose experience with teaching and learning may not have been supported by formal qualification. The unifying trait of this group is that they have not been exposed to, and do not engage with SoTL in a meaningful way. For early career TFAs the reasons cited for lack of engagement is time available or pressure of workload, while for Late career TFAs, only one of them completed a PGCert in the latter part of their career out of choice, while others were exempt from completing a PGCert in lieu of their years of experience of teaching in HE. However, the lack of experience of formal qualification means that this group has less active SoTL participation than equivalent TFAs in the other two groups.

Group 3 TFAs are less likely to be involved with a community of practice, although for the individuals who are part of a community of practice, this may be local or external.

At those conferences, you meet colleagues that you get in touch with, em, specially on the ethics, because I teach bioethics, so I've got a few contacts there, and people at [institution]*. But not many, I must admit.*

Group 3 TFAs have limited engagement with pedagogic literature. For the early career TFAs this may be because of pressure of workload, which results in a lack of time to fully engage with the PGCert, which holds them back in their development.

I think it's a pity that we're being asked to do this under these circumstances. Do the PGCert. Because I'm not at my full capacity with it, because I'm just seeing it as a tick box. So what's happening is, it's a bind for me, so I'm actually starting to resent it. And that, so I'm not learning it. I'm resenting it. Because I don't have time, but I don't know what it's like for people who teach in other [areas of the university].

For late-career TFAs, there is a range of experience of pedagogic literature, from none (Informed dimension 1), to engaging with the literature in general terms (Informed dimension 2).

I don't really know what it [SoTL] *means*.

I don't to be honest, base it much on theory. It's very much just what works.

Despite the variation in engagement with pedagogic literature, Group 3 TFAs still engage in a variety of projects; however, some of these projects are more about the practical development of learning tools and resources. E-learning, in particular, is popular with this group of TFAs, however, they often find themselves unsupported in their endeavours.

I'm frustrated in part because I've tried to initiate a number of progressive teaching advances which have fallen by the wayside, because someone, somewhere in senior administration has not warranted it or provided the money to do so. [Late career TFA]

Well, right now I feel unsupported, and trying to promote something that's going to enhance teaching and enhance learning, was just, I know, and that's to do with the innovative, interactive use of software to teach, where you can convert it into a quiz where they get instant feedback. And again, this study that I'm doing, it's my second year case study, is my use of the [technology] *in teaching and learning and assessment.* [Early career TFA]

This Group, again, varies in the routes of public communication that they engage in. For some, there is very little (Communication dimension 1), while a few present at teaching and learning conferences (Communication dimension 3) and write some discipline-specific case studies (Communication dimension 3), although the level is not high impact enough to be justified as Communication dimension 4.

I do find it useful to attend meetings provided by the learning and teaching department here, also the higher education academy, in particular bioscience group, and you then go to these, and you discuss what's going on, this can give you ideas, you

can then go and try these ideas out on your own students if you feel, and you have time and you're organised enough, you can then propose to do a study, you would then get ethical approval and you could then write up a case history or a more detailed paper if you've got enough energy or time, time's the most crucial factor here.

Group 3 TFAs, like the other two groups, reflect on their teaching (Reflection dimension 3). However, a lack of experience with pedagogic literature means that their reflections quite often result in frustration, as they search for answers to their teaching and learning problems. Their reflections also highlight a more teacher-centred approach to their conception of teaching (Conception dimension 2/3).

I wish I was better. I wish I was a better teacher. I would like to be more, able to write a lecture without spending weeks and weeks thrashing about like a cat in a sack, you know, what to write about, really.

In summary, Group 3's engagement with SoTL in terms of engagement with literature, and communication opportunities, has not developed over time in comparison to Groups 1 and 2. There are practical reasons for this, which for younger TFAs is time or workload pressure, while for older TFAs SoTL has not been a significant part of their professional practice.

Impact of SoTL on Classroom Innovation

The three groups identified in this study highlight the development of SoTL and how that development results in increased understanding of pedagogic literature that affects practice, in terms of carrying out pedagogic research and communicating to a public audience. This cycle of practice-research-theory-dissemination as demonstrated by Group 2 and aspired to by Group 1, shows the ways in which SoTL can be supported and encouraged to improve student learning. Both Groups 1 and 2

are enthusiastic about their engagement with SoTL, they take a systematic approach to their pedagogical research, and they benefit from and contribute to their communities of practice, all of which serves to enrich the wider teaching and learning community. They reflect on their practice, and what is going on with their students, and they make informed changes to their practice, which they evaluate. All of this leads to a student-centred conception of learning, which in turn leads to better understanding of how to improve further. Group 3 demonstrates what happens when there are barriers to engagement with SoTL; the result is demoralisation and frustration as teachers search for solutions to their teaching problems, without the underpinning of others' research. This is further hindered by the groups' teacher-centred conception of learning; that if only they could improve their lectures with more and better content, the students would learn better, rather than looking to what the students do with their learning.

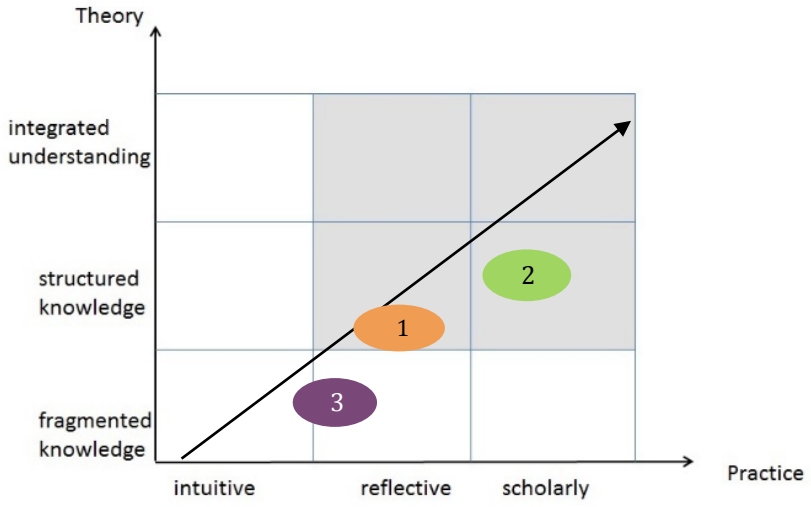

Figure 2 Antman & Olsson (2007; p288) Adapted to show position of groups in this study

Figure 2 shows the approximate positions of the three groups identified in this study on Antman and Olsson's (2007) model. Group 3 lags behind in terms of both theory and practice, as they struggle to engage with SoTL. However, even Groups 1 and 2 show signs that their practice outstrips their knowledge of theory. This is to be expected, as the TFAs involved, although highly involved with teaching and learning in HE, are still scientists with decades of scientific experience behind them. Their experience with SoTL is less both in terms of time and also in terms of how it is supported. While the TFAs in Group 1 have all had the benefit of a PGCert program, even the choice to study education at a Masters or Doctoral level still leaves individuals in Group 2 lagging in their engagement with theory. As they self-report, this lag exists because they feel uncomfortable or afraid of mainstream pedagogic literature, and prefer to take comfort in discipline specific pedagogic literature that they feel they can understand.

Suggestions for the Future

There are a number of things that can be done to support TFAs as they develop their expertise in SoTL. The first is to continue to support early-career TFAs with a PGCert, which supports them through the first two years of their career as teachers in HE. However, it is important that support extend beyond the duration of the PGCert. Therefore the second thing which should be considered is how that support should be continued. Ad hoc support is not enough; however, for most full time TFAs, commitment to a full Masters or Doctorate would not be practical.

However, there are alternatives. One consists of Faculty Learning Communities, as proposed by Milton Cox (Blaisdell & Cox, 2004; 2004), which offer one year, structured explorations of some facet of SoTL, thus allowing TFAs time to deepen their understanding, both of theory and practice. Another alternative is an eight-month Faculty Certificate Program on SoTL, such as the one offered at the University of British Columbia (University of British Columbia, n.d.) and highlighted by Christina Gitsaki (2015) at this conference. Both of these programs keep up interest and momentum in SoTL, and develop the individuals who take part in them, and may help to address the tendency for TFAs to restrict themselves to disciplinary pedagogic literature. A third thing to consider is to encourage participation in wider communities of practice, by supporting TFAs to submit abstracts to pedagogic conferences. By broadening their network of contacts, TFAs also come into a contact with a broader range of expertise, and develop their own expertise.

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