# *"More than just a Teaching Fellow": The impact of REF and implications of TEF on Life Science Teaching-Focused Academics in UK HEIs*

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# Abstract

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"More than just a Teaching Fellow": The impact of REF and implications of TEF on Life Science Teaching-Focused Academics in UK HEIs

This study seeks to understand the effect of the Research Excellence Framework (REF) on Teaching-Focused Academics working in Life Sciences in UK higher education institutions. Twenty-one full-time Teaching-Focused Academics from England, Scotland and Wales were interviewed about their academic roles. Using Engeström's Activity Theory as an overarching framework, a picture emerged of the significant influence of REF on the academic roles of Teaching-Focused Academics despite their exclusion from the process. The status of Teaching-Focused Academics is influenced by REF, as they are perceived within academia to be lesser academics as they are not included in REF. It is also perceived as a deficit that they are not included in REF for pedagogic research. As a result of this perception, the Scholarship of Teaching and Learning was further studied to investigate the practicalities of pedagogic research being included in future REFs. Although the participants in this study were active in SoTL, the emerging picture of pedagogic research was that its purpose was for the sharing of practice, rather than high impact research. Furthermore, there was evidence to suggest that engagement with SoTL was hampered by the existence of threshold concepts associated with it. This has implications for the suitability of pedagogic research inclusion in REF. In addition, the workload and priorities of Teaching-Focused Academics may be impacted by the introduction of the Teaching Excellence Framework from 2016.

# “More than just a Teaching Fellow”: The impact of REF and implications of TEF on Life Science Teaching-Focused Academics in UK HEIs

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# Glossary

| | |
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| Activity system | A framework to consider a work/activity system beyond the individual. Used for looking at organisations. In this case, the activity system is used to look at the experiences of Teaching-Focused academics in UK University Life Science departments. |
| Educational research | Research carried out by educational researchers, usually large scale projects. Research subjects are not necessarily the researchers' own, and research may not be carried out at their own institution. |
| Liminality | Ambiguity or disorientation felt by an individual in the middle stages of transition between an old and new state of understanding. |
| Pedagogic research | Research carried out by a practitioner, usually on their own practice, with their own students. |
| Research-focused | Description of academics whose main priority is disciplinary research, focused on submission to the REF |
| Scholarship of Teaching and Learning | Scholarly inquiry into student learning. Includes making findings public, relating them to underpinning literature, reflective practice and a student-centred conception of learning. |
| Student-centred | Conception of learning that puts what the student does at its heart (Biggs, 1999) |
| Teacher-centred | Conception of learning that puts what the teacher does at its heart (Biggs, 1999) |
| Teaching-focused | Description of academics whose main priority is teaching and learning, and who engage in SoTL as a means to underpin their practice |
| Threshold Concept | "A threshold concept can be considered as akin to a portal, opening up a new and previously inaccessible way of thinking about something. It represents a transformed way of understanding, or interpreting, or viewing something without which the learner cannot progress." (Meyer & Land, 2003, p.3) |

# List of Abbreviations

| | |
|---|---|
| HE | Higher Education |
| HEA | Higher Education Academy |
| Hefce | Higher Education Funding Council for England |
| HEI | Higher Education Institution |
| HoR | Heads of Research |
| JISC | Joint Informations Systems Committee |
| NSS | National Student Survey |
| OUP | Oxford University Press |
| PDR | Performance and Development Review |
| PedR | Pedagogic research |
| PGCert | Postgraduate Certificate in Teaching and Learning in Higher Education |
| PVC | Pro-vice Chancellor |
| QAA | Quality Assurance Agency |
| RAE | Research Assessment Exercise |
| REF | Research Excellence Framework |
| SoTL | The Scholarship of Teaching and Learning |
| TEF | Teaching Excellence Framework |
| UKPSF | UK Professional Standards Framework |
| UoA | Unit of Assessment |

# Declaration

Work contained in this thesis was also presented in the following forms:

**Peer reviewed journal articles**

"Communities of practice in life sciences and the need for brokering" F1000 Research, Innovations and best practices in undergraduate education, 2016.

"Threshold Concepts in Academic Practice: Engagement with the Scholarship of Teaching and Learning", Practice and Evidence of the Scholarship of Teaching and Learning in Higher Education, Threshold Concepts and Conceptual Difficulty, 2016.

**Conference presentations**

"Using Semantic Differential to Measure Academic Identity", Scottish Federation of University Women Research Presentations Day, Glasgow, 27th April, 2013

"Using Semantic Differential to Explore Life Science Academics' Perceptions of Academic Identity", Highways to Active Learning: New Roads Towards Engaging Our Students, 38th International Improving University Teaching Conference, 17-19th July 2013, Pontifica Universidad Católica de Chile, Santiago.

"Can We Measure Differences in Perceptions of Academic Life Between Research-Active and Teaching-Only Academics?" Durham University Scholarship Mini-conference, Hartlepool, 2nd September, 2013

"More Than Just a Teaching Fellow: The Development of the Academic Identity of UK Life Sciences Teaching Academics", 4th Academic identities Conference, Durham University, 8-9th July, 2014

"Engagement of UK Life Science Academics with the Scholarship of Teaching and Learning: Threshold Concepts in Academic Practice?", Threshold Concepts in Practice, Durham University, 9-11th July, 2014

"The Scholarship of Teaching and Learning; Teachers as Students" The Connected Classroom; 39th International Improving University Teaching Conference, University of British Columbia, Vancouver, 23-25th July, 2014

"Academic Identity of Teaching Focused Life Science Academics" Higher Education Academy Bioscience Summit, University of Newcastle, 9-10th September, 2014

"The Role of SoTL in Classroom Innovation" 40th International Improving University Teaching Conference, Ljubljana, July, 2015.

"SoTL Developments through Threshold Concepts", 6th Biennial Threshold Concepts Conference, Dalhousie University, Halifax, Nova Scotia, 15-17th June, 2016. [co-presented with Andrea Webb, University of British Columbia]

"Brokering between communities of practice: strengthening learning with co-operative practices" 41st International Improving University Teaching Conference, University of Durham, 13-15th July, 2016.

## Statement of Copyright

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# Dedication

To mum and dad, who encouraged my curiosity.

# 1 Introduction

## 1.1 Framing the problem: The impact of the Research Excellence Framework on Teaching-Focused Academics

The role of the academic within a university has been traditionally tripartite: disciplinary research, teaching and administration. However, in the UK, since the introduction of the Research Assessment Exercise in 1986, and its evolution into the Research Excellence Framework, an increasing emphasis has been placed on the importance of disciplinary research to the detriment of both teaching and administrative duties. In recent years, a new category of academic has been appointed: the "Teaching only" academic. However, the term "Teaching only" is misleading, as these individuals are also involved in curriculum development, administration of courses, pedagogical research and policy development, all of which are in addition to "only teaching". In an attempt to make "Teaching-only" staff more academic, many institutions require staff to engage in the Scholarship of Teaching and Learning (SoTL). Coined in 1990 by Ernest Boyer as the "Scholarship of Teaching" (p. 1), SoTL is commonly understood to be pedagogic research undertaken by practitioners in Higher Education on their own practice and with their own students. However, there is more to SoTL than just pedagogic research; to fully engage in SoTL, one must be conversant with pedagogic literature and theory, be capable of reflection on practice, and have a conceptual understanding that puts students, rather than the teacher, at the heart of the learning experience (Trigwell, Martin, Benjamin, & Prosser, 2000). This position aligns with Biggs' (1999) developmental view of learning. Biggs outlines three levels of teaching. The first level is characterised by *what the student is*; that is, the ability of the student is fixed and they are either a "good" student or a "bad" student. Therefore any failure of the student to learn is theirs alone. The second level is characterised by *what the teacher does*;

that is, the teacher is responsible for their students' learning. There is an expectation that the more a teacher does, the better the student learns. The contrary is also true at this level; that if the student fails to learn, it is the teacher's fault. The third level is characterised by *what the student does*; at this level the responsibility for learning is given to the student while the role of the teacher is to support the student's learning. A level 3 conception of learning does not belittle the role of the teacher. Indeed a level 3 teacher is knowledgeable about the scholarship of teaching and learning, and employs evidence-based activities which facilitate student learning.

Engagement with SoTL sets Teaching-Focused Academics (TFAs) apart from their colleagues whose priority is disciplinary research. Whereas the latter group is expert in the latest disciplinary research, institutional pressures to produce 3* and 4* quality publications for inclusion in REF may limit the amount of time they can spend developing their teaching and learning activities. These same pressures may also limit their engagement with pedagogic literature. While this in itself is not negative and should be built upon (Oleson & Hora, 2014), it may result in a perceived division between research-focused and teaching-focused colleagues. In contrast, a more scholarly approach to teaching should be cultivated (Kreber, 2002b), resulting in teaching which facilitates students' learning, is scholarly, and is underpinned by appropriate education theory. Teachers who do not develop their scholarly practice may persist in a conception of learning focused on what they do as a teacher, with little recourse to pedagogic literature to inform how they teach. The introduction of the need for new staff to complete the PGCert in Higher Education, one of the recommendations of the Dearing Commission (1997) has improved academics' awareness of scholarly approaches to pedagogy. However, those whose priority is disciplinary research, may not have time to pursue pedagogic research post PGCert. This is understandable as, at least in the UK, the demands of disciplinary research make it

impossible to devote time to other scholarly pursuits. This has been acknowledged over the past two decades, with Kinman (2001) identifying difficulties in obtaining funding, pressures of RAE, pressures of time on teaching and administration, and pressure to publish all affecting academics' psychological health negatively. Elton (2000) also identified the competitive and adversarial nature of RAE to be damaging to individual academics engaged in research. Since 2000, there has been a further shift in the pressures of the RAE/REF, with many institutions (mostly research-intensive) taking the decision to separate teaching and research, employing staff on teaching-only contracts. These Teaching-Focused Academics pursue SoTL and pedagogic research as part of their role, developing their expertise beyond that of Research-Focused colleagues. Many universities in the UK now have Teaching and Learning conferences, as do organisations such as QAA Scotland and the Higher Education Academy, where practitioners can share practice and support one another's endeavours. Recently, in Life Sciences, subject-based learned societies, such as the Society for Experimental Biology, Society for General Microbiology and Physiology Society have included Education streams in their main conferences, which allow Life Science Teachers in Higher Education to share practice. However, despite the proliferation of SoTL conferences and the increasingly common requirement for some staff in HE to engage with, and take part in pedagogic research, there is a dearth of studies which investigate the experiences of this group of academics. In particular, there have been no previous studies of the effect of REF on TFAs, who are not involved in disciplinary research, but whose roles may be shaped indirectly by the REF. This study uncovers the extent to which REF influences academic life, whether or not individuals are actively involved in it or not.

The motivation to undertake this study came from my own observations and experiences as a University Teacher at The University of Glasgow. University Teachers were introduced

to the University of Glasgow in 2002 (Bell et al., 2006, p. 4). Originally instituted to accommodate staff from St. Andrew's College of Education when it was incorporated into the University of Glasgow's Faculty of Education, University Teachers are now embedded into all areas of the university. Employed primarily to teach the majority of undergraduate classes, with their associated administration, as part of our professional development we were expected to engage in "The Scholarship of Teaching and Learning". However, the definition of SoTL was never really clearly articulated, and it remains a "fuzzy" term for most University Teachers. In 2006, I was fortunate to take part in the University Teachers' Learning Community (Bell et al., 2006; MacKenzie et al., 2010), the focus of which was to try to come to an agreed definition of SoTL. While I am not sure that we managed to fulfil that task of reaching an institutional definition of SoTL, all of us benefitted from working with one another and the growing sense of confidence in our identity as University Teachers is one that still resonates (MacKenzie et al., 2010). The Learning Community was one of the initial drivers which fuelled my curiosity of the group which I call Teaching-Focused Academics, which has culminated in this thesis. Others, which are just as important are my involvement with the Higher Education Academy Centre for Bioscience, which started in 2000, until its closure in 2010, and subsequent work with Nathan Pike, Life Sciences HEA Discipline Lead, and my contributions to Improving University Teaching conferences, which I first attended in 2009. My involvement with these two groups led me to start thinking in terms of "Teaching-Focused" rather than "Teaching-only" academics. I also took a second, formal, structured approach to developing my expertise. I completed a Master of Education at the University of Glasgow in 2008, Faculty Certificate Program in SoTL Leadership (distance education) at the University of British Columbia in 2010 and a Master of Science in Practitioner Research (University of Strathclyde) in 2012. On the way I have met many people who have become colleagues and friends and the sense of

community and belonging is one that is very important to me, and it strikes me that Teaching-Focused Academics carry out their role within the prevailing culture which rewards success in the REF, and which is geared towards maximising gains in the REF. Much of what it written about REF takes a positive slant, reporting the successful institutions and the money gained from the exercise. Although there is some work criticising it, most material written about REF concentrates on institutional benefits, with very little written about the effect on individual academics. Those papers which look at the effect of REF on academics concentrate on those individuals who are involved in contributing to it. There is a small, but growing body of literature which criticises the effect of REF on individuals, in particular early career academics (Jump, 2014, 2015b). The consequences of REF on Teaching-Focused Academics, who are not directly involved in contributing to REF has not been investigated, despite the existence and proliferation of Teaching-Focused Academics attributable to the evolution of REF since the 1980s. Teaching-Focused academics *per se* remain an under-researched, and underrepresented group within the Academy. It is my intention that this thesis redresses this deficiency, and that Teaching-Focused Academics are given a voice, which in turn will improve understanding of their role within, and contribution to their institution. I have taken a critical perspective on this study, to look in detail at how Teaching-Focused Academics engage with SoTL, the consequences of REF, its influence in the emergence of Teaching-Focused Academics as a group, and the challenges that they face in establishing their position within the academy.

## 1.2 Scope of the study: Teaching-Focused Life Science Academics in UK Universities

The scope of this study is confined to Life Science academics at UK Higher Education Institutions (HEIs). Life Science includes a range of disciplines, from observational and

population studies in ecology to high stakes biomedical research; literally an “A to Z” from Anatomy to Zoology. The participants, therefore, although all Life Scientists, cannot be described as homogeneous in their expertise and background. The group includes academics who have chosen to follow a teaching career path, distinct from being employed as a teaching-only academic, and therefore some of the participants are required to undertake disciplinary research. The term “Teaching-Focused Academic” is thus the most realistic term for this group as it encompasses both those contracted as “teaching-only” academics, and those who choose to concentrate on pedagogic research on their “teaching and research” contract. The HEIs represented in this study range from prestigious research intensive universities (Russell Group) to former polytechnics (Post-1992). Institutions from England, Scotland and Wales are represented in the study. This takes on special significance as the recently published White Paper “Success as a Knowledge Economy: Teaching Excellence, Social Mobility and Student Choice” (Department for Business, Innovation & Skills, 2016c), is about to be enacted in England. Despite Education being a devolved matter, the other home nations have agreed to engage with TEF at least for the first iteration (Department for Business, Innovation & Skills, 2016a), albeit with reservations (Department for Business, Innovation & Skills, 2016b). Despite these differences, what connects the participants in this study is their role in higher education through their engagement with SoTL. Consequently my interest is in the identity of Teaching-Focused Academics in Life Sciences, the value they add to their departments and institutions, and the challenges they face in doing so, within the context of REF.

There is a paucity of research into Teaching-Focused Academics, how they view themselves, how they are supported within their local contexts and how reward and recognition structures apply to them. For UK HEIs to support Teaching-Focused Academics appropriately, and to develop and implement reward and recognition strategies, it is vital

to research how REF influences Teaching-Focused Academics in terms of identity, workload and reward and recognition. This is necessary as research shows (Cashmore, 2009a, 2009b) that despite the increase in Teaching-Focused Academics in UK HEIs, there is still no coherent national reward and recognition scheme, in contrast to that recognised by Research-Focused Academics. The study itself is transferable to other science disciplines, as they too are subject to the pressures of REF, and employ Teaching-Focused Academics. It also has the potential to inform beyond the scientific disciplines. Although it is written in the context of UK Higher Education, it serves as a warning to global Higher Education, as research claims ever more importance at the expense of teaching and learning.

## 1.3 The role of the Scholarship of Teaching and Learning

The Scholarship of Teaching and Learning (SoTL) has a central role in this study for a number of reasons. SoTL, in the form of pedagogic research, is commonly used as a "Teaching Academic" equivalent to disciplinary research in an attempt by institutions to justify Teaching-Focused Academics as academic members of staff. However, this is contentious for a number of reasons, not least of which is the failure of institutions to agree to a definition of SoTL. The debate that surrounds SoTL, both in this context and in the wider HE arena, will be discussed throughout this study. While the definition of SoTL may be contested (Boshier, 2009; Boshier & Yan Huang, 2008), there is a body of literature which helps to describe what constitutes SoTL, and a number of authors have proposed Models of Scholarship (Antman & Olsson, 2007; Trigwell et al., 2000). These will be explored in more detail in chapter 2; however, it is my opinion that the 2000 Trigwell et al model is the most useful to Teaching-Focused Academics, as it encompasses ontological and epistemological dimensions, rather than a narrower definition which is confined to

pedagogic research. As such, I use this model to further investigate engagement with SoTL, and potential barriers to engagement, in Chapter 7.

## 1.4 SoTL and Teaching-Focused Academics

SoTL is seen as being an increasingly important part of the role of a Teaching-Focused Academic. However, to date, there remains a lack of enquiry into how Teaching-Focused Academics understand and engage with SoTL, what challenges remain, and how engagement can be fully supported. This study highlights some of the challenges for a group of UK Life Science academics, portraying the realities of engaging with SoTL within the current UK Higher Education sector. The study seeks to uncover the realities of engaging with SoTL from the point of view of those individuals who are actually involved in it, and the challenges they face in fulfilling their obligations and responsibilities as Teaching-Focused Academics. The study also seeks to explore the nature of the environment that teaching-focused academics work in, and how the environment influences their ability to perform effectively in the dual role of educator and researcher.

## 1.5 Academic Identities of Teaching-Focused Academics

The modern university in the UK is many things. Massification of HE has resulted in increasing class sizes and raises challenges for teachers to deliver on "The Student Experience". Most academics acknowledge that disciplinary research has become the main focus for universities, mainly because of the Research Excellence Framework (Higher Education Funding Council for England, n.d.) and its predecessor, the Research Assessment Exercise ('Research Assessment Exercise 2008', 2008). This is despite reports on HE which recommend that attention is paid to educators in HE (Browne, 2010; Dearing, 1997). In England, the introduction of student fees, and the introduction of student loans for

maintenance across the UK means that the relationship between students and staff has the potential to change to a customer oriented relationship, and may have changed already. It is incumbent on universities to ensure that their Teaching-Focused Academics are informed and professional, and use evidence-based methods to ensure the highest standard of learning. Many UK HEIs now mandate completion of a PGCert as a probationary requirement, although the seriousness of this requirement may be called into question (Smith, 2011). The Higher Education Academy, which is the body which champions teaching quality, administers the UK Professional Standards Framework (UKPSF, 2011), to which many institutional PGCerts are aligned. HEA accreditation allows those who complete their institution's PGCert Fellowship of the HEA. This has become more relevant recently as it is now one of the collected statistics for universities, and it is the aspiration of many institutions to have 100% HEA accreditation of academic staff. In addition, Fellowship of the HEA may be required for promotion of academics whose focus is on teaching, learning and scholarship.

## 1.6 Aims of the study

The aims of the study are threefold. Firstly, I wish to understand the extent to which REF impacts on Teaching-Focused Academics, not directly involved in disciplinary research, but whose role is to alleviate the pressures of teaching and administration from those research-focused colleagues who are. Secondly, I wish to understand how and why Life Science Teaching-Focused Academics engage with SoTL, despite a culture which prioritises disciplinary research. My reasons for doing this stem from my own experiences of tackling a PGCert, and then a MEd, comparing what I thought I had learned about SoTL with institutional expectations of what SoTL was, and discovering that they were often quite different. Thirdly I wish to investigate the potential existence of barriers that Life Science

Teaching-Focused Academics may encounter when they engage with SoTL, and the consequences to their development as pedagogic researchers, should these barriers exist. My research questions for this study are stated below:

*To what extent are Teaching-Focused Academics a distinct academic group?*

*To what extent does REF impact on the role of Teaching-Focused Academics?*

*What are the barriers to engaging with SoTL for Life Science Teaching-Focused Academics in UK institutions?*

*To what extent can engagement with SoTL be regarded as a Threshold Concept (Meyer & Land, 2003)?*

## 1.7 Significance of the study

This study is the first of its kind in the UK. There has been some work done on the impact of REF on academics, especially early career academics (Jump, 2014, 2015b). However, this is the first study which looks at the impact of REF on those academics who are excluded from it. This is significant because the contribution that this group of academics makes to their respective institutions is not acknowledged in terms of prestige (Blackmore & Kandiko, 2012), or reward and recognition (Cashmore, 2009a, 2009b) as it does not directly contribute to REF itself. It does, however, contribute indirectly, as Teaching-Focused Academics allow Research-Focused colleagues to concentrate on research in order to maximise their place in the REF. As institutions move towards casualization in the age of "austerity", it is important to give this group of academics a voice, acknowledging the contribution they make, which largely goes unnoticed.

The study is also significant as it is the first study to look at the possibility of Threshold Concepts within the Scholarship of Teaching and Learning within Life Sciences in the UK. One similar study in Canada investigated Threshold Concepts in SoTL for mid-career

academics engaging in a year-long SoTL Leadership certificate course at the University of British Columbia (Webb, 2015). This study is qualitatively different as the cohort being investigated in this study are all from Life Sciences, and are all SoTL enthusiasts within Life Sciences. This has implications for educational developers providing postgraduate certificates in higher education, and continuing professional development opportunities for academic staff. It also has implications for the practicality of including SoTL practitioner research in REF, which is a recent aspiration of some institutions.

The study is timely, as the HE landscape in the UK is changing rapidly, due to external pressures, increasing student numbers, a governmental policy of austerity and the introduction of student fees. As a result of the 2015 UK General Election, the newly elected government has begun steps to initiate and implement a "Teaching Excellence Framework" (TEF). While TEF remains to be implemented, the recent White Paper (Department for Business, Innovation & Skills, 2016c) unveils the priorities of the exercise: to facilitate the entry of new (for profit) providers into the sector, with degree awarding powers; to mandate all universities to publish a range of statistics regarding applications and acceptance, broken down by gender, ethnicity and disadvantage; the establishment of the "Office for Students" which will replace HEFCE and the Quality Assurance Agency; implementation of TEF, safeguards protecting students and the reputation of the sector; the establishment of a single funding body to replace existing funding bodies, to encourage multi-disciplinary research, and a call for evidence on accelerated degrees. All of these priorities promise fundamental changes to the UK Higher Education landscape, and the consequences, as yet, remain largely unknown.

## 1.8 Limitations to the study

The experiences of Teaching-Focused Academics is underrepresented in the literature. Given the increasing number of Teaching-Focused Academics in universities in the UK, this study represents a small sample in one disciplinary field. Life Sciences in the UK has a buoyant teaching and learning community, with supporting conferences, journals and personal networks. However, the support afforded by the wider community may not be mirrored by departments or institutions. The study concentrates on Teaching-Focused Academics who work on full-time, permanent contracts. As such, they are employed as academics, and have the same employment rights as their Research-Focused colleagues. The study does not include casual staff, either those on temporary or zero-hours contracts, or Graduate Teaching Assistants who may supplement their income by teaching in laboratory practicals or tutorials whilst pursuing their doctorates. However, it is important to acknowledge these latter groups as ones worthy of study and support. Another, but important, limitation of the study is that there were no Research-Focused Academics included in the sample. While it is acknowledged that Research-Focused Academics also have an important role in teaching and learning in Higher Education, institutional pressures mean that their priority is disciplinary research, rather than pedagogic research. As such, Research-Focused Academics are not included within the scope of this study. However, in further work, it would be both interesting and useful to elicit their opinions and experiences of SoTL and pedagogic research.

## 1.9 Structure of the thesis

The context of this thesis, framing, and my own personal reflection on my interest and motivation for carrying out the study are outlined in the first part of this chapter. In this

section of chapter 1, I lay out the structure and content of the thesis, in order that the reader may follow the line of reasoning contained within.

Chapter 2 is a review of the literature which informs the study, and is divided into four sections. I begin section one with an account of the development of REF, its proliferation since the inception of the Research Assessment Exercise (RAE) in the 1980s to the latest Research Excellence Framework in 2014, the consequences of the REF on the Higher Education landscape in the UK, and the lessons that can be learned from REF in the implementation of TEF.

In section two of Chapter 2, I explore SoTL, from Boyer's coining of the phrase "Scholarship of Teaching" (Boyer, 1990, p. 1) to the current SoTL movement and its implications for Teaching-Focused Academics. I explore the ways in which SoTL can be conceptualised and applied in a variety of contexts, and explore models of SoTL which I will use throughout the study to analyse my findings. In the third section of the literature review I discuss the theoretical framework that informs my findings, using Engeström's (1987, 2000, 2009) Third Generation Activity Theory as an overarching framework for the study, particularly the Activity System components of Community, Rules and Division of Labour. Each of the three findings chapters, 4, 5 and 6, utilises a secondary theory with which to investigate issues in further detail; chapter 4 uses Wenger's (1998) Communities of Practice to investigate Teaching-Focused Academics' community in more detail; Chapter 5 uses Alvesson's (2013) Grandiosity to investigate the imposition of Rules on Teaching-Focused Academics, and Chapter 6 utilises Trigwell, Martin, Benjamin & Prosser's (2000) Model of Scholarship and Meyer and Land's (2003, 2005) Threshold Concepts to look at barriers to engagement with SoTL.

Chapter 3 explains my research methodology and methods. The chapter begins with a description of the methodology I employed, focusing on my decision to take a critical stance and the consequences on the work, and the ethical considerations for taking this study forward. This section includes identification of the sample population, the justification for data collection methods, and the development of the analysis of the data. I end this chapter with an evaluation of my approach and the limitations of the study.

Chapter 4 is the first of three chapters of findings. In this chapter I discuss the Academic Activity System. I then present the evidence to support the evolution of Teaching-Focused Academics as a distinct Activity System, with particular reference to the Community aspect of the Activity System, and how the separation of community due to the pressures of REF has resulted in a distinct Teaching-Focused Academic community and identity. Using Wenger's (1998) Communities of Practice, I consider the role of REF as the catalyst in exacerbating the tensions and contradictions already existing in the previous activity system, resulting in the emergence of Teaching-Focused Academics as a distinct, separate system.

In chapter 5, the second of the findings chapters, I further explore the Teaching-Focused Academic activity system using Engeström (1987, 2000, 2009), with particular focus on the imposition of Rules on Teaching-Focused Academics, and how this has shaped the Division of Labour of academics, and shapes the Teaching-Focused role. Utilising Alvesson's (2013) Grandiosity, I investigate how the Rules and Division of Labour intended to favour disciplinary research in terms of the REF, affect Teaching-Focused Academics and how the role of SoTL has been appropriated in order to respond to these Rules.

The third findings chapter, chapter 6, looks at Teaching-Focused Academics' engagement with SoTL. I use Meyer and Land's Threshold Concepts to explore internal barriers to engagement with SoTL, highlighting potential Threshold Concepts within the framework of Trigwell et al's (2000) Model of Scholarship.

Chapter 7 is a discussion of the findings of the previous three chapters addressing the research questions formulated in chapter 1; the influence of REF on Teaching-Focused Academics, the drivers for Teaching-Focused Academics to engage with SoTL, and the barriers to that engagement.

Chapter 8 is the concluding chapter. In this final chapter, I consider the wider consequences of the study, and make recommendations for the improvement of the conditions experienced by Teaching-focused academics, in practical and policy terms. While REF is an indirect influence on Teaching-Focused Academics, the proposed implementation of TEF in England promises to have a more direct effect. By looking at the known effects of REF, I extrapolate the effect of TEF on Teaching-Focused Academics. I end by making recommendations for areas of further study.

# 2 Literature review

In this chapter, I explore the existing literature which informs the study. I examine the evolution of the Research Excellence Framework (REF), from its origins in the 1980s as the Research Assessment Exercise, to the latest incarnation in 2014. I also look at the recent development of the Teaching Excellence Framework (TEF) and the parallels with REF. I follow that with an exploration of the development of SoTL, looking in detail at definitions of SoTL, models which help us to understand what SoTL is, and some of the criticisms that have been made against it. In the final part of the literature review, I look at academic identity as explored by Becher and Trowler (2001), followed by a brief explanation of intrinsic and extrinsic motivation (Deci and Ryan, 1985), leading on to Blackmore and Kandiko's work on the Prestige Economy (2011, 2012) which seeks to explain Research-Focused academics' motivations to pursue their careers.

The second section of the literature review is an exploration of the theoretical framework underpinning this study. I chose to use Engeström's (1987) Third Generation Activity Theory as an overarching theory. I explore the tensions and contradictions that Teaching-Focused Academics face in their academic roles. Exploiting the main categories in Activity Theory, Community, Rules, Division of Labour and Tools/Artefacts, I explore each in turn with a secondary theory, unearthing the influence that the Research Excellence Framework exerts on Teaching-Focused Academics. Wenger's (1998) Communities of Practice is used to investigate the emergence of a Teaching-Focused Academic Community, which is distinct from that of Research-Focused Academics. I then turn to Alvesson's (2013) Grandiosity to explore the interplay of the imposition of rules and division of labour on Teaching-Focused Academics, and how that influences their ability to engage with SoTL. Finally, I employ Meyer and Land's (2003, 2005) idea of the existence of threshold concepts

to investigate epistemological and ontological barriers to engagement with SoTL. The use of the secondary theories as lenses allows me to explore the components of the Activity System in greater detail, and is explored further in the second half of this chapter.

## 2.1 Research Excellence Framework

In this section, I deal with the development of the Research Excellence Framework (REF). REF (previously known as "Research Selectivity Exercise" and "Research Assessment Exercise") is a national exercise which is undertaken by HEFCE approximately every five years, to assess the "quality" of the research done in UK universities. The first such exercise was done in 1986 as a way to allocate research funding during a time of budgetary cuts during the Thatcher administration. Subsequent exercises have been carried out in 1989, 1992, 1996, 2001, 2008, with the latest one being carried out in 2014, the next proposed for 2020.

In 2014, the Research Excellence Framework assessed the research of 154 UK universities (Higher Education Funding Council for England, n.d.). There were 1,911 submissions to units of assessment (UoA), of the work of 52,061 staff which included 191,150 outputs and 6,975 impact case studies. Overall, 30% of the work submitted was judged to be "world leading" (4*), 46% "internationally excellent" (3*), 20% recognised internationally (2*) and 3% recognised nationally (1*). It should be noted that currently, only 3* and 4* rated research is deemed of sufficient quality to influence subsequent institutional funding. In order for an individual's contribution to be considered worthy of inclusion in REF, the following must be observed. In order to understand the challenges involved it is necessary to look at the rules governing submission (with a caveat that these rules may change in time for REF2020) (http://www.ref.ac.uk).

1. Individuals submitting to a UoA should submit their “best” four papers.
2. Only submissions deemed to be 3* (Quality that is internationally excellent in terms of originality, significance and rigour, but which falls short of the highest standards of excellence) or above will receive subsequent funding.
3. A paper may not be submitted by more than one individual in an organisation.
4. Submissions should be accompanied by Impact Statements (minimum 2 impact statements per UoA).
5. Impact statements cannot be about the impact on one’s own students, but should consider impact on the wider community.

The official cost of running the REF has been estimated to be £246 million (Technopolis group, 2015), although academics have cited amounts between £500 million and £1 billion as being more realistic (Jump, 2015a). The official figure is about 1% of UK research funding for the period 2008-2014, or 6% of the funding distributed by the UK funding councils.

The REF has been criticised, particularly by the University and College Union, who published the findings of a report (UCU, 2013) carried out on behalf of their membership, concluding that there were unrealistic expectations being imposed upon academics in terms of research output, with no discernible improvement in quality of research. In addition those surveyed believed that REF was discriminatory to certain categories of staff, was detrimental towards teaching and resulted in unfair workloads. Respondents also reported discrimination in terms of promotion, and compulsory transfers to teaching-only contracts. Benefits of the REF were discerned by Pro-Vice Chancellors (PVC) who saw improvements to their institutional reputations by taking part in REF, and were able to gather institutional intelligence via benchmarking, the results of which were used in performance management (Technopolis group, 2015, p. 2).

Recent work by Kneale, Cotton and Miller (2016) looks into the status of pedagogic research. Out of the total submissions from 154 institutions, only 76 returned a submission for UoA 25 (Education). From those submissions, although there was a higher than average proportion of 4* (internationally excellent) papers, there was also a higher than average proportion of 1* and 2* papers. Institutions were more likely to be successful in UoA 25 if they were from the Russell Group of research-intensive universities, and/or had representation on one of the adjudicating panels. Whilst not stated in Kneale et al's work, an internet search revealed that many of the institutions returning to UoA 25 had a School of Education. Looking at submissions more closely, only 8% of impact case studies focused primarily on HE (17 out of 216). This was also reflected in the low percentage of papers (9%) submitted, the subject of which was HE. Following on from these discoveries, Kneale et al interviewed individuals responsible for co-ordinating the 2014 UoA 25 REF submissions. They identified lack of credibility of pedagogic research, tensions between outputs and impact, political issues surrounding selection, contractual issues, coherence of submission and the inhibiting effect of the "impact" definition as barriers to inclusion. Conversely they also found that not being subject to REF allowed pedagogic researchers to be more innovative with their research. Kneale et al (2016) made several recommendations to improve the UoA 25 REF submission: development of pedagogic research skills for those whose home discipline is not education, thinking strategically about national and international collaborations to improve scope of research and potential impact, increasing impact through visible activities such as giving keynotes or influencing policy, and engaging with colleagues in other institutions to engage in "impact swaps" to increase the range of impact. They also recommended that institutions had a part to play in identifying and supporting pedagogic researchers across disciplines, and the role of the HEA in both

promoting the importance of pedagogic research in HE, and ensuring that HE pedagogic researchers were included in the next UoA 25 assessment panels.

While institutional reputations may be enhanced, the price of institutional success may be a high one for individual academics. There are few studies which have examined the impact on individual academics. However, a study conducted by Charlotte Mathieson (Jump, 2015b; Rhodes, 2015), presented at the Westminster Higher Education Forum's "Next Steps for the REF" conference on 23 April, 2015, painted a bleak picture of academic life under the influence of REF. In particular, Mathieson's study highlighted the adverse effects on early career academics, citing a "culture of aggression and bullying" and a "two-tier hierarchy between teaching and research which is used to inhibit career mobility of those stuck in teaching positions". REF was proposed as the cause of difficulties in UK academia. One of the problems highlighted was the reliance on REF-able publications as a recruitment criterion to permanent positions, above experience with teaching and learning, which tended to leave individuals in casualised, temporary positions. Adverse effects to mental health because of the pressure of REF were also cited in Mathieson's report. The only positive in Mathieson's study was increased attention paid to public engagement, driven by the necessity to demonstrate "impact", although a lack of clarity as to the measurement of "impact" was a negating factor. Heads of Research (HoR) were not immune to the effects of REF, citing that the administration involved for the 2014 REF was at least, if not more onerous than previous iterations, with one HoR estimating it to be three to four times as much work as previous exercises (Jump, 2014). The new requirement for "impact case studies" was cited as the reason most likely to account for the bulk of the extra work, with academics struggling to understand what was expected. A second reason for increased workload were the processes required to allow staff with mitigating circumstances, such as ill health, or maternity leave, to submit fewer than four papers without penalty. However,

in 2013, historian Derek Sayer challenged the decision to include his research in REF in order to highlight what he perceived as discrimination suffered by his colleagues (Jump, 2013). Sayer claimed that the expert reviewer his institution used to determine the quality of his and his colleagues' submissions to REF was inexperienced in several areas covered by the submission, therefore they were unqualified to act as a peer reviewer for the submission. He further claimed that the decision to include or exclude an individual's research in REF was both contrary to Hefce's advice to include "all eligible staff in submissions who are conducting excellent research" (*Research Excellence Framework (REF) 2014 Code of Practice*, n.d.) and potentially damaging to their academic reputations.

Academic reputations can be made or destroyed by the REF, and the significance of this should not be underestimated. Nobel Prize winner, Peter Higgs (2013), writing for The Guardian, claimed that he would not be employed in today's academic system as he was not productive enough for the demands of REF. Higgs' seminal work on the acquisition of mass by subatomic particles was published over fifty years ago, (P. W. Higgs, 1964), and he published fewer than ten papers in subsequent years. Higgs (2013) further expressed doubts over the possibility of scientists to achieve huge scientific breakthroughs while the dominant culture favoured quantity of papers over quality:

> *"It's difficult to imagine how I would ever have enough peace and quiet in the present sort of climate to do what I did in 1964." (P. Higgs, 2013)*

Higgs' statement is clear. The time to think and formulate ideas necessary to gain a Nobel Prize is missing from UK universities. The increasing pressure being placed upon academics because of REF is also, paradoxically, making it almost impossible for them to excel in the jobs they are employed in. This cannot be brought into starker focus than in the case of Prof. Stefan Grimm, Professor of Toxicology at Imperial College London, who took his own

life, at the age of 51 (Parr, 2014). There were a series of events leading up to this tragic conclusion, not least of which were increasing pressures put upon Prof. Grimm to obtain increasing amounts of research funding and produce more published papers.

The state of REF is important because of two recent developments in UK Higher Education, both of which are pertinent to this study. The first is a natural development of the requirement that Teaching-Focused Academics engage in SoTL as part of their contractual obligations. In order to try to place Teaching-Focused Academics on an equal footing with their Research-Focused colleagues, there is an attempt to include them in REF. That means that some institutions are looking to include their SoTL activities in REF2020, in the form of pedagogic research (PedR). This aspiration has been supported by the recent publication of the Stern Review (2016) which recommends that more attention be paid to pedagogic research in REF and that "research leading to major impacts on curricula and/or pedagogy within or across disciplines should be included" (p. 23).

The second development is the announcement, By Jo Johnson, Secretary for Business, Skills and Innovation, the government ministry which until July 2016 covered Higher Education, to impose a "Teaching Excellence Framework" on universities in England. Building on a manifesto commitment, a Green Paper was published in 2015, which sets out the vision for TEF. The message is clear – the potential for "excellent" universities to charge more than the current £9000 per annum undergraduate fees, the sloughing off of underperforming institutions, and the entry into the sector of an increasing number of private providers. This has serious implications for universities in general, and Teaching-Focused Academics in particular. While the paper speaks of achieving "excellence" it does not make clear how this will occur. What is made clear is that "excellent" institutions will be able to raise tuition fees for students, that there will be closures of some universities

that are deemed not to be “excellent”, and that rules will be relaxed to facilitate the entry of private for-profit providers to offer accredited degree courses. There is evidence to suggest that the vision for TEF is one of grandiosity (Alvesson, 2013) which will be further explored in the following sections.

## 2.2 Teaching Excellence Framework: Measuring “Excellence” in Higher Education

The use of “excellence” is a form of grandiosity (Alvesson, 2013). While “excellence” may be an ill-defined concept, it is one that cannot be argued with; no-one aspires to mediocrity. There are clues as to where Jo Johnson expects to find “teaching excellence” in relation to TEF. There is a heavy reliance on “student satisfaction” and NSS (National Student Survey, n.d.) results in the White Paper (Department for Business, Innovation & Skills, 2016c) when referring to the measurement of “excellence”. However, the NSS itself has come under criticism, being described as “bland”, “methodologically worthless” and a “waste of government money” (Agrawal, Buckley-Irvine, & Clewlow, 2014). Universities, desperate to have high survey completion rates, effectively bribe students into completing the survey (Tierney, 2013). It has even been suggested that the NSS is harmful to learning and teaching as it concentrates on “student satisfaction”, which is facilitating

> *“an intellectual race to the bottom as lecturers are put under pressure to cut reading lists and shorten assessments. If students do not like reading whole books, then perhaps extracts will do. If they find essay-writing difficult, then lecturers should guide them step-by-step through what to write and how, rather than leaving them to work it out for themselves. If students do not like exams, then maybe a poster would suffice.” (Williams, 2015)*

The student voice has joined the NSS debate, with Laura Warner (2016) articulating a compelling case for the inappropriateness of the questions being asked. There appears to be a mismatch between Johnson’s reliance on NSS to contribute to a measurement of

teaching excellence and what the NSS is actually measuring. This is worrying, and has the potential of making some institutions vulnerable, through no fault of their own.

The White Paper also stated that one of the aims of TEF was that institutions should publish their acceptance and retention statistics categorised by ethnicity, gender and deprivation. This puts some of the elite universities at a disadvantage, potentially favouring newer, local universities. However, institutions also have to publish their graduate destination employment and salary figures drawn from the Destination of Leavers survey that may also be subject to 'gaming' in ways reminiscent of the NSS and the REF. In this case, the elite universities win, as their well-established networks and privileged entry cohorts allow graduates entry into the highest paying sectors of employment. While students may choose a university on its reputation, this may not be reflected in the quality of the teaching. However, the prestige of these elite universities is such that their position is protected from market forces, as students want to be associated with these institutional reputations.

> *"Institutional reputation is known, teaching quality mostly is not. The acid test is that when faced by choice between a prestigious university with known indifference to undergraduate teaching, and a lesser institution offering better classroom support, nearly everyone opts for prestige"* (Marginson, 2006, p. 3)

Higher Education, therefore, is subject to grandiosity, with students desiring prestige over learning support. The question is, will TEF disrupt the current hierarchy of UK universities, resulting in a sector which places equal value on teaching and on research? While it is one of the stated outcomes of TEF, it is difficult to see how this can be achieved, given that elite institutions, by their nature, have more power to retain and enhance their reputations in the face of competition.

### 2.2.1 Entry of private providers into the HE sector

Another of Johnson's aspirations for HE in both the Green and White Papers is that the sector should be deregulated in order to facilitate the entry of new, private providers.

> *"But at the moment new providers find it hard to engage on a level playing field with the established sector. The barriers to entry are significant. New providers, as well as many existing providers, are generally reliant on support from other incumbent providers before they can award degrees in their own right. And they are subject to different regulatory regimes depending upon whether they receive teaching grant funding or not. We want to end the parallel regulatory regimes and introduce a level playing field." (Department for Business, Innovation & Skills, 2015, p. 14)*

This statement is disturbing as it appears to refute Johnson's assertion that the purpose of the Bill is to improve the quality of Higher Education in England. Aligned with this is the removal of the Quality Assurance Agency as the body which oversees the quality of Higher Education, replacing it with the "Office for Students". However, reservations have been voiced as to the reputation of private HE providers, asserting that they damage the reputation of UK HE (Paton, 2014), which is at odds with the priority of the White Paper (Department for Business, Innovation & Skills, 2016c) to protect the sector's reputation.

Johnson's paper is interesting in that it presents its changes in terms that cannot be argued with, as we can all agree that we want "excellence" in the sector. However, there is no substance in how "excellence" will be achieved or maintained, and some of the content of the Bill appears to undermine the aspiration. The possibility remains for the execution of an illusion trick (Alvesson, 2013); while promoting "excellence" in teaching and learning, TEF may result in very little in the way of change as institutions manipulate the way they are assessed.

### 2.2.2 Parity of Teaching and Research

One interesting aspiration of Johnson's Green Paper is to:

> *"build a culture where it is recognised that teaching has equal status with research within and across HE institutions. Outstanding teachers should enjoy*

> *the same professional recognition and opportunities for career and pay progression as great researchers. Research and teaching should be recognised as mutually reinforcing activities"* (Department for Business, Innovation & Skills, 2015, p. 18)

Johnson makes reference to the REF, and suggests that his proposed TEF will be equivalent. Given what is known about REF, this is a worrying statement. REF, as has been shown, has been damaging to individual academics, while encouraging a culture of competitiveness between both individual academics and institutions. Larger, more well-established institutions have an insurmountable advantage over newer institutions. REF is a means by which institutions are kept within a hierarchy, with limited movement only within one's stratum permitted. Therefore ancient, research-intensive universities remain in the top tier of University League Tables, with new institutions struggling to maintain their positions further down in the hierarchy. TEF could be assumed to impose the same restrictions on teaching and learning. While the proposals directly affect England only, with Education being a devolved issue, the changes may affect all home countries: negotiations apparently continue as to whether the other home nations continue their involvement beyond the first iteration in 2016. As with the NSS (another HEFCE England-only requirement), the risk associated with the lack of representation in subsequent league tables will ensure that the effects of TEF ripple out throughout the whole UK sector.

## 2.3 What is Teaching Excellence – the evidence

Teaching Excellence, although amorphous in nature, is central to Johnson's vision of TEF. The UK Higher Education Academy (HEA) is the body concerned with accreditation of teachers in HE, and its redesigned UKPSF acknowledges four categories of recognition: Associate Fellow, Fellow, Senior Fellow and Principal Fellow, according to the roles, responsibilities and expertise shown by the individual. However, rather than being

concerned with teaching excellence, the award of Principal Fellow is primarily focused on "Strategic Leadership" and therefore is more concerned with management of others' teaching rather than one's own development of teaching *per se*. The HEA has recently published a number of commissioned reports on Teaching Excellence and SoTL. The first of these reports deals solely with the concept of Teaching Excellence (Gunn & Fisk, 2015) and how understanding has progressed since the CHERI report of 2007. Gunn and Fisk acknowledge the diversification of academic roles and the competing discourses within higher education regarding teaching excellence as reward and recognition for individual performance, or excellence as a form of performance management. They also uncover ways in which excellence in teaching is being identified, including an integration of research and teaching which encourages a culture of enquiry (Jenkins & Healey, 2007) and evidence-based SoTL's influence on the practitioner who carries it out (Kreber, 2013).

In the second of these reports, "Defining and supporting the Scholarship of Teaching and Learning (SoTL): A sector-wide study", Fanghanel, Pritchard, Potter, & Wisker (2016) discuss the use of SoTL in identifying teaching excellence, engagement with SoTL as a means of professional development, and the uncomfortable relationship between SoTL and teaching excellence being overshadowed by research excellence. However, they also found that a consensus on what constituted SoTL was missing, as was a link between professionalism and SoTL, and between SoTL and quality. Despite this, the authors found that SoTL was primarily about practice, curriculum enhancement and emphasised the role of the student in contributing to the development of learning. While they also identify a trend of "new SoTL" which seeks to focus on more strategic aims than those of individual practice, this appears to be more aligned with educational research. Fanghanel et al (2016) further go on to make a series of recommendations. Of note are two recommendations: that SoTL be

recognised over all REF Units of Assessment, rather than the imposition of a separate TEF, and the need for recognition of SoTL activities in institutional workload models.

## 2.4 The Scholarship of Teaching and Learning

Although only mentioned once in the White Paper, scholarship has potential to work within the TEF framework (Department for Business, Innovation & Skills, 2016c). Within Higher Education, the Scholarship of Teaching and Learning allows academic staff to improve the methods they employ to teach, and by extension, improve student learning. In addition to disciplinary expertise, academic members of staff are now expected to have some insight into teaching and learning, and many new staff are obliged to attend initial and continuing professional development courses which result in a formal teaching qualification. This is important as it provides an evidence based approach to teaching and learning, however, there are many criticisms of SoTL. The term "Scholarship of Teaching", coined by Ernest Boyer (1990) is one of four domains of scholarship. It is suggested that the definition of the Scholarship of Teaching is confused (Boshier, 2009), leading to a lack of participation by academic members of staff. If we look at the four domains of scholarship: Discovery, Integration, Application and Teaching (Boyer, 1990), it is possible to see that a "Scholarship of Teaching" may include elements of the other three domains. The term "Scholarship of Teaching & Learning", as it is known now, is a development from Boyer's original suggestion that academic staff become familiar with teaching, and is transforming into a field of inquiry in its own right. The reasons for this are diverse; individual academics may be drawn to teaching and learning as a career option (Garwood, 2011), being put off by the intense competition demanded by disciplinary research, or there may be demands imposed upon them by management to improve teaching and learning for external schemes such as the National Student Survey ('The National Student Survey',

http://www.thestudentsurvey.com/). Despite this, with few exceptions, within most institutional cultures, research dominates over teaching and learning, and in the UK, the Research Excellence Framework (Higher Education Funding Council for England, n.d.) takes precedence over other scholarly activities.

There are, however, potential changes on the horizon within the Higher Education landscape. With the changes to fees in England and Wales (Browne, 2010) and pressure from exercises such as the National Student Survey ('The National Student Survey', http://www.thestudentsurvey.com/) and the proposed Teaching Excellence Framework, more emphasis is being placed on teaching and learning. However, support for SoTL may not be explicit within institutions, and there may be a growing tension between research and teaching.

## 2.5 Views of SoTL

Despite the previous assertion that the definition of SoTL is confusing (see previous section (Boshier, 2009)), there is a visible development of definitions of SoTL. One view of SoTL is akin to educational development, pedagogic research or educational research, but rather than education experts employed to carry out research, discipline-based academic staff carry out research on their own students' learning (Norton, 2008, p. xvi) within their own context. This brings with it several challenges: academics are not necessarily experts in teaching and learning theory, and may be unfamiliar with the conventions of educational research. Educational research itself is not defined as a discipline; it borrows from diverse disciplines within psychology, social science, management in addition to influences from within the practitioners' own discipline. However, in order to understand the breadth of what SoTL represents, it requires to be viewed through a number of lenses, each of which

adds to what we understand SoTL to be. This freedom can be confusing for novice researchers as they try to negotiate an unfamiliar paradigm; conversely, the lack of a "discipline" also allows practitioners to draw from a number of influences, including their own background and training.

## 2.6 The role of SoTL in Teaching Excellence

### 2.6.1 SoTL as research

As outlined above, a common view of SoTL is as pedagogic research (PedR). This particular view is popular with institutional management who use it within promotion criteria as a substitute for disciplinary research. Boyer's (1990) four types of scholarship are unhelpful here, as it could be argued that Discovery, Integration and Application are all necessary components of successful pedagogic research. More helpful is Glassick, Huber & Maeroff (1997), who assert that scholarship should include the following six criteria: it should have clear goals, adequate preparation, appropriate methods, significant results, effective presentation and reflective critique. These criteria can be applied to any area of research or scholarship as they apply to the research process, where the end point is a "making public" of one's findings. Trigwell et al's (2000) model of scholarship includes two dimensions which chart the development of engagement with appropriate literature and the reach of outputs resulting from pedagogic research, the highest level of which is publishing in international pedagogic journals. While this view of SoTL portrays it as analogous to disciplinary research, there are barriers in the way of practitioners achieving this level of development. Tight (2004) reviewing over 400 articles in seventeen journals, highlighted a lack of use of theory in peer reviewed publications. Hutchings (2007) also disputes the integration of theory into SoTL practice, believing that practitioners avoid it. She notes that there is some integration of theory, but the inference is that it is used in a general way to

support interventions in practice, reflecting a lower level of achievement in Trigwell et al's (2000) model of scholarship. There is, therefore, more work to be done in fostering a scholarly approach to the use of theory in SoTL. In support of this, Hubball and Burt (2006) offer the option of a formal mid-career certificate course with which to support the integration of pedagogic theory and practice. However, despite the benefits of this approach, it may be seen as resource intensive, with the majority of institutions leaving individuals' development of SoTL to chance, after they have completed the requirement of the PGCert. Webb's (2015) thesis which looked specifically at barriers to engagement with SoTL in a group of mid-career academics on this course, uncovered both epistemological and ontological thresholds which retarded development of expertise in SoTL. Webb (2015, p. 120) identified eight potential threshold concepts associated with engagement with SoTL. These were: The Nature of SoTL, Conceptions of Research, Subjectivity, Institutional Culture, Teaching as Scholarship, Studentness, Disposition of a SoTL scholar and Boundary Crossing. Throughout this study, the term PedR may be used when referring to SoTL which is thought of as pedagogic research.

### 2.6.2 SoTL as practitioner development

A more holistic way of viewing SoTL is its role in the development of academics as practitioners in education. Individuals engaging with SoTL go through a developmental process, as outlined in a number of studies; the development of practice (Shulman, 1999), of pedagogic content knowledge (Shulman, 1986), development of engagement with literature, publication, reflection and conception of learning (Trigwell et al, 2000), reflective practice and scholarliness Kreber (2002b) and the relationship between theory and practice (Antmann & Olsson, 2007). Importance is placed on the notion of the "reflective practitioner" (Schön, 1983). Kreber and Castleden (2009) found that academics in "soft"

fields (Becher & Trowler, 2001) were more likely to engage in reflection on "educational goals and purposes" than colleagues in "hard" fields, putting this difference down to their disciplinary backgrounds. Trigwell and his colleagues (2000, 2004) expand the idea of SoTL being only about research, including the development of reflection and the conception of teaching as core dimensions. This shifts the definition of SoTL to a more holistic view of the academic as teacher, where the goal is beyond producing outputs for public consumption, and instead concentrates on mentoring and guiding as a process. If we consider Antman and Olsson's (2007) two-dimensional matrix of SoTL engagement, we can see that there is a requirement to increase the degree of integrated understanding of theory, while at the same time increasing the degree of reflective practice in pedagogical action. There is some evidence that this developmental process is long-term, (Hubball, Clarke, & Poole, 2010; Kelly, Nesbit, & Oliver, 2012) taking about ten years to move from local, unreflective practice, to fully-fledged engagement with SoTL which contributes to the advancement of our understanding of teaching and learning. Thus, the time taken to become expert in SoTL is analogous to the time taken to become expert within one's discipline. However, the route taken could not be more different. In contrast to a structured, recognisable trajectory of full time undergraduate and postgraduate study, followed by a series of temporary postdoctoral positions, leading to a full time academic position in Life Sciences, gaining expertise in SoTL is routinely left to the individual's own interests, after the (mostly) compulsory PGCert which is undertaken during probation in one's first academic appointment. It is hardly surprising, therefore, that there are barriers to engagement with SoTL which put into question its inclusion in REF, and possibly its significance to TEF.

### 2.6.3 SoTL in reward and recognition

Many UK universities now offer some form of reward and recognition of teaching in Higher Education. How this works in practice differs across the sector. Table 2.1 summarises

promotion opportunities across the UK sector. It should be noted that although the examples below are not extensive, there is a trend towards having a separate pathway for Teaching-Focused Academic career progression. However, the criteria are sometimes based on research careers, as in the example of the requirement of substantial external funding at the University of Glasgow.

*Table 2.1 Career progression possible at different UK universities*

| Institution Type | Institution example | Separate Pathway for Teaching-Focused Academics? | Highest level of Achievement Possible for Teaching-Focused Academics | Notes |
|---|---|---|---|---|
| Ancient | University of Glasgow | Teaching, Learning and Scholarship<br><br>http://www.gla.ac.uk/media/media_365384_en.pdf<br>http://www.gla.ac.uk/media/media_365388_en.pdf | Professor | External income of c. £60k over 4 years for Senior University Teacher & £100k over six years required for professorship |
| Red Brick | University of Bristol | Pathway 3 (Teaching Fellow)<br><br>http://www.bristol.ac.uk/hr/grading/academic/pathways/pathway3.html | Personal Professorship | Demonstration of "excellence" at national levels |
| Plate Glass | University of East Anglia | Academic Teaching and Scholarship (ATS) posts<br><br>https://www.uea.ac.uk/documents/2506781/2685870/Academic+Promotion+Guidance+Notes.pdf/3a5f9bb3-7200-4bcb-aaa9-2473c7c03d40 | Chair | Teaching portfolio/Teaching observations required |
| Post-1992 | University of Abertay | No<br><br>http://www.abertay.ac.uk/discover/work-here/policies-procedures/role-grading-framework/ | Teaching Fellow | Teaching Fellow (Grade 6) is the only explicit teaching post. Lecturer (Grade 7) and above do not differentiate teaching/research pathways |

Table 2.1 outlines the variation in strategies that universities employ when dealing with Teaching-Focused Academic career progression. While the four examples are taken from four categories of institution, the table is not meant to imply that all ancient universities require research income or that all Post-1992 institutions fail to differentiate between Research- and Teaching-Focused Academics. Rather it is an illustration of the difference in approach that institutions take. Of interest is the University of East Anglia, which requires a teaching portfolio and peer observations as part of the promotion application process. This approach is the only one of the four examples which explicitly states teaching-focused evidence.

Cashmore's (2009b) work concludes that there is "little consistency in the way in which criteria for promotion are embedded in institutional policies", arguing that the sector regards teaching as unimportant compared to research. Cashmore further elucidates the state of reward and recognition criteria across the sector. Table 2.2 shows the breakdown of institutions providing information on policy regarding promotion criteria for teaching and learning.

*Table 2.2 Inclusion of teaching & learning activities in promotion policies (Cashmore, 2009b, p. 12)*

| University Group | Number of institutions providing data | Total number of institutions with teaching criteria in promotion policies | Policies for lecturer / senior lecturer level posts | Policies for promotion to professor |
|---|---|---|---|---|
| Pre-92 | 25 | 22 | 22 | 9 |
| Post-92 | 43 | 34 | 34 | 32 |
| Russell Group | 19 | 11 | 11 | 9 |
| 94 Group | 17 | 6 | 5 | 6 |

This table represents a picture of the unevenness of provision of promotion criteria for teaching and learning. In addition, Table 2.3 shows the implementation of these policies.

Institutions were asked to provide data for promotions where teaching and learning activities were a major component. Cashmore (2009b) notes that many institutions did not record this information, despite teaching and learning criteria being distinct.

*Table 2.3 Implementation of promotion with T&L component (Cashmore, 2009b, p. 18)*

| University Group | % promotions at lecturer/senior lecturer level with significant t&l component | % promotions at reader/professor lecturer level with significant t&l component | Number of institutions with available data |
|---|---|---|---|
| Pre-92 | 32 | 13 | 11 |
| Post-92 | 49 | 41 | 26 |
| Russell Group | 26 | 8 | 5 |
| 94 Group | 24 | 9 | 4 |

The information supplied by institutions shows that reward and recognition for teaching and learning is taking place. However, promotion criteria, and the extent to which they are implemented, varies between institutions, as does recording of those who are rewarded. It is also unclear from Cashmore's 2009 work, the extent to which SoTL plays a part in promotion criteria. Later work by Cashmore and colleagues (Wills, et al, 2013), in an attempt to develop criteria for career progression for teaching-focused academics, incorporates the notion of an increasingly outward-facing profile for academics seeking promotion.

### 2.6.4 Critics of SoTL

There is much written about SoTL and it is used, sometimes in an indiscriminate manner, by institutions for a variety of reasons. However, SoTL has attracted justified criticism from a number of authors. Boshier (2009) blames the difficulties encountered in trying to encourage academic staff to engage with SoTL on a number of misconceptions. These he lists as the use of SoTL to cover a variety of activities which are not actually SoTL, the

confusion over Boyer's initial definition, the difficulties in articulating SoTL, the neoliberal use of SoTL as anti-intellectual and the overuse of peer review, resulting in a lack of critique and rigour.

Potter and Kustra (2011), like Boshier (2009), criticise claims of the relationship between scholarly teaching and the Scholarship of Teaching and Learning. However, they provide definitions of both SoTL and scholarly teaching, influenced by major contributors to the debate (Allen & Field, 2005; Boyer, 1990; Hutchings & Shulman, 1999; Kreber, 2002a, 2002b, 2005; Richlin, 2001; Richlin & Cox, 2004).

SoTL is defined by Potter and Kustra as: "*the systematic study of teaching and learning, using established or validated criteria of scholarship, to understand how teaching (beliefs, behaviours, attitudes, and values) can maximize learning, and/or develop a more accurate understanding of learning, resulting in products that are publicly shared for critique and use by an appropriate community.*" (Potter & Kustra, 2011, p. 2),

whereas, scholarly teaching is defined as: "*teaching grounded in critical reflection using systematically and strategically- gathered evidence, related and explained by well-reasoned theory and philosophical understanding, with the goal of maximizing learning through effective teaching.*" (Potter & Kustra, 2011, p. 3)

Potter and Kustra differentiate SoTL and scholarly teaching on the basis that when put under scrutiny, there is a lack of evidence to suggest that SoTL engagement improved student learning (Healey, 2000), while there is evidence that scholarly teaching may result in improvements to student learning, although this may be conflated with engagement

with SoTL such as taking a course on pedagogy, which results in a more student-centred conception of learning.

## 2.7 Factors affecting engagement with SoTL

Engagement with SoTL is a complex area. The priority of most institutions is research, as institutions compete for funding via the Research Excellence Framework. However, there is still a subset of academics who are drawn to SoTL, and who contribute at significant levels. Recently, many institutions have included a new academic post of the "Teaching Only" academic. This title is misleading, as these individuals are generally required to contribute to SoTL. However, within a new paradigm, with the pressures of day-to-day teaching, and institutional priorities elsewhere, there are many factors which could potentially affect individuals' engagement with SoTL. Academic identity, or a disposition to engage with pedagogic research, and the motivation to do it are both important factors affecting individuals' propensity to develop their expertise in SoTL. These will be explored in more depth in the following sections.

## 2.8 Academic Identity

Becher and Trowler (2001) explore the nature of academic identity at the disciplinary level. Life Sciences can be categorised as a field, in that it is composed of a variety of disciplines which may exhibit differing characteristics. High stakes, high profile "hard" Life Sciences disciplines such as molecular biology and biomedical research, with its connections to cancer research, stem cell research and reproductive technology are all at the forefront of research, whereas lower stakes, "soft" disciplines such as conservation biology or environmental biology have a low profile character, with methodologies (such as observing animal behaviour) that have much in common with social sciences disciplines. Competition

in the high stakes disciplines is cut-throat, with millions of pounds at stake in large research grants, and there are more losers than winners. While there is competition in the lower stakes disciplines, the external rewards are not as obvious. Funding is harder to come by, and reward and recognition is less likely. These pressures may contribute to an individual rejecting engagement with SoTL; either they have no need for it, or are under pressure to succeed with disciplinary research, so cannot afford time on other activities. "Teaching-only" academic positions have challenged this notion, as they are specifically designed for teaching, administration and scholarship. This relatively new position within the academy, while necessary, and popular with those who do it, makes their position within the discipline unclear. There is a risk that academics who specialise in teaching may lose part of their identity as a scientist as they forego disciplinary research.

Henkel (2005) confirms competing pressures on academics, citing increased governmental control as a contributing factor in the loss of academic autonomy, as academics compete for less and less research funding. This drives the focus away from teaching towards research, and she identifies staff who describe being "set back by other administrative and teaching activities" (Henkel, 2005, p. 166). Recently, Peter Lawrence, an academic at the University of Cambridge, discussed the exodus of individuals from scientific research because of its individualistic, competitive nature (Garwood, 2011):

> "*And I hear all the time that people get put off from continuing in science. Not because they're unable but because they just don't like it. Those people are often women but there are also many 'gentle' men who don't like it.*"

If these individuals are motivated by more people-centred, collaborative activities, which leans towards the rewards of intrinsic motivation, and choose to stay in academia, these may be the people who choose to engage in SoTL.

In the context of educational development, Land (2004) identifies a particular individual that he defines as a "provocateur" who works within a disciplinary context, but chooses to specialise in the development of teaching and learning. Although they are identified by colleagues as disciplinary educational developers, they themselves may find it difficult to cross completely from their disciplinary identity to join the new community of educational developers, preferring to have one foot in each camp. This fluidity of identity, being part of two communities, may also go some way to explaining individuals who choose to engage with SoTL.

## 2.9 Motivation – Self Determination Theory

In addition to academic identity, motivation is important when looking for reasons why academics should choose to specialise in teaching and learning. Self-determination Theory, as described by Deci and Ryan (1985), looks at the factors that affect motivation. In the context of engagement with SoTL, motivation is an important consideration, given that there are individuals that engage with it despite the prevailing culture of the importance of disciplinary research. Deci and Ryan (*ibid*) describe psychological needs of competence, autonomy and relatedness, and how these can be satisfied by taking part in activities which interest and fulfil the individual, based on deriving satisfaction from being good at it (competence), having choice in which activities to take part in (autonomy), and, to a lesser extent, how participation in the activity allows interaction with other people (relatedness). In contrast to the work of B. F. Skinner (1953), there is no punishment or reward that acts as an external driver to the activity. Rather the act of taking part is a reward in itself. In the case of engagement with SoTL, the activities associated with engagement (reading background literature, carrying out meaningful studies, analysing and interpreting results, talking with students and other academics, writing scholarly articles, dissemination of

results) are an end in themselves, in that intrinsically motivated individuals engage because they choose to, because they derive satisfaction in being good at it, and they relate to other people who are also stakeholders in the process.

According to Self-determination theory (Deci & Ryan, 1985, 2000) Individuals who act by intrinsic motivation are, by and large, happier and more content than those who take part through external drivers (Deci, Ryan, & Koestner, 2001; Niemiec, Ryan, & Deci, 2009). External motivators, such as the pursuit of external recognition or reward, result in less interest, and engagement at a superficial or operative level. However, motivation may be thought of as a continuum (Figure 2.1) ranging from amotivation, stages of extrinsic motivation, to intrinsic motivation.

| Behaviour | Nonself-determined | | | | Self-determined | |
|---|---|---|---|---|---|---|
| Type of motivation | Amotivation | Extrinsic Motivation | | | | Intrinsic motivation |
| Type of regulation | Non-regulation | External regulation | Introjected Regulation | Identified Regulation | Integrated Regulation | Intrinsic Regulation |
| Locus of Causality | Impersonal | External | Somewhat External | Somewhat Internal | Internal | Internal |

*Figure 2.1 Motivation continuum (Deci & Ryan, 2000, p. 237)*

The stages of extrinsic motivation are interesting in that a stage of extrinsic motivation may be reached which is equivalent to intrinsic motivation, resulting in high levels of engagement in an activity. People will naturally "internalize the values and regulations of their social groups" (Deci & Ryan, 2000), so that even activities which are extrinsically motivated may be accepted and internalized if individuals are given appropriate autonomy, choice and support. This is significant as it allows for a shift in culture, if institutional or departmental support is given to engagement with SoTL. It also accounts for the current

culture in which research, especially high stakes clinical and biomedical research is accepted to bring the highest rewards.

Related to Deci and Ryan's Self-Determination Theory is the work of Blackmore and Kandiko (2011, 2012), who have investigated the factors which motivate academics, resulting in the proposal of "The Prestige Economy" Figure 2.2. The Prestige Economy gives a more complex view of motivation, citing academics' motivation to engage in activities as a mixture of intrinsic, extrinsic and prestige factors. The Prestige Economy is recognisable for research academics, as reward, recognition, hierarchy and career progression are clearly defined, and shaped by the priorities of the department and or the institution. However, unless the culture shifts in favour of teaching, and departments and institutions explicitly support and reward engagement with SoTL, it is unlikely that there will be a general uptake amongst academics whose time is already stretched.

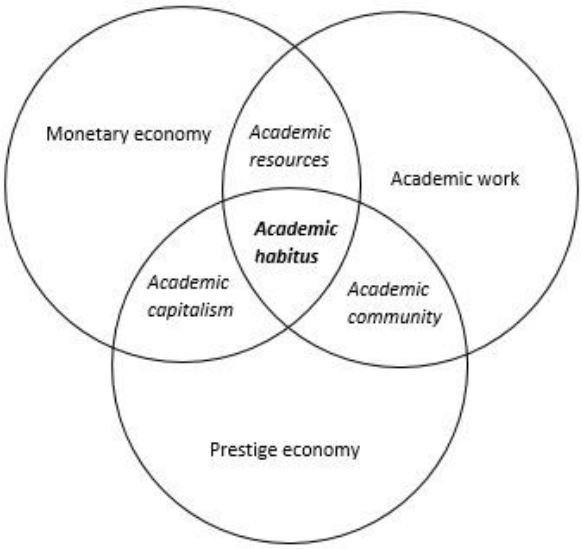


*Figure 2.2 The Prestige Economy (Blackmore & Kandiko, 2011, p. 405)*

It is of interest that Blackmore and Kandiko's Prestige Economy (2011) deals with factors which influence Research-Focused Academics. In comparison, there are few prestige factors for Teaching-Focused Academics, other than the satisfaction that they get from improving their practice and seeing their students do well as a result of that.

## 2.10 Choosing a theoretical framework

Teaching-focused academics face a complex landscape when negotiating their professional roles. This complexity can be understood by using Activity Theory (Engeström, 1987) as a framework with which to investigate the tensions and contradictions that exist between Teaching-Focused Academics and their research-focused colleagues, as well as those felt by the imposition of policy and strategy from institution and government. This is especially pertinent in the UK at the moment, when there are massive changes going on in the sector, the outcomes of which remain unknown. The Teaching Excellence Framework will have far-reaching consequences on Higher Education in the UK. However, its relationship with SoTL remains undefined.

Engagement with SoTL is a complex issue, but one which is important in today's Higher Education sector. There appears to be a subset of academics who are intrinsically motivated to engage with SoTL, however, there is little incentive for other individuals to engage with it, given the competing pressures on academics' time, and institutional priorities. However, there are changes to the Higher Education landscape, notably with the introduction of student fees in England and Wales. With a financial investment from students (and their parents) demand for more informed educational methods may push the agenda towards engagement with SoTL and more institutional support.

## 2.11 Rationale for the Theoretical Framework

As a Life Scientist, I had to find a way to bridge the gulf between my scientific training and embracing a new, qualitative paradigm. Activity Theory, with its diagrammatic representations of a complex system, allowed me to do that. The distinctions between the components of the Activity System (Subject, Community, Rules, Division of Labour, Tools and Artefacts and Objects) appealed to my need to categorise, as well as being able to identify tensions and contradictions associated with the system. However, I took a somewhat unconventional approach to using Activity Theory, in that, rather than expressing "the university" as an Activity System, and looking at the relationships between academics as part of that system, I identified the academics themselves as the subjects of the Activity System. Using this as the focus allowed me to explore the relations between Research-focused and Teaching-focused Academics, and how their experiences of academic life are different. Implicit in this construct is the action of external Activity Systems; Government, Institutions, Learned Societies, the HEA, could all be viewed as external Activity Systems having some influence on Academics.

While Activity Theory was used as the overarching theoretical framework, I also employed three other theories to further investigate the components of the Activity System. While this may appear to introduce unnecessary complexity to an already complex system, use of the secondary theories gave me way to investigate and explain why tensions and contradictions were occurring between Teaching-Focused and Research-Focused Academics. I refer to Communities of Practice (Wenger, 1998), Grandiosity (Alvesson, 2013) and Threshold Concepts (Meyer & Land, 2003, 2005) to further investigate the concepts of Community, Rules, Division of Labour and Tools and Artefacts as described by Engeström (1987). I explore this further in the following sections of this chapter.

## 2.12 Activity Theory

Teaching-Focused Academics inhabit a complex world, influenced by both internal and external pressures. As a new and emerging academic group, they are subject to a number of tensions and contradictions as they are perceived by the academic community to be different to the traditional view of an academic. Teaching-Focused Academics interact with their Research-Focused colleagues, with institutional management, with institutional and departmental rules and practices. They also are subject to governmental forces, demands of their learned societies, the Higher Education Academy (HEA) and Quality Assurance Agency (QAA). All of these entities contribute to a complex picture of what it means to be a Teaching-Focused Academic. In order to deal with this complexity, to identify and investigate the most pressing influencers, Third Generation Activity Theory is employed as an overarching theoretical framework. While other theories also deal with complexity, such as Complexity Theory (Mason, 2008) or Actor-Network Theory (Latour, 2005), Activity Theory was, for me, a good choice, as its use of diagrams to present the components of the system and the relationships which occur between them supported my understanding of the complexity of the Activity System I was investigating.

Activity Theory has its roots in the work of Vygotsky and Leont'ev in the Soviet Union in the 1920s and '30s. For the purposes of this study I use the Nordic model third generation Activity Theory, in which complex Activity Systems exist and exert influence upon one another.

Vygotsky's original triangular model of an Activity System (Engeström, 2009) was of a "complex, mediated act", composed of a subject, object and mediating artefact (Figure 2.3).

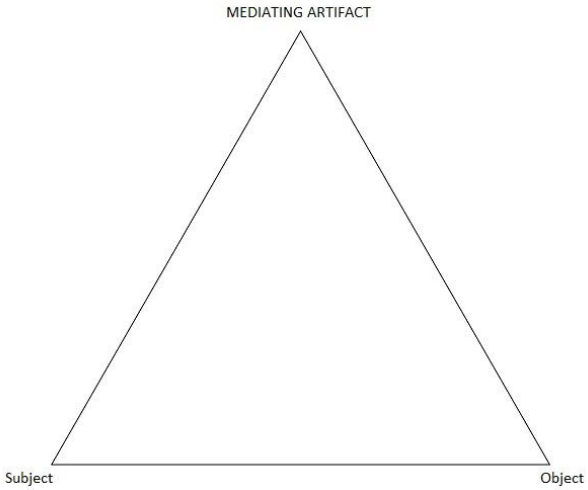


*Figure 2.3 Vygotsky's reformulated model of mediated act; from (Engeström, 2009, p. 54)*

Vygotsky proposed that rather than a direct connection between and stimulus ("subject" in Fig. 2.1) and response ("object" in Fig. 2.1), there was the involvement of a "complex, mediated act", facilitated by the mediating artefact. While the idea was revolutionary in its time, it was limited in its scope as a research tool, as it focused on the individual as its primary unit of analysis. In second generation activity theory, Leont'ev introduced the difference between individual action and community activity, graphically represented by Engeström (1987, p. 78). In addition to the idea of the mediating artefact facilitating interaction between subject and object, second generation activity theory also allows for the exploration of the environment within which the mediation takes place. Vygotsky's original proposal can be viewed as the top portion of the triangle in Figure 2.4. The lower portion is the addition of collective activity – Rules, Community of Practice and Division of Labour. This transforms the activity system into a tool which can be used to look at the individual and their interaction with their community, as each intersection represents how and where the individual and group actions have the potential to influence one another. The "object" represents the area where learning occurs. This may take many forms,

depending on the interactions and influences of the components of the activity system. This second generation activity system was used primarily to investigate school children. It received renewed attention in the 1980s, when Nordic researchers began to use it in a variety of settings in order to understand organisational culture.

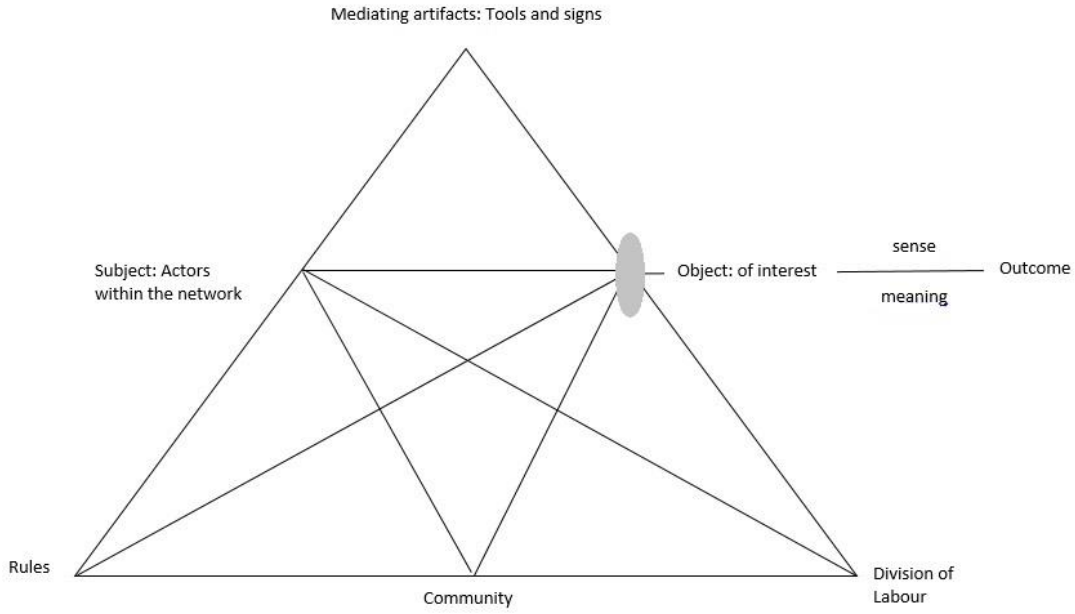


*Figure 2.4 Human activity system (second generation) (Engeström, 1987, p. 78)*

The subject of the activity system is the actor or individual involved in the activity. The actor interacts with the object, primarily via the mediating artefact, which may be represented by a tool or a process. These tools and processes may be visualised as facilitating actions, and may occupy more than one category, as their identity is fluid. In the case of Teaching-Focused Academics, SoTL can be designated as a tool, as it is used to develop, improve and evaluate student learning. However, it can also be designated as an Object, as it is where learning takes place in the development of the Teaching-Focused

Academic as a pedagogic expert. No mediated action between a subject and object is done in isolation, but is subject to rules, the influence of the community within which the activity system exists, and the division of labour. Imagining Teaching-Focused Academics as the subjects in their activity system, each of the dimensions can be described in Table 2.4.

*Table 2.4 Elements of the Teaching-Focused Academic Activity System*

| Dimension | Description |
|---|---|
| Subject | Teaching-Focused Academics. Academics whose role is teaching, administration and scholarship. Scholarship is often referred to as pedagogic research, and is used in place of disciplinary research. |
| Mediating artefacts | Tools and signs of being a Teaching-Focused Academics. Includes the classroom, computer, laboratory, field sites, scientific equipment, disciplinary knowledge, speech, teaching and learning knowledge, scholarship of teaching and learning. |
| Community | Groups of Teaching-Focused Academics with a common purpose. Teaching Excellence. Improving on and disseminating best practice. Community may be situated locally within a department or institution, or may be geographically diffuse, spread over institutions. |
| Rules | Rules are generated by institutions and departments. These define what work a Teaching-Focused Academic does and differentiates between Teaching-Focused and Research-Focused, setting local priorities. Rules are also generated by governmental bodies, such as REF and TEF. |
| Division of Labour | Division of Labour is governed by imposition of rules and priorities. Teaching-Focused academics concentrate on teaching and administration, taking on large tasks. This in turn frees up time for Research-Focused academics to concentrate on disciplinary research. |
| Object of Interest | "Scholarship of Teaching and Learning" potential to differentiate Teaching-Focused academics from Research-Focused academics. |

Although not exhaustive, this gives a flavour of the complexity of an activity system, as we see that in this particular case, Rules are generated and imposed from outside the activity system. This leads on to the next iteration of Activity Theory, which acknowledges that activity systems interact with and influence one another.

Engeström (1987, 2000, 2009) proposed Third Generation Activity Theory. In this iteration, Engeström proposed that activity systems interact with one another, and new activity

systems could evolve from old activity systems, when the tensions and contradictions within one activity system become too much to be contained. This approach acknowledges the existence of multiple activity systems which interact with one another, and also acknowledges the inevitable evolution of activity systems as living, organic entities, rather than static, unchanging ones.

Using third generation Activity Theory (Figure 2.5) supports an investigation of what is happening between all the components of an activity system, in addition to exploring how activity systems interact and influence one another at different levels. Rules may evolve within a system in order for that system to work. However, if the system changes while the Rules remain unchanged, this may result in Rules being imposed internally, or externally in the form of policy or law. Community may interact with other communities outside the activity system. The division of labour may be influenced by rules and community organisation which prevent or permit different categories of people from carrying out different tasks. The object takes on new significance in third generation Activity Theory. As can be seen in Figure 2.5, two interacting activity systems produce a third object space where they interact. The emergence of the third object is significant as a place where learning takes place.

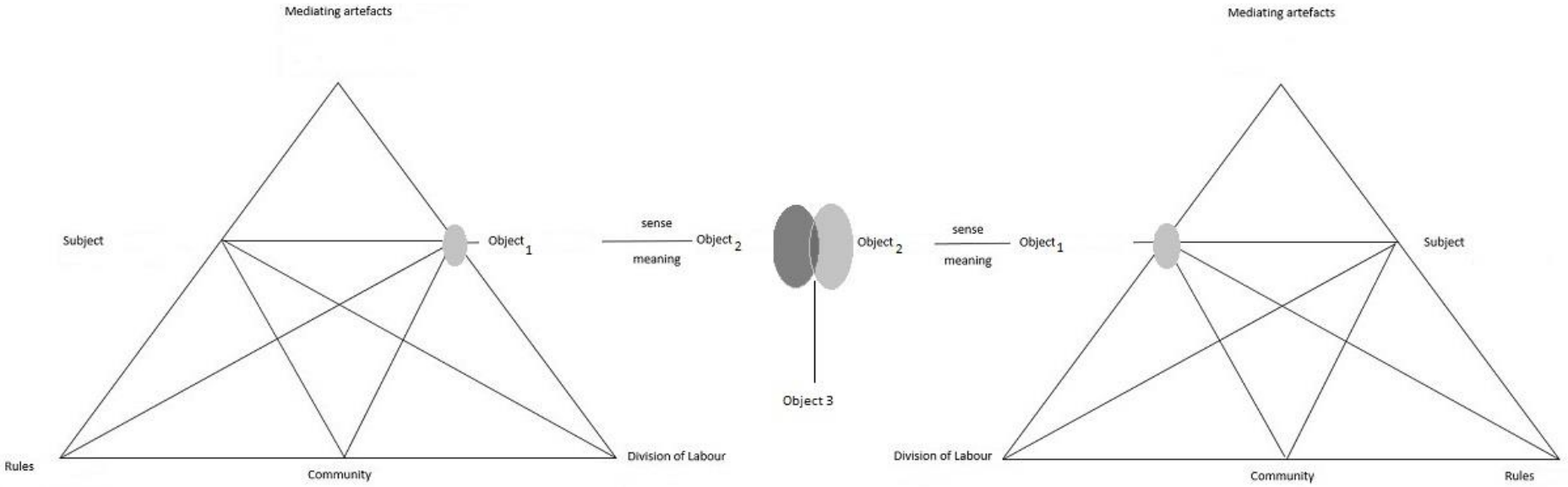


*Figure 2.5 Two interacting activity systems as minimal model for the third generation of Activity Theory (Engeström, 2009, p. 56)*

Referring to Figure 2.5, SoTL has the potential to become Object 3, sitting between the two Activity Systems of Teaching-Focused Academics and Research-Focused academics.

### 2.12.1 Expansive Learning Theory

Tensions and contradictions remain at the heart of activity systems thinking, as it is from these tensions and contradictions that developments within the activity system may be uncovered. Engeström proposes a framework which can be used in the context of Activity Theory to uncover tensions within and between activity systems. Expansive Learning Theory (Engeström, 2009; Engeström & Sannino, 2010), proposes five bipolar axes with which to identify potential tensions or contradictions within activity systems, as seen in Table 2.5, derived from the work of Engeström (2014) and Engeström and Sannino (2010).

*Table 2.5 Five axes of Expansive Learning Theory (Engeström, 2014; Engeström & Sannino, 2010)*

| **Axis** | **Inquiry** |
|---|---|
| Empirical – Theoretical | Is learning primarily a process of acquiring and creating empirical knowledge and concepts or a process that leads to the formation of theoretical knowledge and concepts? |
| Verbal – Material & Multimodal | Is learning primarily through verbal means, or is there a variety of modes and media which are used to facilitate the process? |
| Vertical – Horizontal | Is learning primarily a process of vertical improvement along some uniform scales of competence or horizontal movement, exchange and hybridization between different cultural contexts and standards of competence? |
| Stabilised – Fluid | Is the culture in which the learning takes place stable, or is there flux? |
| Adaptive – Transformative | Is learning primarily a process that transmits and preserves culture or a process that transforms and creates culture? |

Expansive Learning Theory is used to uncover the tensions and contradictions which exist between the components of an activity system, and between activity systems. Using a

modified form of Nonaka and Takeuchi's Theory of Organizational Knowledge Creation, Engeström (1999, p. 384) takes a systematic approach to expansive learning (Figure 2.6).

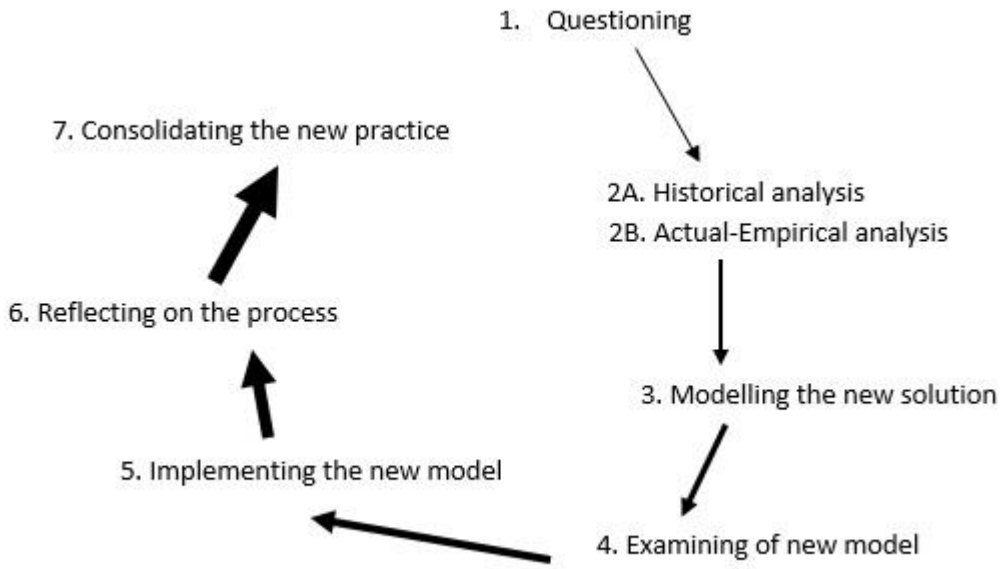


*Figure 2.6 Sequence of epistemic actions in an expansive learning cycle (in Engeström, 1999, p. 384)*

The Expansive Learning Cycle is useful when looking at change. Every step of the cycle is subject to influences and actions within the activity system, therefore the evolution of the activity system is uncovered, as are the tensions and contradictions which force the emergence of new activity systems. In this case, the Teaching-Focused activity system can be thought of as emerging from a previous Academic activity system, as the tensions and contradictions which acted on the system forced the separation into two distinct Teaching-Focused and Research-Focused activity systems. In the following sections, I will further investigate each of the dimensions of the Teaching-Focused Academic Activity System, with reference to a secondary theory which helps to elucidate what is going on.

## 2.13 Communities of Practice

A central component of Engeström's Activity Theory is Community. The inclusion of Community takes Activity Theory beyond that of the individual and allows for the investigation of organisations. Within education, the notion of Communities of Practice is underpinned by the work of Wenger (1998). For the purposes of this study, I defined Community as Wenger's (1998) Community of Practice and contextualised with regards to SoTL using the work of Roxå, Olsson and Mårtensson (2007, 2008) and Roxå and Mårtensson (2011). Wenger's elucidation of what makes a Community of Practice, as well as his identification of boundary objects and brokerage was compelling in understanding the role of Community for Teaching-Focused Academics within the Activity System.

Wenger (1998, p. 73) describes three dimensions of practice within a community. These are:

1) Mutual engagement
2) A joint enterprise
3) A shared repertoire

*Mutual engagement* - is a vital part of a community of practice. It is what differentiates a community of practice from a group, team or network. Engagement in the community has to be actively facilitated and encouraged, in order to make members feel included and valued. This may include social time, talking and discussing issues, and the formation of meaningful relationships between the members of the community. At the heart of a community of practice is the diversity of the individuals that make up its membership. Their ability to contribute a variety of different skills and experience is what makes a community

of practice work as it is among these differences that creativity is fostered. The community of practice thrives on the complementarity of competences that are offered by individuals. In that, the community is bigger than the sum of its parts. This is not to say that communities of practice are harmonious entities; the opposite is true. It is the variety of individuals' opinions and beliefs that give it strength. The community also need not be geographically local; individual members may be physically separated, and yet the community of practice may still flourish when opportunities to engage are offered.

*Joint enterprise* - Central to a community of practice is the joint enterprise, which is a negotiated response to the situation of the members of the community find themselves in. The joint enterprise gives members a sense of ownership and mutual accountability. The community of practice does not exist in isolation; it exists within a larger system, and that system may exert influence or control over the community of practice. However, the response that a community of practice makes to its situation is independent of the influence of the larger system. In that way, it is the community of practice that shapes the practice that takes place within it. Any power that the parental system has over the community is mediated through its practice.

*Shared repertoire* - Over time, a community of practice devises a shared means of communication, including "routines, words, tools, ways of doing things, stories, gestures, symbols, genres, actions, or concepts that the community has produced or adopted in the course of its existence, and which have become part of its practice." (Wenger, 1998, p. 83) Shared meaning is useful to a community of practice as it binds together the history of the community, as well as lending itself to future interpretations.

There is also the potential for communities to exchange knowledge and skills, mediated via *boundary objects* and through *brokerage* between individuals (Wenger, 1998, p. 105). This is particularly pertinent when there are adjacent Communities of Practice which may have grown apart over time, resulting in separation of their goals and practices. There is still the potential for an exchange between communities, allowing communication between them.

Communities of practice are transformative in nature (Wenger, 1998, p. 85) and impact on the individuals who participate in them. In the context of higher education, Roxå and Mårtensson (2009, 2011) identify these as strong microcultures, within an institutional context. They identify many of the characteristics defined by Wenger; a high degree of trust within the microcultures, which is not dependent on role or status, a common purpose which is taken very seriously and value placed on it, collegial support, active leadership, and a shared vision of the future (p. 3). The external organisation (in this case a university) is not explicitly apparent, and the values of management out with the microculture do not necessarily match those within. However, Roxå and Mårtensson found one serious mismatch within the microcultures; while the individuals interviewed were actively engaged in a variety of SoTL activities, they did not articulate them as being central to their views on good teaching. Roxå et al. (2008, p. 280) identify two possible Trajectories for SoTL; Trajectory 1 arises when there are one or two "SoTL experts" in a department who are the "go-to" people. This benefits those individuals in terms of career, as their expertise is not shared by the rest of their colleagues. However, the department suffers as there is no shared expertise over the entire group. In contrast, Trajectory 2 is characterised by a shared expertise in SoTL within the whole department, so that every academic underpins their practice in a scholarly manner. This benefits the group as a whole, and is also of more benefit to student learning. However, it does not benefit individuals, as their expertise is shared between the group.

More recently, a study on the relationship between faculty development in two US colleges and student learning (Condon, Iverson, Manduca, Rutz, & Willett, 2015) concluded that there was a measurable improvement in student learning when staff engaged with professional development. In addition, this improvement was greater when the faculty development was sustained; an embedded approach to development was more successful than offering one-off workshops. For individual staff, intrinsic motivation (Deci & Ryan, 1985) and a willingness to take risks also resulted in greater results. There was also evidence that staff who did not participate actively with faculty development still benefitted from the expertise of their colleagues, incorporating some of their findings into their own teaching. This chimes with Trajectory 1 (Roxå et al., 2008, p. 280), highlighting that there is still benefit to be had by having pedagogic "experts" within a department, and that brokers (Wenger, 1998, pp. 105; 255) can improve teaching and learning indirectly.

## 2.14 Grandiosity, Zero-sum Games and Illusion Tricks

Grandiosity (Alvesson, 2013) is a useful way to conceptualise the application of Rules and how that impacts on the Division of Labour in the Teaching-Focused Academic activity system. While Grandiosity owes much to Foucault (1977), unlike Foucault, Alvesson's explanation of Grandiosity is that often it is not deliberate, and the consequences are often unintended. This viewpoint supports the assertion that Rules within an Activity System evolve over time, both changing and being changed by the system. Alvesson (2013) asserts that Grandiosity is creeping into every aspect of modern life, in particular the modern university. It is a type of one-upmanship which results in ever grander language to describe people and events, without any increase in quality in real terms. Grandiosity is closely related to the consumerist society, where consumption has a personal and social component. As we become more enthralled with consumerism, so our personal status is

measured against our accumulation of “positional goods”, “those things whose value depends strongly on how they compare with things owned by others” (Frank, 1985, p. 101). Objects become status symbols and titles become grander. Importantly, despite superficial promotion, there is no measurable increase in quality. This leads to the Zero-Sum Game, where, for each “have” there is a corresponding “have-not”, and an increase in value or status relies on another having less or no value/status. Grandiosity manifests itself in the use of inflated language governing both individuals and groups. The increasing reliance on league tables in Higher Education, and the collection of metrics could be seen as a form of grandiosity. Turner (2011), for example, found no statistical difference in the university league tables produced by The Guardian, The Independent or The Times, despite differing approaches to compiling the data. In higher education, there is a tendency for more and more areas to be included at degree level, leading to more degree programmes and credentialisation. While this promotes the idea of more people having the opportunity to access higher education, the downside is that it may lead to over-qualification and under employment (Dore, 1997). The downside to this grandiosity is that as something becomes more commonplace, it loses its value. So, whereas a bachelor’s degree was a passport to a career twenty years ago, students are now required to have a Masters, or PhD level qualification. The final part of grandiosity is that of the illusion trick (Alvesson, 2013, p. 15). Illusion tricks exist where there is a lack of substance behind a flashy image or idea, and where the reality does not add up to the hype. Examples of illusion tricks include ethical principles, gender-equality plans and quality assurance initiatives, where, despite a great deal of effort and publicity, the underlying culture of an organisation or institution does not change. For example, an institution may declare that they have a 50:50 male-female staff ratio, however, the reality of that ratio is that high prestige research roles are done by men, while the women work in teaching roles. This creates a tension in the Division of Labour as

individuals are treated differently, and Rules may be applied in a different way depending on the career route chosen (Cashmore, 2009a, 2009b). Illusion tricks are the most destructive of the aspects of grandiosity, as they are, in effect, false promises.

Teaching-Focused Academics may be subject to grandiosity, being caught in a zero-sum game, and subject to illusion tricks. This can be seen in the areas of title, and reward and recognition. The recognised titles for academics in the UK are, rising in seniority, Lecturer, Senior Lecturer, Reader, Professor. As a Teaching-Focused Academic at a research-intensive university, I have had the following titles: Teaching Assistant, Associate Lecturer, Faculty Teaching Assistant, University Teacher and Senior University Teacher. Each of the titles belies the fact that the Research-Focused Academics did not want us referred to as "lecturers". Other institutions refer to their Teaching-Focused staff as Teaching Fellows, and titles may include Senior, Principal and Professorial Fellow. There is power in a title, and the academy excludes Teaching-Focused academics from using the same title as their Research-Focused colleagues. This separation of titles creates a two-tier system, where the universally recognised titles are used by the Research-Focused academics, while the Teaching-Focused academics are given newly invented titles.

Reward and recognition for Teaching-Focused academics is also subject to grandiosity. Teaching excellence is an ill-defined concept within higher education, which is receiving renewed attention in the UK, as a result of the proposed introduction of the Teaching Excellence Framework in England. Teaching excellence can be misunderstood as teaching popularity, or entertainment value, rather than by any learning that is being done. SoTL does appear to have a role in defining teaching excellence, as it allows teachers to demonstrate a scholarly approach to teaching, whilst contributing themselves to the knowledge of the field. However, using SoTL to evidence teaching excellence is not without

its challenges. Ramsden and Martin (1996) discovered that out of 32 universities in Australia, only 50% of them had any criteria to judge teaching excellence, and only 25% had explicit SoTL criteria. In contrast, more than 50% of the institutions relied solely on student feedback as a means to ascertain "teaching excellence". Ten years later, Chism (2006) reported similar findings in a larger study within the US. She found that from 144 teaching awards, in 85 universities in 33 states, less than 50% used criteria to judge teaching excellence, and less than 15% specifically used SoTL as a criterion. In addition, 92% used nomination letters, with one third using the letter as the only form of evidence of teaching excellence. Only 4% asked for evidence on student learning, and only 2% matched the criteria with the evidence. Despite the age of these studies, more recent work centred in the UK, by Cashmore, (dealt with in section 0) suggests that not much has changed. As there is evidence to suggest that SoTL is being ignored as a criterion to judge teaching excellence, it would be prudent to examine why its inclusion would benefit teaching in higher education.

Roxå, Olsson and Mårtensson (2008) explore how teaching excellence can be influenced by engagement with SoTL, in a Swedish context. They propose that there are two "trajectories" that can be taken with engagement with SoTL: Trajectory 1, which results in improvement of teaching and learning for the individual teacher, whilst maintaining the status quo of current teaching and learning practices, or Trajectory 2, where like-minded individuals meet to discuss teaching and learning, where teaching and learning practices may be transformed through the exploration and application of theory into practice. Roxå and his colleagues suggest that Trajectory 1 is more likely to benefit the individual; if all goes well, there may be reward and recognition, and if it fails, then it is unlikely that colleagues would notice. Trajectory 2 is more likely to benefit the institution, as it seeks to improve teaching and learning for the student, beyond the influence of the individual

teacher. Following Trajectory 1 supports a group of scholars to become local “brokers” (Wenger, 1998, pp. 105; 255) of ideas of teaching and learning; whereas Trajectory 2 is more likely to foster the development of communities of practice (Wenger, 1998, pp. 72–84). The importance of these communities of practice is observed in further work, where Roxå and Mårtensson uncover what they term “strong academic microcultures” within their institution, where communities of practice have been allowed to flourish.

In order for more individuals to engage satisfactorily with SoTL, there has to be a change in culture to elevate the status of SoTL. This is significant in that it rewards those who are intrinsically motivated, while at the same time allows extrinsically motivated individuals to internalize the motivations for engagement, resulting in a deeper commitment to SoTL, in the way that disciplinary research is a product of the local culture. As Roxå et al (2007) suggest, that change can occur through engagement with SoTL. Their findings echo the notion of intrinsic and internalized extrinsic motivation in that they assert that for successful change to occur, not every individual need to engage with SoTL at the highest level, but that there should be a balance ensuring that everyone engages with SoTL at some level.

## 2.15 Threshold Concepts

Threshold Concepts, as proposed by Meyer and Land (2003) may also be considered when investigating engagement with SoTL. In general, Threshold Concepts have been used in the context of student learning, and within disciplines. While much of the early investigation into Threshold Concepts has been done in the context of undergraduate education, work has also extended into the areas of postgraduate, and in particular, doctoral study (Keefer, 2015; Salmona, Kaczynski, & Wood, 2016; Wisker, 2016), and educational developers

(Timmermans, 2013). Webb's (2015, 2016) recent study into mid-career academics participating in a SoTL leadership course is the first of its kind to suggest that there are Threshold Concepts identified with SoTL. Both this study, and the work of Keefer, Wisker, Salmona, Kaczynski and Wood, offer insight into the possible thresholds that academics may face when confronted with SoTL.

In brief, a Threshold Concept is a concept that a learner must negotiate and understand before they can move on with their learning in a particular area. However, it is not just a new piece of knowledge to be learned. For a concept to be considered as a Threshold Concept, it must exhibit the following properties: it should be *transformative*, *irreversible*, *integrative*, *bounded,* and *troublesome* (Meyer & Land, 2003), of which *transformative* and *irreversible* are the most important. In addition, the *discourse* of SoTL should be considered as being potentially threshold in nature (Meyer & Land, 2005). In order for the acceptance of the presence of threshold concepts associated with engagement with SoTL, we must first think of academic staff as learners. This may be contrary to the image of an academic as an expert, but it should be considered that the academic is only an expert in their particular disciplinary field; in order to engage with, and participate in SoTL, the academic, especially one whose expertise lies in Life Sciences, has to renegotiate their position regarding research paradigms, and lay themselves open to unfamiliar methodology and literature which is alien to them. There is also the possibility that individuals may reject the new paradigm, being more comfortable with what is known. However, there are individuals who are motivated to pursue SoTL, and they may be considered to be different to their colleagues in that they have additional expertise.

Both Keefer (2015) and Wisker (2016) emphasise the experience of liminality in doctoral studies and the transformation associated with becoming a researcher. Teaching-Focused

Academics will have experienced this within the context of their discipline. However, life scientists confronted with SoTL, whether it is introduced as part of a PGCert during academic probation, or as a requirement for continuing professional development, or reward and recognition, may experience once again feelings of disorientation and liminality as they grapple with the conventions of SoTL. Salmona et al (2016) and Webb (2015; 2016) both identify research methodology as a challenge, the former in doctoral thesis completion and the latter in understanding SoTL. The identification of research methodology is pertinent to Life Scientists' understanding of SoTL as their positivist background and scientific training precludes them from having experience of, or confidence in interpretivist, qualitative methodologies. This lack of experience or confidence may lead to a range of responses – a rejection or mistrust of the methodologies, attempts to carry out pedagogic research using scientific (quantitative and/or statistical) methodologies, or a superficial application of qualitative methodologies. For Life Scientists to embrace these methodologies, and by inference, a qualitative paradigm, requires both an epistemological and ontological shift, both of which could be an uncomfortable, troublesome experience.

Wisker's (2016) recent work on doctoral liminality identifies several areas where doctoral students may become stuck or blocked. The stuck places, representing liminal spaces (Lather, 1998) are identified as:

> "moments before realizing the main dialogue in a literature review, what main theories help you address your research question, and what methodological approach you should take to approach that research. They also precede understandings about what the data tells us, and what overall knowledge the research findings are making, so that liminal space moments are understandable as transformational." (Wisker, 2016, p. 168)

As with Salmona (2016) et al's work, all of these liminal spaces could be applied to Life Science Teaching-Focused Academics' interactions with SoTL. In addition to the already-identified methodologies, literature, theory, formulating research questions, data analysis and interpretation are all potentially alien activities for Teaching-Focused Academics from a Life Sciences background to deal with, with the potential to prevent individuals from this group from making progress with their understanding of SoTL. Wisker is particularly concerned with liminality with doctoral writing, which can be seen as a synthesis of the elements previously identified. In the case of Teaching-Focused Academics, writing for SoTL may be seen as a challenge of negotiating a series of thresholds of understanding each of the separate elements in order to produce the written outputs of pedagogic research.

As has been mentioned previously, the potential threshold concepts encountered by Teaching-Focused Academics may be ontological in nature (Keefer, 2015; Webb, 2016). Just as doctoral students have to come to terms with their identities as researchers within their discipline or field, Teaching-Focused Academics face an added complication. As experienced practitioners in their own disciplinary areas, the introduction of SoTL has the potential to disrupt their view of their own identity, as they move between the identities of Life Science Academic, teacher, pedagogic researcher and disciplinary researcher. This ontological shift may involve leaving behind a former identity, or the Teaching-Focused Academic may also encounter liminality or uncertainty as to what their identity is. They may face the uncomfortable shift from disciplinary expert to SoTL novice (what Cousin (2012) terms "studentness"), causing uncertainty and insecurity of identity. Juxtaposing the disciplinary expert with the SoTL novice has the potential to result in mimicry (Land, Meyer, & Baillie, 2010).

As has been demonstrated using the experiences of doctoral students (Keefer, 2015; Wisker, 2016), and faculty certificate participants (Webb, 2015, 2016), there is much scope for the potential of epistemological and ontological thresholds to be uncovered in the area of Teaching-Focused Academics' engagement with SoTL. This may go some way to understanding reasons for the type of engagement with SoTL which occurs, barriers to that engagement, and misconceptions of the definitions of SoTL which exist.

The choice of theoretical frameworks in this study facilitates the exploration of the Activity System itself. Activity Theory (Engeström, 1987) is used as a framework to identify areas of tension and contradiction within the system. These tensions can then be further explored using the other theories identified as being pertinent to the area to which they are being applied; Communities of Practice (Wenger, 1998) to explore Community, Grandiosity (Alvesson, 2013) to explore Rules and Division of Labour, and Threshold Concepts (Meyer & Land, 2003, 2005) to look at engagement with SoTL.

# 3 Research design and methodology

In this chapter I deal with the research methodology employed in this study. I begin with epistemological and ontological considerations, and researcher positioning. I then describe the methodology employed in the study and the rationale for the methods used. Full details of recruitment and sampling, data collection and analysis are given, including the ethical considerations surrounding this study. Finally I consider the strengths and weaknesses of the methodological approach employed in the study.

## 3.1 Epistemological and ontological considerations

### 3.1.1 The insider researcher

For reasons outlined in chapter 1, this study can be characterised as "insider-research" (A. Smith & Holian, 1999; van Heugten, 2004). As a Life Sciences teaching-focused academic engaged with SoTL, I am familiar with the context and the challenges that the participants in this study face. The "Insider-researcher" may also be referred to as the "Practitioner-researcher" (Robson, 2002) or "Worker-researcher" (Armsby & Costley, 2000). As an insider-researcher I have insight into the problem being addressed, as I have experienced the issues. As part of the community of interest, I have access to potential participants and a bond of trust which I can use to the advantage of the study. While I have particular insight into the problem as an insider-researcher, the position is not without its issues. Asselin (2003) warns insider researchers to gather data objectively, from the position of knowing nothing about the phenomenon they are studying although this is not completely unproblematic. This allows the insider-researcher to observe and surface issues which might not be part of their personal experience, but which are an essential part of what is being examined. According to Adler and Adler's (1987) identification of the three types of

qualitative researcher membership roles. I am characterised as a complete member researcher; that is someone who is already a member of the group, and who espouses the group's values and goals. This is in contrast to the other two roles, which are peripheral member researchers, who do not participate in core group activities, and active member researchers who are involved with group activities without being committed to the shared values and goals of the group. Being a complete member researcher results in a dual role which can risk confusion in interpreting data from the point of view of the researcher, or of the group member (Asselin, 2003). However, being a member of the community also has its advantages, as I share experience, identity and language with the group I am studying. The shared experience, and sense of identity was one of the drivers which led me to conduct this study, and, paradoxically, the feeling that a shared language (Green, 2010) with which to engage with SoTL was missing was also a driving force.

Being a member of the community being studied has its advantages. There is a sense of acceptance from the group, and a level of trust and openness, because of a shared history (Corbin Dwyer & Buckle, 2009). However, the familiarity the researcher has with the group also has the potential to impede the research, as participants may assume that the researcher is familiar with their experiences, and fail to explain themselves clearly, or that the researcher may allow their experience to cloud their judgement. Therefore, it is important for me as an insider researcher to acknowledge my biases and preconceptions, and put them aside, while, at the same time, being mindful of capturing the detail of the experiences of the participants in my study.

## 3.2 Methodology

### 3.2.1 Rationale for a qualitative study

In this section I explore the rationale for the approach I took for the study. I look in detail at the advantages of a qualitative study to unearth the complexities of the Teaching-Focused Academic, and why narrative interviews are my preferred method of data collection.

My access to information, via my network of contacts, is via discussion and conversation, therefore my preferred study was qualitative in nature, allowing me to explore issues which I have experienced, while also giving participants the freedom to elaborate on issues which are of particular importance to them. This study concentrated on the social world inhabited by Teaching-focused academics, utilising Activity Theory (Engeström, 1987, 2000) to explore the component parts of that social world. As such, it was a hermeneutic study, relying on my interpretation of data to build a picture of the activities and challenges faced by Teaching-Focused Academics. The complexity of the Teaching-Focused Academics' Activity System cannot be satisfactorily explained by Activity Theory itself; therefore individual components of the Activity System are further explored by supplementary theories; Communities of Practice (Wenger, 1998), Grandiosity (Alvesson, 2013) and Threshold Concepts (Meyer & Land, 2003, 2005). I originally considered a mixed methods study, developing a survey for initial data gathering and participant recruitment for interviews. However, the results which were generated from the survey were limited in terms of how they could be used to inform the study, and I abandoned further pursuit of that line of enquiry. However, the data generated for each individual from the survey was useful to act as a starting point for the interviews, and therefore, I used graphical representations of an individual's data as a mediating artefact, which could be emailed to the interviewee prior to the interview taking place.

### 3.2.2 Strengths and weaknesses of using narrative interviews

The use of interviews is appropriate for generating rich data which captures an individual's experiences and beliefs. When this is done with a number of participants, a fuller picture of what is going on can be built up. However, it should be acknowledged that the picture which emerges from the data is coloured by the experiences of both the individuals being interviewed and the interviewer (Riessman, 2005). Rather than forming a truth which is applicable to the entire UK higher education sector, or even the UK HE Life Sciences sector, the picture is an amalgamation of the experiences of twenty-one academics from a range of UK universities in the period immediately preceding the 2014 REF. Therefore this study provides a snapshot of the experiences of these academics during this time, and their reflections on their roles as Teaching-Focused Academics in the period directly prior to REF2014.

Narrative interviews have been systematised by Schütze (1992), who employs a two phase approach. Phase 1 consists of the interviewee relating their story with minimal interruption from the interviewer. Phase 2 then commences with questioning from the interviewer, with questions ranging from questions designed to pursue the narrative potential of the story, to asking interviewees about their own theorising. Schütze warns against asking questions too early on in the process, as it impedes the spontaneous nature of the story being recounted. However, Jovchelovitch and Bauer (2007) contend that the lines between semi-structured and narrative interviewing is blurred, taking the view that "rather than a new form of interviewing, we have semi-structured interviewing enriched by narratives" (Hermanns, 1991; Jovchelovitch & Bauer, 2007). As such, the interviews I employed were recognisable as those described by Jovchelovitch & Bauer, and Hermanns. I used the first part of the interview to allow the interviewee to talk about themselves in relation to the

graph generated by their responses to the survey. Once that was exhausted I started asking questions. While I had a list of questions, I used them only as a guide, following the natural direction of the narrative as presented by the interviewee. As such, I completed a series of interviews which, while covering a similar area of academic experience, focused on the issues which were of particular importance to each individual interviewee (Riessman, 2005).

### 3.2.3 Rigour

One of the criticisms of qualitative studies is the perceived lack of rigour in comparison to quantitative studies. This reflects the difference in convention between a positivist and interpretivist paradigm. According to Michael Quinn Patton (2002, p. 432):

> *"Qualitative analysis transforms data into findings. No formula exists for that transformation. Guidance, yes. But no recipe. Direction can and will be offered, but the final destination remains unique for each inquirer, known only when – and if – arrived at."*

Patton's statement underlines a fundamental difference between the positivist and interpretivist paradigm, which is difficult to reconcile. As a Life Scientist and an educational researcher, I also struggle to reconcile interpretivism with positivism. In order to reconcile these differences, I followed these principles in ensuring to the best of my abilities, that the study is as rigorous and true to the experiences of the individuals involved as it can be, given that what follows is my interpretation of those experiences. With the intention of producing a faithful representation of the perceptions of the interviewees, I used the following criteria when analysing the data:

*Frequency* The number of times a particular topic occurred while interviewing was important. This was an indication that the topic was important to individuals and to the interview group as a whole.

*Emphasis* In addition to the words expressed by interviewees, the force with which they talked about topics was taken into consideration. As with frequency, the stress placed on topics gave me an indication that this was important to interviewees.

*Impact* In contrast to the previous two categories, I interpreted impact as something which might have been said by only one or two interviewees, but which made an impression on me which stayed with me post-interview.

### 3.2.4 Use of direct quotes in findings chapters

Following interview transcription, and analysis of the data, I make use of direct quotes in the three findings chapters, 4, 5 and 6. Corden and Sainsbury (2006) found seven reasons why researchers used verbatim quotes in their publications. These were: "presenting discourse as the matter of enquiry" (p.11); "presenting quotations as evidence" (p.11); "presenting spoken words for explanation" (p.12); "using quotations as illustration" (p.12); "using quotations to deepen understanding" (p.13); "using spoken words to enable voice" (p.13) and "using quotations to enhance readability" (p.14). From these reasons, I can identify that I used direct quotes as evidence, to deepen understanding, and to enable voice. The use of quotations as evidence is contested, with some researchers taking the view that evidence comes, not from direct quotes, but from the conclusions and linkages of the thematic analysis of the data. This means that direct quotes are not necessary. However, I felt that the use of direct quotes was evidence of the experiences of the participants in the study. I was also aware that they wanted their experiences to be known

and understood, and their voices to be heard. The impact of some of the quotes is to give a more powerful account of the Teaching-Focused academics in this study, by letting them talk in their own words.

## 3.3 The study

### 3.3.1 Pilot development

The UK Life Sciences teaching and learning community is large, and buoyant. The HEA UK Centre for Bioscience was one of the largest of the Subject Centres, prior to its closure in 2010. This was largely due to the enthusiasm of the members of the community, but also the practicality of bioscience being an umbrella term for the range of science disciplines covering the wide range of scientific investigation into living organisms, ranging from the "hard-science" of biochemistry and biophysics, to the softer, social conventions of population and ecological studies. I therefore had to develop a means of gathering initial data and recruit participants for the main study. Despite the qualitative nature of the study, I employed an online survey, which I piloted with seven bioscience colleagues. The survey, which was sent out to recruit participants contained a series of questions using Semantic Differential, as an alternative to the more commonly used Likert (1932) scale questions. Semantic Differential (SD) (Osgood & Suci, 1969; Osgood, Suci, & Tannenbaum, 1957) provides an interesting alternative method of data gathering to the more commonly used Likert scale (Likert, 1932). Whereas Likert scales ask the participant to rate on a numerical scale from low to high, SD requires the participant to make a decision on the meaning of a word or phrase in terms of bipolar adjectives, that is, adjective pairs which are antonyms, on a seven point scale. The adjective pairs themselves have a weighting on a particular scale. Osgood (*ibid*) identified a number of scales, of which the three most reliable and commonly used are Evaluation (E), Potency (P) and Activity (A). Bipolar adjective pairs

relate to one of the scales. For example, High – Low is an Evaluation pair, Small – Large is a Potency pair and Dynamic – Static is an Activity pair.

In order to understand how SD works, we can use a readily understood example, using "Mountain" as a concept (Figure 3.1).

| Mountain | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| High | x | o | o | o | o | o | o | Low(E) |
| Small | o | o | o | o | o | o | x | Large(P) |
| Dynamic[1] | o | o | o | o | o | x | o | Static(A) |
| Dynamic[2] | x | o | o | o | o | o | o | Static(A) |

*Figure 3.1 Measuring "Mountain" using SD, showing a potential difference in perception of Activity with [1]the general public and [2]geologists*

The general public are likely to describe Mountain as "high", "large" and "static"[1], however a geologist would be more likely to view Mountain as being "dynamic" in geological terms.

SD gives us the possibility of measuring the meaning of concepts by assigning a number to each of the points on the scales. In Figure 3.1, the negative side of the scale (low, small, static) would be 1, going up to 7 on the positive side of the scale (high, large, dynamic). Therefore, a member of the general public would score 7,7,2 for Mountain, whereas a geologist would score 7,7,7 for the same concept. We could then say that this geologist perceives Mountain as having a more positive score on the Activity scale than the member of the general public. We can take these numerical scores and plot them on a 3-dimensional graph representing where the concepts sit within the "semantic space", and example of which can be seen in Appendix 1.

SD can be used to explore the perceptions of individuals. However, a more powerful use of SD is to use it to explore the perceptions of groups of individuals. The scores obtained for

any concept can be combined by taking the average for a defined group of individuals. Similarly, data from more than one concept maybe plotted on one graph to explore how concepts may be related to one another.

For the purposes of the study, I chose fifteen concepts which represent aspects of Academic Identity relevant to the project, and which were important to me. These concepts can be seen in Table 3.1. The fifteen concepts were chosen to reflect areas typical of academic work, both for traditional Research and Teaching academics and also for Teaching only academics.

*Table 3.1 Fifteen concepts representing aspects of Academic Identity used in an online survey, and reasons for choosing them.*

| **Concept** | **Reasons for choosing the concept** |
|---|---|
| Bioscience | Field within which all respondents work |
| Research | Dominant feature of university academic life; one part of the traditional academic role of research, teaching and administration |
| Discovery | One of Boyer's (1990) scholarships; synonym for Research |
| SoTL | A unique facet of Teaching-Focused Academics' role |
| Pedagogy | The science of learning |
| Education | Synonym for "Teaching and Learning" |
| Community | As academics and teachers, we have to work together. Learning is a communal pursuit (Wenger, 1998) |
| Collaboration | Teaching and learning is a collaborative exercise |
| Competition | Research is often seen as competitive in terms of funding, publishing, Research Excellence Framework (Higher Education Funding Council for England, n.d.) |
| Lifelong Learning | The notion that as academics we should continue to learn. |
| Teaching | As academics, do we value our own teaching more than students' learning? Part of the traditional identity of an academic. |
| Students | The receivers or consumers of education |
| Career | Occupation of one's life with opportunities to progress |
| Identity | Close affinity; "Being" |
| Administration | The third part of the traditional academic identity |

In addition to the choice of concepts, bipolar adjective pairs (Table 3.2) were chosen using Osgood's (1969; 1957) original work, using adjectives which have the most reliable results on the Evaluation, Potency and Activity scales. A total of fifteen bipolar adjective pairs were

chosen, with twelve pairs used per concept. The permutation of bipolar pairs was changed for each concept, and the orientation of the poles (positive – negative) was reversed for each subsequent pair, as recommended by the Osgood (1957).

*Table 3.2 Bipolar adjectives used in the study. Each concept was evaluated with twelve bipolar pairs from this list of fifteen pairs.*

| **Evaluation** | |
|---|---|
| (positive) | (negative) |
| valuable | worthless |
| pleasant | unpleasant |
| relaxed | tense |
| clear | hazy |
| sociable | unsociable |
| **Potency** | |
| dominant | submissive |
| masculine | feminine |
| alive | dead |
| deep | shallow |
| large | small |
| **Activity** | |
| complex | simple |
| active | passive |
| emotional | unemotional |
| severe | lenient |
| dynamic | static |

The survey was used to recruit participants to the study, and the conceptual maps each participant's responses generated was used to facilitate the conversation in the interviews. Data was not used further in this study, as the sample size was small (65 responses). The size of the sample made any statistical analysis limited in its usefulness, therefore it was decided not to pursue this line of inquiry any further.

### 3.3.2 Sampling and recruitment

For qualitative studies it is usual to use purposive sampling, the goal of which is to sample in a strategic manner which maximises the relevance of the participants to the research questions being asked (Bryman, 2012, p. 418). There are many subtypes of purposive

sampling, which are appropriate in different cases. For this study, sampling was done as a combination of opportunistic and stratified purposive sampling. Opportunistic sampling capitalises "on opportunities to collect data from certain individuals, contact with whom is largely unforeseen but who may provide data relevant to the research question" (Bryman, 2012, p. 419). Stratified purposive sampling is "typical cases or individuals within subgroups of interest" (Bryman, 2012, p. 419). The recruitment survey was sent out via email using three routes: the School of Life Sciences University Teachers' mailing list at my own institution, the Bioscience Pedagogic Research JISC mail list (formerly HEA Bioscience Pedagogic Research) and the Society for Experimental Biology's Education and Public Affairs mailing list. These three modes of contact contained overlap, but given the volume of email traffic experienced by academics, I was hopeful that a larger audience would read at least one of the requests and respond to it. The first email was sent out via the mailing lists between the 2nd and 7th January, 2012, followed by a reminder three weeks later. The online survey remained open until two weeks after the second email had been sent out and was closed on the 11th February, 2012.

Survey participants were invited to volunteer to be interviewed. Twenty-one individuals volunteered and were interviewed from a range of UK universities and academic roles, within Life Science departments.

### 3.3.3 Nature of the sample

The twenty-one participants who were interviewed came from a variety of backgrounds and institutions, from research intensive ancient universities, to post-1992 institutions. Academics from twelve universities took part in the study, which included one institution in Scotland, one in Wales and ten in England. Men (6) and women (15) are represented in the sample, as are a range of experiences and roles, as outlined in Table 3.3.

Institutional differences in the composition of the sample are recorded in Table 3.3. While it is of interest to note the variety of roles and titles within the sample and the range of institutions involved, these differences did not represent any tangible differences in the experiences of the individuals taking part in this study. During the data analysis, I attempted to make sense of the findings via a range of groupings; university mission, stage of career, contract type. These groupings did not shed light on the experiences of any one group. I concluded that experiences of SoTL were likely to be at the level of the individual, as, in some cases, two individuals at the same institution in the same stage of their career could have a different experience of SoTL. Therefore, individuals have not been further identified in chapters 4-6, as this did not add to the findings.

### 3.3.4 Inclusion and exclusion criteria

The survey was open to UK Life Science academics who received at least one of the emails from the three routes described above. This ensured that those contacted were both Life Scientists, and had an interest in SoTL. Excluded from the sample were individuals on temporary contracts; teaching assistants or post-doctoral fellows, and those whose main job was research, but who might teach in an adjunct capacity. While this may run contrary to the evidence of increasing casualization of teaching in higher education it was my intention to capture the views of academics in permanent positions with a majority of their time given to teaching, as these individuals are those most likely to engage with SoTL and most likely to be affected by any move to formalise SoTL outputs into the REF, or REF-like exercise. Research-Focused Academics were also excluded from this study, as the focus for their role is REF-returnable research. The original focus for this study was engagement with SoTL and its place as a proxy for disciplinary research in the role of the Teaching-Focused Academic, excluding Research-Focused Academics. As a part-time PhD student with limited

resources, while it may have been a useful addition to include Research-Focused Academics as a comparison, at this time it was outwith the scope of the study.

### 3.3.5 Data collection

Sixty-five individuals responded to the survey, with twenty-one indicating that they would be prepared to be interviewed (Table 3.3). Data collected from the survey was used to ascertain the backgrounds of the interview participants in terms of type of institution, type of contract, role and present engagement with SoTL.

*Table 3.3 Composition of the sample by title*

| Type of institution | Title | Male | Female |
|---|---|---|---|
| Ancient | University Teacher | 0 | 3 |
| | Senior University teacher | 0 | 3 |
| | Senior Lecturer | 1 | 0 |
| | Professor | 0 | 1 |
| Red Brick | Teaching Fellow | 0 | 1 |
| | University Teacher | 0 | 2 |
| | Senior Teaching Fellow | 1 | 0 |
| | Senior Lecturer | 3 | 1 |
| Plate Glass | Lecturer | 0 | 1 |
| | Senior Lecturer | 0 | 1 |
| Post 1992 | Lecturer | 0 | 1 |
| | Senior Lecturer | 0 | 1 |
| | Principal Lecturer | 1 | 0 |

Interviews took place either face-to-face, or by telephone or by Skype, using the audio feature. I used a pre-prepared set of questions (Appendix 1), but as the sequence of interviews progressed I found it easier to use the question areas as a guide and allow interviewees to lead the conversation. Interviews were recorded using two digital voice recorders, and fully transcribed as an ongoing process as soon after the interview as possible. A total of twenty one interviews were carried out in summer 2013. All participants were interviewed once, with the exception of the half phone/half in person interview, which had to be resumed at a later date because we ran out of time. Nine interviews were carried out face to face (range 35-70 minutes, average interview length, 45 minutes),

eleven were carried out over the phone (range 29-73 minutes, average interview length, 49 minutes), with one carried out half over the phone and half in person (57 minutes). This goes against the findings of Frey (2004), who found that telephone interviews were unlikely to be sustainable beyond 20-25 minutes. Sturges and Hanrahan (2004) noticed few differences between interviews conducted face-to-face or by telephone, whereas Irvine (2011) observed that face-to-face interviewees talked for longer, there was more vocalisation of agreement from the interviewer, more superfluous discussion, and that questions were more likely to be left unfinished or grammatically incorrect during face-to-face interviews. Novick (2008) found that, despite people's reservations that phone interviews lacked social and non-verbal cues, in reality there was no loss or degradation of data using this medium, concluding that it was researchers' own bias against phone interviewing which restricted its use. In my own experience, there was little difference in the length of interviews between the two groups, and I actually found the lack of non-verbal cues to be helpful in that it did not distract me from what was being said. Similarly, participants did not report discomfort using either telephone or Skype, and appeared comfortable with the medium.

Roulston et al (2003) suggest five challenges for novice interviewers: unexpected interviewee behaviour or environmental problems, intrusion of own biases and expectations, maintaining focus in asking questions, dealing with sensitive issues and transcription. From my own experience with the interviewees in the study, I found it easier to conduct the interviews over the phone or by Skype, rather than face to face. I put this down to the issues experienced with being an insider researcher; that my familiarity with the group meant that I was prone to talking too much and making assumptions of what interviewees were saying during face to face interviews. To highlight this, I give an example

of where my familiarity with an interviewee's situation led me to close down the narrative at what could have been a pivotal moment in the story.

> *I think I have to be aware, and I have always been like this with people, with any job that I'm in, is that I try not to, you never know who you're going to have to work within a certain environment, so I always, it always really upsets me if something negative happens with somebody, because I always think, well, what if we have to spend a day with each other in a room? And you know, but it does, I kind of think I've always had that in my past, I've always thought, you know, eh, I like when I interact with people for it to be positive interaction, most people do, it's not a strange thing to think, so, d'you know? I18*
>
> *Oh, yeah, I know what you mean. But we'll move on because I know what happened in that situation. - Interviewer*

The interviewee could have been probed to expand on the situation, but because we had shared knowledge of it, and I knew that it was painful for the interviewee, I glossed over it, and closed that part of the narrative down. This foregrounded my role as a fellow Teaching-Focused Academic. As a researcher, I should have picked up on what was potentially an interesting area to probe, as it impacted on the Teaching-Focused Academic and her relationships with colleagues. However, due to my positioning, in this case, as a colleague, that particular piece of narrative was lost to the study.

A lack of social and visual cues during the phone interviews meant that I paid more attention to what interviewees were saying, leaving them more space to fill with their stories. I interrupted less and the result was a richer source of the participant's voice.

Kvale (1996) proposes ten criteria for a successful interviewer, which is helpful in overcoming the challenges of being a novice: Knowledgeable, Structuring, Clear, Gentle, Sensitive, Open, Steering, Critical, Remembering and Interpreting. Bryman (2012, p. 475) adds two more qualities to the list: Balanced and Ethically sensitive.

The most difficult of these for me, as a novice researcher, was being balanced. I had a tendency to talk too much during the early interviews, which was exacerbated by the familiarity of both the interviewees and the topics we were discussing. Unexpectedly, the issue was resolved to a certain extent during the phone interviews. As with Irvine et al's (2011) findings, I found myself less likely to interject, leaving the interviewee free to discuss the topics of interest. This led to more rich, detailed data coming from the uninterrupted phone interviews. I then applied this to the later face-to-face interviews, talking less, and listening more to what the interviewees had to say.

### 3.3.6 The purpose of the theoretical framework

The use of Activity Theory to explore Teaching-Focused Academics allows me to take a critical stance in relation to the findings. As a Teaching-Focused Academic, my motivation for studying Teaching-Focused Academics was not only to understand their role, but also to improve it, both for present and future colleagues. Activity Theory is a vehicle for doing so, as it has common elements with critical theory; historicity, rules, community, tools and artefacts, and division of labour, allowing the researcher to explore the interplay of tensions and contradictions which occur at an individual and organisational level. Analysis of the interview transcripts proved to be a challenge for me. As a Teaching-Focused Academic in Life Sciences, my natural inclination is to use deductive methods in order to analyse data. Shifting my focus from quantitative to qualitative data, initially I attempted to employ a similar, deductive approach. While this was useful in breaking down the interview transcripts into small, manageable pieces, it was not until I understood the power of inductive reasoning that I was able to start to make sense of my data. This process involved the development of my research skills, taking me in a direction away from that of a Life Scientist. A major influence in supporting my development was Alvesson and Kärreman's

(2011) “Qualitative Research and Theory Development: Mystery as Method”. Alvesson and Kärreman suggest that the reason that researchers get stuck is because they adhere too closely to one particular theory or idea, which causes problems if they then come across anomalous data. They advise treating research like a detective mystery, using anomalies in the data, or “breakdowns” in the congruence between theory and findings as a mystery to be solved, and an opportunity for further investigation. Using this method, the theory must fit the data, rather than the other way around. They stress the importance of “interpreting and reflexive humans come to shape research and its outcomes with their sense-making, their ideas and methods.” (Strong, 2012) This was particularly relevant for me, as I was dealing with a complex system. I began with the notion that engagement with SoTL was the central concept, but it became clear that while this was important, it was the influence of REF which was driving every aspect of the activity system, despite Teaching-Focused Academics not being directly involved, and often actively excluded from it.

## 3.4 Ethical issues

When planning and carrying out this study, I was mindful that all research should be carried out in an ethical manner (Denscombe, 2009, pp. 62–73). In order to fulfil that, I address the criteria for an ethical approach to research as it applies to this study:

*Researcher Integrity*: I approached this study as an insider-researcher. I was part of the community that I wished to research. This gave me insight into participants’ experiences but it also meant that sometimes I had to remind myself of my role as a researcher. There were some surprising findings within the study, and also some sensitive issues which were brought up during interviews. I approached this with sensitivity, taking individuals’ concerns and issues seriously. I have taken care to represent the experiences of the

participants within this study. The Social Research Association's publication (2003), "Ethical Guidelines" recommends:

> "*While social researchers operate within the value systems of their societies, they should attempt to uphold their professional integrity without fear or favour. They must also not engage or collude in selecting methods designed to produce misleading results, or in misrepresenting findings by commission or omission*."
>
> ('Social Research Association Ethical Guidelines', 2003, p. 18)

*No misrepresentation or deception*: There was no secrecy in collecting data in this study. All of the participants were fully informed of the study, and their rights to withdraw. Each participant was furnished with a participant information sheet and a consent form (Appendices 3 & 4). They were also free to ask questions, either in person, or by email. I also gave all participants access to their interview transcripts and allowed them to amend or clarify points that were important to them.

*Protection of the interests of participants*: The study looks at the experiences of Teaching-Focused Academics in Life Sciences in the UK. As such, it was possible that some participants may have had disappointments or challenges in their careers. In order to protect participants, it was necessary for me to keep their identities confidential, and anonymise any revealing characteristics within their transcripts which I used within the findings chapters. In practice, anonymization meant removing the name of the participant's institution, city, and discipline within Life Sciences. Less frequently, job title was removed. While I knew the identity of each participant, I kept this separate from the transcripts, referring to each of them by a code, which I also used within each transcript. Therefore

each participant knew their own code, but no-one else's. During the data analysis phase of the study, I used these codes, however, in the thesis, I changed the codes so that they could not be directly linked with any participant.

I kept all interview transcripts in electronic form in a password protected folder. In addition to me, my supervisors had access to the transcripts, although, as previously stated, all transcripts were identified by code. Hard copy of transcripts, which I used during data analysis, were kept in a locked cupboard, and then put in confidential waste post-use. Electronic copy of the data will be kept until journal papers have been written. Data Protection is covered in the UK by the 1998 Data Protection Act ('Data Protection - GOV.UK', 1998). In summary, the Act ensures that those responsible for collecting and using data make sure that the information is kept anonymous and confidential.

Interview questions had the potential to unearth uncomfortable findings from participants, therefore it was important that I was sensitive to participants' feelings. It was also possible that participants might feel that some lines of questioning were aimed at uncovering their deficiencies as academics, therefore it was important to assure participants that the purpose of the study was to investigate the roles of Teaching-Focused Academics objectively.

It was vital to gain informed consent from participants. The original email sent to potential participants included information on the study. The online survey was also preceded by information and a statement of informed consent. Each participant was given an informed consent form and participant information sheet prior to interview. Participants were informed of their right to withdraw consent of their data being used up until the point of analysis. They were also supplied with a verbatim transcript of their interview, and given

the opportunity to amend or add to the transcript before returning it to me, with their approval.

This study was approved by the University of Durham, School of Education Ethics Committee on the 17th October 2012. The Ethics Approval Form, Plain Language Statement and Consent Form can be seen in Appendices 2-4.

## 3.5 Data analysis

All interviews were recorded using two voice recorders, and were transcribed by me as soon as possible after the interview took place. Transcripts were first interrogated for phrases and comments of interest. These were then copied from the Microsoft Word documents and put into Excel with a coding system to identify transcript and place within it, and the biographical details of the interviewee. Phrases were divided into relevance according to the fifteen academic concepts (themes) found in Table 3.1. I kept two copies of each set of phrases; one according to theme, the other according to interviewee. Within those Excel spreadsheets, I added keywords to each phrase, which I was able to use to search within Excel's database function, and I indicated where there was evidence of the possibility of the existence of a threshold concept, which I was able to exploit using Excel's database function. An example of data can be seen in Appendix 5. I chose to use Excel over NVivo for practical reasons. While I had attended a training session on NVivo 8, by the time I was ready to use it for this study, NVivo 10 was available. However, I was advised by IT support that there was a problem with NVivo 10 which made it unstable. I turned to Excel, initially as a stop-gap measure until the technical problem with NVivo was resolved, but found the database function of Excel to be adequate to my needs. Table 3.4 outlines the volume of phrases associated with each of the concepts identified in Table 3.1. It should be

noted that 'Bioscience' was not counted as it was common to all interviews, 'Discovery' was counted with 'Research', and 'Competition' was later subdivided to take into account the prevalence of the term 'REF'. It should be noted that these terms (with the exception of REF) were used to generate the 3D semantic differential concept maps, used as mediating artefacts in the interviews, when each participant was given the map generated from their survey responses, and was given the opportunity to discuss it. It can be seen that some themes generated more of a response than others.

*Table 3.4 Number of comments made per concept*

| **Theme** | **No. of comments** |
|---|---|
| Bioscience | Not counted |
| Research | 27 |
| Discovery | Counted as "Research" |
| SoTL | 27 |
| Pedagogy | 50 |
| Education | 5 |
| Community | 139 |
| Collaboration | 13 |
| Competition | 3 |
| Lifelong Learning | 80 |
| Teaching | 85 |
| Students | 32 |
| Career | 142 |
| Identity | 138 |
| Administration | 89 |
| REF | 54 |

### 3.5.1 Analytical frameworks

Engagement with SoTL is complex, and in order to make sense of it I identified frameworks in which to situate my qualitative data. I used five frameworks for the systematic analysis of interview data: As an overarching framework I used Engeström's Activity Theory (2014; Engeström & Sannino, 2010) and model of Expansive Learning. Engeström's model

supported my investigations into the different aspects of the Activity System, and eventually highlighted the pivotal role played by REF. The elucidation of REF as the defining influence on Teaching-Focused Academics was further strengthened by my use of Wenger's (1998) Communities of Practice to explore Community; Alvesson's (2013) Grandiosity to further explore the nature of Rules and Division of Labour in the Teaching-Focused Academic Activity System and Trigwell et al's (2000, p. 163) four dimensional model of scholarship and Meyer and Land's (2003) criteria for Threshold Concepts to look at SoTL as a Tool/Artefact and its possible role as a boundary object between two Activity Systems.

## 3.6 Reflection on data collection and analysis

The collection of data in this study was a learning experience for me as a researcher. One of the biggest surprises for me was the contrast between face-to-face interviews and phone interviews. My original plan was to travel to each interviewee to have a face-to-face interview. However, as an independent, part-time researcher, this proved to be impractical and I relied on phone/skype interviews, which proved to be as useful as the face-to-face interviews (Frey, 2004; A. Irvine, Drew, & Sainsbury, 2010; Sturges & Hanrahan, 2004).

The process of data analysis was in itself a Threshold Concept for me, as I struggled to come to terms with it, and, as I became more confident, I was able to appreciate the differences between quantitative and qualitative research that I had not been aware of before. The timeline of this project can be seen in Appendix 6. There were two major amendments to the timeline. The first was making use of only one interview period in summer 2013. I was able to gather enough interview data on the first round of interviews, as interviewees were eager to be interviewed and generously gave up their time. The second amendment was the extension of six months at the end of the write up period.

This study set out to investigate the relationship between Life Science Teaching-Focused Academics and SoTL. The findings chapter provide evidence for a compelling case that REF influences this relationship, and all aspects of the role of the Teaching-Focused Academic.

## 3.7 Summary

This chapter set out the research methodology for the study, and the methods employed to collect and analyse data. Starting with an exploration of the "insider researcher", I positioned myself within the study as a member of the community I wished to explore. I then looked at the rationale for a qualitative study, and the importance of being an ethical researcher, protecting both the research and participants during the research process. I explored the methods used, justifying my reasons for narrative interviews, and also the decision to limit the use of the survey data to that of a mediating artefact within the interviews. The interviews themselves represent a snap-shot of the Teaching-Focused Academics included in the study, in the period immediately before REF 2014. The analysis and subsequent interpretation of the data represent a substantive explanation of this particular group of academics.

In chapters 4, 5 and 6, I present the findings of the study. The chapters are divided according to the areas of the Activity System. Chapter 4 deals with Community; chapter 5 deals with Rules and Division of Labour, and chapter 6 deals with engagement with SoTL as a tool for understanding teaching and learning.

# 4 Teaching-Focused Academics' Community of Practice

## 4.1 Introduction

In this chapter I explore Teaching-Focused Academics as a Community of Practice. Using Third Generation Activity Theory (Engeström, 1987; Engeström & Sannino, 2010), as the overarching framework for this study, the focus of this chapter is primarily concerned with Community and the influences of which act upon the Teaching-Focused Academics' Community of Practice. Two major influences are identified; SoTL and REF. SoTL is identified as a tool which Teaching-Focused Academics use to develop their teaching practice, and which acts as a focus to bring the community together. Conversely, REF is a focus for the Research-Focused Academics' community of practice, from which Teaching-Focused Academics may find themselves distanced, as they no longer carry out disciplinary research. Wenger's Communities of Practice (Wenger, 1998; Wenger, McDermott, & Snyder, 2002) is used to explore the Teaching-Focused Academics' Community of Practice under these circumstances. I show that there can be development of local community, which is dependent on the support of management. However, these Communities appear to be weak, resulting in a situation where Trajectory 1 (Roxå et al, 2008, p. 280) favours the individual's interests in SoTL, rather than those of the group. In contrast, I demonstrate that Teaching-Focused Academics seek out external communities, in a search for a strong, sustainable community favouring Roxå et al's (2008, p. 280) Trajectory 2. In this study, this community is primarily the HEA Centre for Bioscience during its ten year existence. Finally, I look at the role of Learned Societies in replacing the HEA Centre for Bioscience as a hub for a Teaching-Focused Community of Practice.

As discussed previously, the traditional academic is engaged in three facets of their role: teaching, research and administration. All three parts of the role are necessary for the functioning of the university: teaching undergraduate and postgraduate students, carrying out disciplinary research, and the associated administrative tasks associated with both. The main components of the Academic (Life Sciences) Activity System common to both Teaching-Focused and Research-Focused academics can be seen in Figure 4.1.

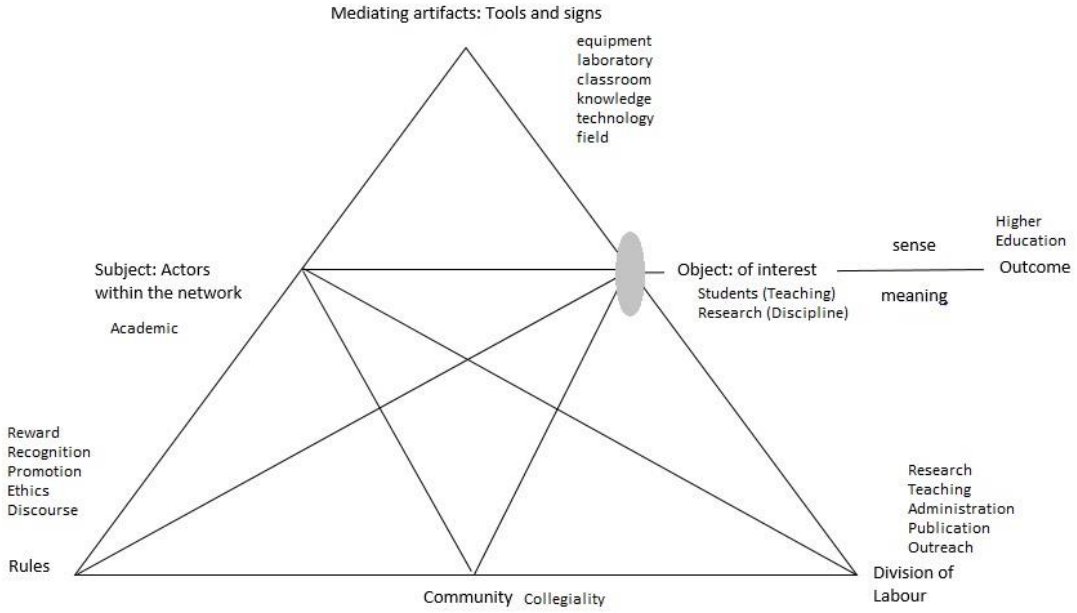


*Figure 4.1 Main components of the Academic Activity System (Life Sciences)*

In this Academic Activity System, there is a sense of collegiality, and reciprocity. However, there are tensions and contradictions within this system, which will be investigated in more detail in the following sections. These tensions and contradictions are explored primarily by examining the effect on Community, with reference to Rules and Division of Labour where relevant.

## 4.2 Two Parallel Communities of Practice; Research- and Teaching-Focused

While Figure 4.1 shows a unified Academic Activity System, in reality there are two parallel Academic Activity systems which co-exist. The Activity System of interest is that of the Teaching-Focused Academic, whose primary functions are to teach, to carry out associated administrative tasks, and to carry out scholarship, in the form of pedagogic research. As such, SoTL is a tool which is used by Teaching-Focused academics to improve their pedagogic practice and students' learning. In contrast, the Research-Focused Academic Activity System is centred on disciplinary research, with the REF as an external influence which influences the Rules, Division of Labour and Community. These two influences serve to separate the two communities of practice in terms of their mutual engagement, shared repertoire and joint enterprise (Wenger, 1998, p. 73).

Historically, it has been perceived that research is more important than teaching (Walker, Baepler & Cohen, 2008; Vardi & Quin, 2011); early career academics have always been encouraged to develop their research careers ahead of teaching. Since the introduction of RAE in the UK in the 1980s, disciplinary research has taken on even more importance, to the further detriment of teaching. This is particularly relevant within Life Sciences, especially those associated with medicine, where there is great prestige and rewards to be had for a successful career. The introduction of RAE, whilst it is controversial in the consequences for UK research (for example, Matthews (2016) on the effect of REF in discouraging innovation in research), has also had the unintended consequence of creating the Teaching-Focused Academic. While this was not the intention of either RAE or REF, it is inevitable that this should have happened, as institutional management puts increasing pressure on Research-Focused Academics to produce research papers for REF, with the

result that teaching and administrative tasks need to be done by someone else. The system as it stands, therefore, creates two communities of practice, as a direct consequence of REF. Research-Focused Academics' joint enterprise is focused on disciplinary research, while Teaching-Focused Academics prioritise teaching and administration. The Prestige Economy (Blackmore & Kandiko, 2011, 2012) may favour Research-Focused academics in terms of reward and recognition. However, this may be viewed as a gilded cage as the demands of REF increase year upon year. Institutional pressures which favour disciplinary research and REF, separates Research-Focused and Teaching-Focused academics, creating a division in labour, where prestige is associated with disciplinary research. Teaching and administration are consigned to subordinate academic tasks. This in turn widens the gap between Research-Focused Academics and Teaching-Focused Academics, further emphasising the two communities which, rather than acting complementarily, can often contradict one another because of the competing pressures they are under. The trend of excusing Research-Focused Academics teaching and administration duties also coincided with the massification of Higher Education in the UK, with huge increases in undergraduate student numbers in the 1980s. The increase in student numbers continues now with increased numbers of taught postgraduates, often international, who bring with them the premium of international fees. Institutions simultaneously trying to increase research outputs and student numbers find themselves with a problem, namely how to deal with student numbers whilst not distracting Research-Focused Academics from maximising institutional gains from REF. The answer, increasingly, is to employ Teaching-Focused Academics to cover the roles that Research-Focused Academics can no longer do. This causes tensions with respect to workload because Teaching-Focused Academics find themselves unable to devote sufficient time to SoTL because of the immediate demands of teaching and administration.

### 4.2.1 Examining the differences between the two Communities of Practice

The two communities, Research-Focused and Teaching-Focused, although they co-exist, are distinct. Using Engeström's Expansive Learning Theory (2014; 2010), we can examine the potential differences between the two communities, illustrated by Teaching-Focused Academics' interview responses. The five dimensions of Expansive Learning Theory applied to the two Activity Systems are laid out below.

*Verbal – Material/Multi-modal* There is a distinct difference in the use of verbal and material ways of working between Research-Focused academics and Teaching-Focused academics when they teach. The traditional, didactic lecture is primarily a verbal mode of communication, which is teacher- or subject-centred. While the transmission mode of education is somewhat out of favour with educationalists (Oakes & Lipton, 1999), it still remains the dominant mode of teaching in higher education, as a cost-effective means of dealing with large undergraduate classes. By contrast, the Teaching-Focused academic has more time to develop material/multimodal forms of education. They may be more likely to facilitate learning in the laboratory and field, help students use equipment, or use active, student-centred, social-constructivist learning (Piaget & Inhelder, 1969; Vygotsky, 1962). Paradoxically, the teaching modes that Teaching-Focused academics use are more akin to Research-Focused academics' use of tools when they engage in research, so a Teaching-Focused academic's teaching is more likely to fulfil the requirement of *research-led teaching* (Healey, 2005) than a lecture. Despite the value of enquiry-based, research-led teaching, there is still a perception among Teaching-Focused Academics in the study that lectures are more prestigious than other forms of teaching.

> *The majority of it [teaching], certainly for the practical classes because we do do a lot of practical classes, I don't know exactly what the number is, but, eh, it's funny, but everybody still sees doing a lecture as the highest form of teaching. You know, 'I'm going to do a lecture' or 'I'm going to do my lecture'. Whereas my point of view is… I always use the argument, as well, that you might have 300 students in your lecture theatre, but 250 of them might be sleeping. And we don't even have that. I would imagine that at this point in the year, our attendance is probably about 50-60%. I01*

This example illustrates the frustration that Teaching-Focused Academics feel when their teaching activities, underpinned by pedagogic literature, are subsumed by colleagues with a teacher-focus.

*Empirical – Theoretical* Life Science research is defined as being empirical. The scientific paradigm is positivist, with scientists in pursuit of "scientific truth". Scientific research, therefore, is engaged in the step-by-step accumulation of new knowledge, illustrated by the painstaking gathering of measurable evidence. While empirical research may result in the production of Theories, (the Theory of Evolution and The Big Bang being two prime examples) it is not the dominant mode of knowledge acquisition for scientists. In contrast to this, Teaching-Focused Academics engaging in social constructivist pedagogy should be informed by education theory, designing their students' learning underpinned by theorists such as Vygotsky and others. This approach to teaching and learning is at odds with the positivist paradigm, and therefore, Teaching-Focused Academics engaging in social constructivist pedagogy are liable to be changed by their activities, and the new learning gained by it.

> *I certainly don't believe that my applications were any better than anyone else's but I've always presented evidence, I've always been analytical, I've always evaluated what I've done, I've always stated the theoretical basis for what I've been doing, and on occasions in the past I've been beaten by, or at least, the award went to someone who wanted to run a Brownie pack using a fax machine in rural Norfolk and I thought well, fine, but if that is the criterion by which I'm being measured by the institution, after five shots at this, there's not a lot I can do about that, I might as well just buy a lottery ticket. I08*

*Adaptive – Transformative* As hinted at above, and elaborated on in this section, the process that Teaching-Focused Academics go through as they engage increasingly with the social constructivist paradigm, results in a transformative experience. This transformation may be less clear in the Research-Focused Academic Activity System. Rather than a transformative experience, Research-Focused Academics may adapt their own student experiences to inform their role as teacher, and perpetuating the status quo.

> *when I first came to the university there was a particular member of staff who then headed up what we called educational initiatives centre, and she was quite inspirational. She was just, very pragmatic, she wasn't one of these people who went around wagging fingers and saying, no you've got to do it this way or that way, and I just found her inspirational. I11*

*Stabilised – Fluid* The reliance on didactic lectures, without being informed by education theory propagates a stabilised system of education. Lecture notes are dusted off year after year and exam results are disappointing as students fail to grasp the same concepts year upon year. In a teacher-centred paradigm, the teacher is transmitting the knowledge, and if students do not grasp it, then it is their deficiency of understanding that is the cause of their failure. In comparison, Teaching-Focused Academics who engage in an informed approach to teaching and learning, find themselves in a fluid system, where they challenge the status quo by the introduction of student-centred activities, research-led learning. By these means they empower students, and change the balance of power, towards a student-centred view of teaching and learning.

> *However, most of my teaching is standard, didactic style of teaching. As is most of my colleagues'. Although, we're all very aware that there are other ways that we maybe should be embracing, however, you also get into the cycle that the more teaching you do, the easier it is to do didactic teaching compared to some of the more, maybe, exciting methods of teaching, and I think that's maybe a prominent problem common to the Russell Group Universities. I05*

*Vertical – horizontal* Research-Focused Academics place a lot of importance on the hierarchies which exist within departments and institutions. Their careers are based on the premise that they will gain reward and recognition, and climb the promotion ladder, if they concentrate on pushing back the boundaries of scientific research, while just "doing" teaching. Systems in place encourage competitiveness and individuality, and institutions exacerbate this by making individual contributions to REF its primary currency. In contrast, the nature of social constructivism promotes a horizontal structure, where collaboration between staff and students promotes learning.

Research-Focused Academics carry out research in preference to teaching. Research-Focused Academics, however, are also subject to the pressures of the institution, and, while the perception is that Research-Focused Academics refuse teaching and administration, it may be that they are forced by management to do so, in order to concentrate on disciplinary research.

> *I think he [research-focused colleague] was very directly told to not, that he had to get more grants, get more applications and to be less involved in the teaching. Whether or not that means he pulls out of his teaching or not I don't know, but it certainly limited his involvement in peripheral goings on. I18*

We can see the influence of both SoTL and REF on the two communities. REF acts as a tension which separates the two communities. SoTL acts as a unique tool or artefact which Teaching-Focused academics use to develop their teaching practice. There is the potential for SoTL to inform their conception of learning to a more student-centred one, in relation to the teacher-centred conception of a research-focused academic. The effect of this paradigm shift may be transformative, allowing Teaching-Focused Academics to develop as scholarly teachers. In comparison, development as a scholarly teacher may be absent from

Research-Focused Academics as their priorities are governed by the influence of REF and disciplinary research.

### 4.2.2 Development of Teaching-Focused Academic Communities of Practice

It has been established that Teaching-Focused Academics have their own community of practice, which is distinct from their Research-Focused colleagues. Defining the Teaching-Focused academic community of practice includes a mutual engagement with SoTL, and a student-centred approach to learning, a shared repertoire of evidence-based teaching and learning practices, which are evaluated and developed, and the joint enterprise of sharing best practice and cooperation between colleagues in order to improve student learning.

Central to the community of practice, Teaching-Focused Academics approach their role cooperatively. They are supported by networks of colleagues and institutional structures which facilitate, or hinder, the Teaching-Focused Academics' development. Two main sources of community were identified in this study; local, which extended to include the Teaching-Focused Academics' home institution, and external, the most prominent of which was the HEA Centre for Bioscience. Although both types of community offered support, there were also negative experiences for some of the Teaching-Focused Academics, highlighting the variety of individual experience. I explore these communities in greater detail in the following sections.

Wenger, McDermott and Snyder (2002, p. 2) offer seven principles to cultivate communities of practice:

1. Design for evolution
2. Open a dialogue between inside and outside perspectives
3. Invite different levels of participation

4. Develop both public and private community spaces
5. Focus on value
6. Combine familiarity and excitement
7. Create a rhythm for the community

These principles acknowledge that communities of practice are composed of human beings who change and evolve over time. They create a space where different points of view can be heard and discussed, in different situations. The focus on value is important because often the value that teachers bring to their institution is overshadowed by that of research, and researchers. Finally, the familiarity and rhythm of a mature community of practice allows for candid discussion, as well as the establishment of enduring relationships between members of that community.

## 4.3 Support for local Communities of Practice

In the following section I explore the nature of Local communities of practice for Teaching-Focused Academics. I begin by looking at the importance of supportive management in fostering a Teaching-Focused Academic community of practice within a department or institution, how local communities may thrive or fail, and where Teaching-Focused Academics get their support from colleagues within their department, from their PGCert cohort, or from colleagues with similar interests in other parts of the institution. I also examine the barriers to community development and how being a Teaching-Focused Academic can mean isolation in the local context.

### 4.3.1 The role of management in setting local culture

Management support is vital for Teaching-Focused Academics. Support for pedagogic researchers, especially those within disciplines other than education, is one of the recommendations of Kneale et al (2016). The culture that exists within a department

depends on the tone set by the Head of Department (HoD). Having a sympathetic HoD with priorities that are aligned to teaching and learning can mean the difference between a supportive working environment and an ambivalent, or even hostile one. Support for Teaching-Focused Academics as academics in HE can often be transformative and creates a momentum for them to develop their career in teaching.

> *In hindsight it sounds positive, but it took an awful long time, so first, say, five years or so I was really the lone caller in the desert so it took a very long time for the whole thing to be recognised and there was one particular person was actually the person who did my PDRs [Performance and Development Reviews] and actually was the professor, and was not on this pathway and he actually was not really in favour of university teachers in the first place but he said if we're going to do that, we should do it properly, and he really supported me and yeah, he was really speaking in my favour and pointing out the good this kind of role is doing, if you do it properly, in other words, if you have the support, ok. So I would think that this person really prompted me and encouraged me to press further and also from our Centre for Lifelong learning where I did all of these courses and the PG cert and so on, the people there were, of course, very supportive. I03*

In this example, despite the reservations of the mentor, they focused on the value of having teaching-focused academics, and the career development of the staff under his care. This proved to be a positive strategy, as it enhanced the experience and confidence of the teaching-focused academic to develop themselves and their role. There is the potential for evolution, and this rests in the hands of the teaching-focused academics themselves. In terms of supporting a community of practice, however, it is limited, as there are few colleagues on the same contract with which to mix and collaborate. There is little evidence of the necessary components of a community of practice: mutual engagement, shared repertoire or joint enterprise (Wenger, 1998, p. 73). Instead, the focus is on the individual, and the mentor does not occupy a meaningful position within a potential community of practice for Teaching-Focused Academics.

Even in the absence of a community of practice, a supportive mentor is useful in encouraging individuals in their development. In contrast, a HoD whose priorities lie within research has the potential to make life uncomfortable for Teaching-Focused Academics, even although teaching and its associated administration still needs to be done. This threat is always present for Teaching-Focused Academics, who worry that a change in HoD may be detrimental to them. In this case there is no support for a community of practice for Teaching-Focused Academics, as the focus is on research, and teaching and administration are viewed as activities which set back the priorities of the Research-Focused Academic (Henkel, 2005).

> *I like to think that when we have our change of head of school that that won't be an issue. We're going from a head of school who is very very supportive of teaching and science communication to a head of school who is far far more research intensive, and his focus has always been on the REF and he teaches very little, and he does very little other stuff so I guess I'm a little bit worried with the change of guard, and the change of flavour of how the school is directed, whether he will be as supportive. That's a bit of a worry, because I do know that other schools at the university, you know, if you don't have a supportive head of school then that can make life very very tough for people like myself, so I'm just waiting to see what will happen, I think. I09*

The sense of the unknown is unsettling for Teaching-Focused Academics. Rather than facilitate the formation and continuation of a community of practice, a HoD who has no interest in teaching and learning beyond its basic function prevents it from flourishing. There are fewer opportunities for a continued dialogue between inside and outside perspectives, fewer invitations to meaningful participation, and less focus on the value of the teaching-focused academic. This in turn impacts on the opportunities for expansive learning, or boundary crossing, as there is a reduction in contact between groups of academics. Instead, the focus is on the deficit: not being a disciplinary researcher, and therefore not contributing to the research of the department, and by extension, the REF.

Neither is the contribution that Teaching-Focused Academics make in relieving research-focused staff of teaching and administration acknowledged.

While it may seem that a change in management may be detrimental to teaching-focused academics, this is not always the case. A change of personnel may also be a positive, and can present opportunities for Teaching-Focused Academics to influence the direction an institution will travel.

> *We've got a new pro vice chancellor for education and she is setting up a research network in education, so I recently talked there about starting off pedagogical research, she asked me to talk at that gathering, so that was across the institution, all disciplines. I17*

The sense of community is reliant on the priorities of the person in charge of the department. In this case, the new PVC has explicitly opened up a dialogue between different perspectives, and invited different levels of participation. In this scenario there is the possibility to cultivate a community of practice, built on the three pillars (Wenger, 1998, p. 73). It may be an advantage to support this kind of community across an institution, rather than within a department, which may be more inclined to follow the research agenda. Acting at the institutional level has the potential to be a powerful medium for the Teaching-Focused Academic in promoting their expertise in pedagogic research. The following example highlights the complexities of the relationships between the teaching-focused academic, the department, and the institution. Hostility towards teaching-focused academics' engagement with pedagogic research makes them an outsider within a department, forcing them to face the ambiguity of their position within the institution. This position may be further confused if the wider institution perceives the value of the teaching-focused academic's contribution, where the department does not.

> *This is going to sound weird, and it sounds a bit unfair to my university, so I'll say it carefully, my faculty as in my local environment, have never, have not shown very much respect for me as an academic, and for what I do. But the university has shown more respect and interest in what I do, and my current position has come out of the university respecting what I do but I have always had way more respect for my work externally than internally. And that's always been strange, really strange, and it's good, because I've felt so crap here that going out is always good for your confidence, makes you feel like what you're doing is of value. I02*

For some Teaching-Focused Academics, the tensions and contradictions experienced by the uncertainty of their worth are felt to be too much, and they have to consider what their career choices are; stay within the hostile environment, or move somewhere more supportive.

> *I think the barriers are mainly my discipline setting, so being in biological sciences when you're actually doing educational research is a barrier now, and it's one that I've had to actively kind of work to resolve because I'm now back in that situation of, that I described in my [disciplinary] research where they'd say – he's a teacher, why's he applying for a Wellcome Trust grant? Now people are saying – he's a biologist, why is he applying for an ESRC educational grant. So that's the current barrier – the perception of being in the wrong place, doing the wrong thing. I02*

There is a tension between research and teaching in the way that the Teaching-Focused Academic is being judged. This also manifests itself as an example of the rejection of competition promoted in scientific research, by the women and "gentle" men who embrace teaching as a career (Garwood, 2011).

Despite the twin missions of the university being education and research, research is often prioritised to the detriment of education, and by inference to the detriment of Teaching-Focused Academics. The culture of research is embedded into every Life Science department and faculty of every university and while this is to be expected in research-intensive institutions, Teaching-Focused Academics in new universities detect a change in institutional priorities towards disciplinary research. In terms of communities of practice,

while the research community may be seen to be supported and evolving, there is less evidence of support for teaching. Teaching-focused academics, therefore, can feel marginalised and excluded from participation in the main academic community. This is particularly felt in Post-1992 institutions, whose previous focus was on teaching and learning.

> *I think what has changed is that our university was a good new university, it was a good polytechnic before that and I think maybe because higher education has effectively been privatised, there is a push to become a more research-focused university. And it's a mistake, I don't think it's actually going to help. You know, even if you just want to be hard headed in terms of income, research income tends to come in and then come straight back out because it's already earmarked for certain projects, and the majority of our income comes from undergraduate student fees, and it just seems a bit daft to me to sideline that in favour of something that's not going to help the university financially. Yeah, that's my view. I11*

While there is a trend within UK universities to focus on research, with new universities such as Post-1992 trying to compete with established research intensive universities, there is a kind of institutional identity crisis as staff are forced in the direction of disciplinary research. For Teaching-Focused Academics this is particularly uncomfortable, as they see a distinction, not only in what they do, but in how they do it.

> *Maybe as a teacher, which is how I see myself, I don't like to see us being in competition. We're all really on the same side. We all want the very best in terms of teaching. I know that research is fundamentally a competitive process because you want to be the one to get papers out and that sort of thing, but I think, generally, teachers take examples of good practice where they can get them and share with others quite freely. We're not really in competition, are we? I11*

Teaching-Focused Academics see themselves as collaborative, which is at odds with their perception of Research-focused colleagues, who they see as competitive (Garwood, 2011). This perception, and the focus on research as an institutional priority, creates a tension

between Teaching-Focused Academics and their research-focused colleagues, forcing the two communities further apart.

> *I think it's got worse lately. When I first started, I was very much embedded in with the rest of the staff in that subject area, but now it's definitely them and us. When the split into these research institutes, so I feel a bit more isolated from a subject point of view. I16*

Separation, therefore exists as a physical entity, with many Teaching-Focused Academics being situated in different offices, or even different buildings. Being physically separated from Research-Focused colleagues adds to the Teaching-Focused Academics' perceptions that they are somehow different to their colleagues. The physical separation also cements the separation of the two communities, with the research-focused community's mutual engagement and joint enterprise centred on the advancement of disciplinary research and REF, while the teaching-focused community is centred on the advancement of teaching and learning through SoTL. This highlights Engeström's (1987, 2000) tensions and contradictions of the Research-Focused and Teaching-Focused Activity Systems which are prised apart by competing priorities and institutional policies, rather than by the wishes of either group..

Communities of teaching and learning are more vulnerable than research communities, because they are not accepted by every academic, and subject to the priorities of departmental and institutional management. Community, therefore, is more than the support and encouragement that a group of individuals can give each other. It is subject to external influences, which may change it beyond the control of the individuals within it.

For Teaching-Focused Academics with a management role, they see their limitations within the context of the separation of teaching and research, and the frustrations of having to organise and manage colleagues' teaching obligations without the formality of line management, so while working with other Teaching-Focused Academics is harmonious, it

may not be the case with research-focused colleagues, because of internal contradictions of line management responsibilities, imposed by institutional practices. This organisation is detrimental to the sustenance of a community of practice as tensions emerge between the demands of research and the needs of teaching.

> *I'm the deputy head of school, so I guess I'm quite involved in the management of the degree programmes and the management of the school and in the immediate school we're very small. There's only about nine of us, and we're a very close community and we all, you know, it's very informal open door, or chat in the corridor, just all good mates, basically…But then the wider culture if you like, is a bit more complex to say the least, so the vast majority of people teaching on our programmes are in the research institutes, over which we have no line management control, and so, the culture, if you like, I don't quite know what you mean by culture, but I do, stop me if I head off in the wrong direction, em, there is again, lots of very good strong collaborative relationships with a lot of people in the research institutes but there's also, with some members of the institutes, a tension in that we're seen to be, from within the school, dictating what shall be done and what shall not be done and some people find, can be quite obsessive about that and that can cause bad relationships and so on, a sort of border community. I10*

There are contradictions between departmental and institutional communities. One Teaching-Focused Academic who has previously expressed contentment at her departmental situation, is critical of her institutional culture.

> *The institutional culture, I'm little bit more bothered by. It's changed, as is often the case, and I think it, I think it's often ill informed, is my view. I think that there are some projects and there are some activities are not very grounded in what's happening at the, I was going to say the coal face, but maybe the chalk face is an appropriate metaphor. I think that they're trying to tick the boxes without actually getting down to the nitty gritty of what the realities are. What it means to be the type of institution that we are, the type of students that we have. I11*

### 4.3.2 Persistence of local communities

Despite the lack of co-ordinated support for teaching-focused communities of practice, and the tensions which exist between teaching and research, there is still evidence for the

existence of participant-driven, local communities of practice, which, while they may be weak and unsupported, still exist for some of the Teaching-Focused Academics in the study. In this section I explore the evidence for local communities which Teaching-Focused Academics experience in their roles. For the purposes of clarity, I define "local" as anywhere in a Teaching-Focused Academic's institution, therefore local communities may be within a teaching team, department, faculty or institution. Local communities may also be organic, forming and developing naturally, or they may be formal, and exist as a result of some kind of process, for example, a PGCert cohort.

### 4.3.3 Experiences of local communities

Earliest experiences of local communities for Teaching-Focused Academics are those formed by PGCert cohorts. Exchanges of teaching experiences can give early career Teaching-Focused Academics confidence, helping them to feel less alone in their new roles. PGCert cohorts are generally cross-discipline, and probationary academics from all parts of the university find themselves brought together to engage with SoTL, and pedagogic research, with the purpose of developing their own expertise in teaching practice, and their students' learning. While there may be disciplinary differences in repertoire, there are commonalities in approaches to learning which all probationers can benefit from. This forms a basis for a teaching-focused community of practice to evolve and flourish. Individuals taking part in a PGCert cohort can share their perspectives on teaching and learning, and contribute at the level they feel most comfortable at.

> *So it was helpful to have that discussion with other people who were all in a similar boat, most of the people taking the course were beginning lecturers, within the first couple of years of teaching and of course a lot of the seminars that we went to were led by somebody with a lot of experience in teaching, so it was good to hear it from various perspectives, and it was inspiring to see, it was a chance to meet people from across the university and so issues that we*

> *might have in teaching within biology are not so different often from what they are in other fields. And so it's quite easy to kind of dismiss them, they're social scientists, I don't know what they're on about, but actually they have some good ideas, and you can see it working in similar ways. I12*

There is a feeling of a common purpose in coming together for the PGCert which transcends disciplinary differences. In that respect, teaching-focused academics in Life Sciences have more in common with their teaching-focused colleagues in other parts of the institution, than they do with their research-focused disciplinary colleagues. While Teaching-Focused Academics discussed differences between disciplines, no-one suggested that the PGCert should be organised along those lines.

One of the advantages that PGCert groups have is that they are composed of academics at similar stages in their careers, with the same kinds of experiences. Another advantage is that since the individuals come from different parts of the university, they are freed from departmental politics and so derive more support from one another. This, combined with regular meetings, allows a rhythm to develop for the community, so that they can anticipate when common activity will occur.

There are also cases where colleagues with a common purpose form a community of practice. This is based around sharing of different perspectives, a focus on the value of improving teaching and learning, and participation at many levels of expertise. This can be particularly valuable for new teaching-focused academics as it gives them a sense of familiarity.

> *And then I've got this new bunch of colleagues that we've merged with and they seem to be much more open to discussing different approaches so also, we share good practice, but we also share bad practice as well, sort of thing, so things that didn't work very well, so yeah, I guess that's that kind of personal, you know, my module, kind of level and sort of sharing with colleagues. I21*

For women, especially, community starts with their closest working colleagues. The sense of community is reinforced at a local level, and the result of this is a confident, supportive working environment. There is a sense of mutual engagement with the joint enterprise of teaching, and open sharing of ideas, which results in a positive feeling of support.

> *My biggest supporter is my friend, who is in the same pathway that I am and we support each other, we do projects together, we discuss the projects, we discuss teaching problems we have, so I think we support each other along the way, and bounce off ideas, and things like that, so that's a very valuable source of support here. I03*

Teaching-Focused Academics negotiating a teaching and scholarship career pathway have vital need of support. As Cashmore (2009a, 2009b) has demonstrated, while many universities have made great improvements on published career paths for Teaching-Focused Academics, there has not been the same improvement in the implementation of career progression, despite published criteria. If Teaching-Focused Academics are not employed to work within teams they may find themselves isolated, if their research-focused colleagues are not sure of what Teaching-Focused Academics actually do. Therefore it is in their best interests to have support from colleagues in similar roles.

> *OK, that's an interesting question. I changed department about two years ago and my current departmental structure and colleagues I feel very very comfortable part of a very cohesive team, that we are all on the same side. There's a recognition that we complement each other, so the people that are less interested in teaching value the fact that there are those of us who are going to make sure that it's all done in the way that it needs to be done. And it's a lovely department, I'm very happy with it. I11*

For some, this kind of informal, intimate community goes further than supporting teaching. There is some organisation to make deliberate career moves, and a kind of "competitive" community emerges. This competitiveness is in contrast with the competitiveness associated with high stakes research. There is no direct competition between these academics, but the fact that any one of them can be successful encourages the others to

push themselves to take on more responsibility, apply for grants, or write papers, which in turn develops their engagement with SoTL, which strengthens their sense of community as they benefit from the mutual support they give one another. Mutual engagement, shared repertoire and joint enterprise (Wenger, 1988, p. 73) is evident in this community of practice, which supports its members to succeed within their own context.

> *We have a, we never call it such, but it does map on to a mentoring circle, so there are a few of us who meet and we don't necessarily meet to say we are going to now discuss our careers although we do from time to time, sometimes we do that, especially if one of us has a massive workload, needs to prioritise then it helps to kind of sit with somebody and discuss prioritisation and what should be done when… It's very very informal but I think all of us who work in that mentoring circle are all now senior lecturers, and we do, and we're all women and we do kind of help each other out in many different ways actually, so I don't think we would have achieved, we're all quite ambitious, so we probably would have achieved those levels anyway, but I think that it has really helped to have other people as sounding boards to kind of, just sound out ideas to brainstorm against, to collaborate with and I think that is, you know, intensely valuable. I09*

This example of support is well organised and is a positive development for the women who are part of it. Implicit in the description, however, is a self-effacing behaviour. The Teaching-Focused Academic who describes the community makes light of its importance and stresses its informality, despite the fact that the group have all achieved promoted positions, which is remarkable for two reasons, they are women in academia and they are teaching-focused.

Local communities are not always supportive. Tensions between research and teaching means that Teaching-Focused Academics can find themselves being taken for granted by Research-Focused colleagues, who may assume the role of the Teaching-Focused Academic is to support them achieve their research goals. This illustrates the tensions that have arisen between Research-Focused and Teaching-Focused academic communities because of the pressures of REF; REF encourages competition in Research-Focused Academic

communities, which is rejected by Teaching-Focused Academics for a more collaborative approach (Garwood, 2011).

> *I always support, I think I support [Research-Focused Academics] by relieving them of some of the more mundane work. I could do that, and rearrange things so they can go and do, relieve their load, I don't think they support me at all, because they probably don't realise I've ever done anything scholarship work, or that it would be their job to support me. I16*

For this Teaching-Focused Academic, lack of support, specifically from research-focused colleagues, comes from a lack of understanding of her role, and also a lack of acceptance that SoTL is a valuable form of scholarship within a Life Sciences department. SoTL is not acknowledged as taking place, and its position is in the shadow of disciplinary research, which takes the spotlight, and attracts prestige. Other Teaching-Focused Academics agree that although they are aware of Research-Focused Academics and what they do, the separation of the two communities has resulted in a lack of knowledge about what Teaching-Focused Academics do.

> *On the other hand, it gives you a certain amount of freedom to kind of do what you want… If I was going to describe it, I would say that pretty much most of the time we're under the radar… It's a double-edged sword because you can do what you like, but it's sad because nobody ever sees what you're doing, if you see what I mean, you know, from the point of view of you doing your job and being recognised for your job, it's kind of 'oh, good. Is it REF returnable? No.' I01*

This lack of knowing what Teaching-Focused Academics do also extends to students, who, because of the emphasis on disciplinary research, have less contact with a wide range of academic staff.

> *I've been here for eleven years and I could have been doing anything in that time. They've simply got no idea what I do. Thus, they probably don't know what my colleagues do. So, when students complain about their experience and yeah, we need to be a bit more targeted and focused in changing behaviours, both on the student side and the staff side. I17*

Female Teaching-Focused Academics in this study are more likely to experience local support. Male Teaching-Focused Academics, in contrast, although they appreciate the existence of informal, local support networks, their experience of it is different to that of the women in the study. Male Teaching-Focused Academics are more likely to report feelings of isolation in the immediate local context. They are often marginalised within their teams and departments, and look further afield for their community, searching for colleagues with similar interests. The feelings of isolation reported by male Teaching-Focused Academics may come about because the local network is not with immediate colleagues, but with a wider circle within the institution.

> *Em, yes, I think I'm fortunate in that there are a group of individuals within my immediate vicinity, not within my academic department, but within the college I work in, within the university, who are engaged in similar work, and also, so we have regular meetings and regular discussions. We don't collaborate as closely as I would like… I do feel slightly more isolated than I would like to feel, but I do feel , I am aware of the fact that I'm more fortunate than a lot of people in my situation, who are far more isolated than I am, and don't have that local support. I08*

Other men in the study report a change in the local community over time, resulting in a withdrawal of colleagues from social occasions, and a general breakdown of social interactions within the local community.

> *[institution]'s always been a pleasant place to work in. REF's affected that a little, people are pulling down the shutters a little bit because they're feeling the pressure, and so it's, the tearoom's as not well frequented any more. And that is impacting on your awareness of how other people are doing. One of my colleagues has turned grey in the last year and I just didn't notice, because I don't see him. I06*

There is a general erosion of social interactions between academics as pressures of work take over. This may have serious consequences as it is important to preserve one's contacts and foster collegiality (Roxå & Mårtensson, 2009, 2011). As well as encouraging solitary

pursuits, there is a reluctance to co-operate with one another, as individuals become more concerned with self-preservation.

> *In terms of that loss of collegiality. When I started doing this twenty five years ago, you would be more than happy to do someone else's lectures if they wanted to go off and do a conference, or even have a day off because you knew that they would do the same for you, or they would reciprocate in some measure, whereas now, when you get extra lectures dumped on you because someone else has won a Nobel prize, or whatever it is, the feeling is just Bastard, I've got to do more work. We've lost the collegiality. It's gone. I08*

At a formal level, community within a department, and the support that is offered to Teaching-Focused Academics varies with each individual. The dominant culture favours research-focused academics, and encourages withdrawal from wider social situations, to focus on more tightly focused research activities instead. Interactions are reduced to those between small groups of academics, and wider collegiality at a departmental level is reduced.

## 4.4 Local communities: a summary

There is some evidence for the existence of local teaching-focused communities of practice within departments and institutions (Wenger, 1998). However, their development is often the result of the persistence of the individual participants themselves, rather than any definite plan. Lacking in this picture is the structured support of management, and instead, what emerges is a confused picture of some support by individual managers, which may change if management personnel changes. This lack of support was recognised by Kneale et al (2016) as a barrier to effective engagement with pedagogic research. Any local teaching-focused community which emerges is subject to a number of outside influences. Prominent in those influences is the assumption that the demands of research take precedence over the needs of teaching. SoTL itself is not a visible activity in the daily routine of the

department, diminishing its role as a Tool/Artefact. However, the introduction of the PGCert has encouraged new academics to form communities of practice. Of concern is that male Teaching-Focused Academics report more feelings of isolation than female Teaching-Focused Academics, who are more proactive in supporting one another.

## 4.5 External Communities of Practice

In this section I explore the existence of external communities of practice that the Life Science Academics in the study experience. While the picture of local communities is confused, with various levels of success of formation and persistence of communities of practice, the experiences of Teaching-Focused Academics within external communities may be more positive. Most of the Teaching-Focused Academics in the study engaged with others outside their local context. However, most external activity occurred where Teaching-Focused Academics expressed dissatisfaction with their local contexts. These Teaching-Focused Academics actively sought external communities to be a part of. The most common external community discussed was the HEA Centre for Bioscience, situated at the University of Leeds. Related to the activity with the HEA Centre for Bioscience was an increase in SoTL activities for those Teaching-Focused Academics who were active members.

One of the subgroups within this study is a group of former reps of the HEA Centre for Bioscience, who, with the staff at Leeds, formed a strong community within Life Science teachers in higher education in the UK. In terms of mutual engagement, shared repertoire and joint enterprise (Wenger, 1998, p. 73) the HEA Centre for Bioscience community of practice was clear in its mission. The purpose of the Centre was to bring together Life Science Academics to share and discuss teaching and learning practice, promote best

practice in teaching and learning, and develop new initiatives in innovative practice. Acting as a hub for activity, the staff at Leeds visited institutions throughout the country, in collaboration with their Reps' Network.

### 4.5.1 HEA UK Centre for Bioscience – a successful external network

The HEA UK Centre for Bioscience was one of the subject centres supported by the Higher Education Academy until its reorganisation in 2010, resulting in the subsequent closure of the subject centres in 2011. Housed at the University of Leeds, it funded 70 projects, held over 100 events , developed resources for Life Science academics and students, and fostered and supported the UK Bioscience SoTL community for a period of eleven years ('UK Centre for Bioscience; About Us', n.d.). One of the strengths of the Centre for Bioscience was its Reps' Network, which, in 2011, had 113 Reps in 93 UK universities. This community was one of the driving forces behind the buoyancy in the UK Life Sciences SoTL community. Reps raised the profile of SoTL within their institutions, distributed information of forthcoming events and funding opportunities, and acted as hosts for the events organised by the Centre for Bioscience. These events were important, especially for new academics taking their first steps in SoTL, to be able to present and discuss their work in a supportive community. In contrast to local communities that faced a lack of support, the HEA Centre for Bioscience community of practice benefitted from a dedicated staff in Leeds who created a vibrant, buoyant community of practice which stretched over the entire UK. This "significant community" was therefore resistant to external pressure, and was able to flourish (Roxå & Mårtensson, 2009, p. 557). Using Wenger, McDermott and Snyder's (2002, p. 2) principles of community cultivation, we can see the difference that structured support gives to a community of practice, so that despite its geographical distribution, the community thrived over the life of the HEA Centre for Bioscience.

1. Design for evolution – over the life of the Centre, the community, the role of the Centre, and the activities they engaged with changed. Through annual calls for funding, Teaching-Focused Academics were able to bid for financial support for projects which they were interested in. This meant that the variety of projects was limited only by the creativity and imagination of those bidding for support. The Centre staff also had a policy of taking events to different parts of the country, to allow as wide a range of staff as possible to participate in them. There was also a variety of media which Teaching-Focused Academics could publish via the Centre. From books on specific topics, such as Assessment and Feedback, or Fieldwork, the Centre's own journal, Bioscience Education, Bioscience Bulletin, a regular magazine sent out to all institutions, to short guides on a variety of practical aspects of teaching and learning
2. Open a dialogue between inside and outside perspectives – While the Reps could be viewed as having an "inside" perspective on teaching and learning, the strength of the Centre was that it took its events to institutions, which allowed a greater number of academics to engage – both research-focused and teaching-focused, which was valuable in widening the range of opinions informing discussion.
3. Invite different levels of participation – There were many levels that individuals could participate with the Centre – there was a management board which consisted of Centre staff, plus academics from a number of institutions. Each of the home nations had a country rep, and each institution had at least one rep. Any Life Science academic was able to come to any event, free of charge, and contribute to any of the Centre's publications. Latterly, the Centre also held a number of events specifically for PhD students and postdoctoral fellows interested in teaching in HE (Gartland, Perkins, Shearer, Tierney, & Wilson, 2013) which added an extra dimension to the views and priorities of the Centre.
4. Develop both public and private community space – While events were public, there was an annual event for Reps, which was run in recognition of their work throughout the year. This allowed the Reps to discuss issues which were of particular importance to them, and which has continued in the shape of the JISC Bioscience PedR mailing list, and the OUP Bioscience Summit, still held annually in September.
5. Focus on value – The focus of this community, and its strength, was on the value of enhancement of teaching and learning in UK Life Sciences in the HE sector. This persisted throughout the life of the Centre, and beyond.
6. Combine familiarity and excitement – The Centre ran regular events over the country, but was encouraging of anyone who wished to hold an event on a particular topic. They also held larger conferences, which were open globally, so that UK Life Science Academics could make contacts with international colleagues.
7. Create a rhythm for the community – the timetable of events, calls for funding, and conferences gave the community a sense of rhythm, especially for Reps, who gathered in September to reflect on the previous academic year and plan for the new one. Regular updates of Bioscience Bulletin and Bioscience Education were also a familiar part of the rhythm of the community.

In contrast to local communities, where it is difficult to identify features of a thriving community of practice, the HEA Centre for Bioscience can be seen as fulfilling all the principles for a strong, continuing community.

Fourteen former reps took part in the survey for this study, and nine were subsequently interviewed. The Centre for Bioscience was cited as being an important source of community for former reps, who described it as a major influence in terms of their development of SoTL. The Centre also represented more than just a place for educational pursuits, but was seen as a source of camaraderie.

> *When I'm confronted by the word "Bioscience" I always think of the HEA Bioscience [Reps] Grouping and that always gives me a warm feeling, but I feel in terms of learning and teaching, where do I get the most positive feelings and also part of that's from those little meetings that we have. I17*

The responses from interviewees feels more like the response reserved for family or close friends. This sentiment was expressed by another former Rep:

> *Em, support, I would say, probably, I would probably call these people friends, certainly colleagues, we all kind of face the same things, you know what higher education is like. I01*

The Centre for Bioscience acted as more than just a focal point for Reps. It was also invaluable as a source of support for teachers in Life Sciences in higher education, by creating a critical mass of people who were able to support colleagues at departmental, institutional and national level.

> *I consider my involvement with the HEA BIOPedR group a great opportunity, and one which I take as often as I can and one which I forward round people as much as I can, and if you've got time to engage in those, then I consider that to be a, effectively some CPD, and certainly you know, discussing things within a community is part of what you need to do. I06*

The Centre for Bioscience and the Reps' network was also a source of encouragement and support for academics who wished to pursue a career in teaching and learning in higher education. The feeling of community from the Centre for Bioscience and the Reps' Network gave academics the confidence to pursue this career, and the assurance that they were doing the right thing.

> *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, [former Rep] especially as well, [former Rep], you know, working with those sorts of people very, that whole sort of subject area, that's been huge, and I think I value that massively. I think it's a shame that that got subsumed I think into the HEA, I think we're struggling for an identity, in a way, and I attended the STEM conference a little while ago, and that was good, but you know, I kind of, I always enjoyed our Rep Meetings more, I think they were, they gave people a chance to be more candid and open with each other, about issues. I miss the Bioscience Subject Centre as a Centre, and I think, I feel my network is less rich because of it. If that makes sense… I don't know how you feel about that, but I feel somewhat at a distance to it now whereas I felt quite enclosed within it before. I09*

The Centre for Bioscience acted as a hub for Teaching-Focused Life Science academics to come together, exchange ideas, collaborate, and support one another. The sense of belonging with the Centre for Bioscience is strong and is a source of identity within the group. The loss of the subject centres in 2011 is a blow to this community, as it has lost its hub, and so the members have lost their identity and their cohesiveness, as opportunities to come together and collaborate have been taken away. This is probably most keenly felt by the Reps as they attended an annual Reps' Meeting in September. This was their opportunity to get together and discuss issues surrounding teaching and learning, their institutions' policies regarding reward and recognition for teaching and scholarship, and reinforce the community. The reorganisation of the HEA has had a negative impact on this community beyond the restructuring of the organisation itself.

Despite the demise of the Centre for Bioscience, there have been measures to keep the Life Science SoTL community alive beyond 2011. Currently, there is a JISC Pedagogic Research mailing list maintained by three former Reps. The mailing list helps to support the dispersed community, and keeps contact with colleagues from different parts of the country.

> *Eh, oh, all sorts of things. There is a mailing list which is quite an active mailing list so we all contribute to that, it's almost like having a tearoom conversation except we're all over the place. I run workshops, I've had a couple of invitations to do various different things and because we all know each other we know what each other's strengths are so if someone's doing something on a particular topic, they know who to ask, and vice versa. At [interviewee's institution] we wanted to do something on internationalisation so I know somebody in [institution] who can do that, so we're trying to fix something up for that. I01*

Until 2014, there were events organised under the auspices of the HEA and an annual STEM conference. There was a Bioscience disciplinary lead who kept in touch with the community. However, in 2014 there was a further reorganisation of the HEA, and the links to the disciplines were discontinued. It is difficult to see how the HEA can effectively support higher education teaching and learning at the grass roots level, given its current model. In addition HEA core funding will be lost in 2015/16 which will again hamper the contribution the HEA can make to support higher education teachers.

The Centre for Bioscience was seen by most former reps as a positive community of scholars. However, it was not a positive experience for everyone.

> *I was the HEA rep for a while, Bioscience Academy, and I went to one of the conferences, the Reps' meetings. I was bored out of my brain. In fact I actually, I encountered the president or whatever he was, and I thought he was somebody I'd been talking to earlier, and he said how are you finding it? And I said I'm absolutely bored stiff and it wasn't until later I realised he was in charge of it! I said, I was told to come! … I just wasn't, it's hard to say really, I just didn't think, there wasn't anything that really you could get your teeth into, it was all kind of airy fairy, impressions, and jargon. I don't know what the delegates hope to learn from it, and, I have to admit, by the end I'd learned a few things. But I just found it, difficult to get interested in teaching and learning in any shape or form at that point. I07*

For Teaching-Focused Academics whose experience of SoTL may have been limited, the experience of joining the community was not a happy one, and they were not enthused to return to it. There is evidence of a lack of engagement with SoTL, which led to negative feelings about the Centre for Bioscience experience. This points to an assumption that in

order to join the group, one must already have some expertise, rather than the legitimate peripheral participation model where novices learn through interaction with masters (Lave & Wenger, 1991). Rather than learning from the experience, and being inducted into the community, this Teaching-Focused Academic found themselves at odds with the experience. Similarly, since the Centre for Bioscience closed, some former Reps have expressed reservations as to the continued openness of the group.

> *It seems to be that even now it's the same people who are still holding this community together, even although the Centre might be gone and it's now the new version of the HEA there are very few, or at least I've not noticed any, very few new people who are contributing to it. Now I don't know if that's because it's a bit of a closed shop, I hope not. I01*

This sentiment is echoed by one of the other interviewees who is not a former Rep, but who found it difficult to break into the group in its current format in order to become a member of it, and contribute to it.

> *I don't think the groups are very open to receive new people. I think it's quite hard to network. I don't know then if it is this area, or if it's a common problem because, then, I don't know, but I tried quite a bit and I was expecting a better response, I don't know, maybe it is fair to say because it's quite a new career, I would expect to be more keen to say yes! Let's all get together as a group. We go to those conferences we go to those satellite meetings where everybody talks about we need to work together, we need to learn from each other but for me very little happens when we left that group. I04*

In the aftermath of the closure of the HEA Centre for Bioscience, despite the efforts of the community to stay alive, the loss of the staff dedicated to the continuity of the community has weakened it to a certain extent.

The Teaching-Focused Academic also identified a recurring problem with external communities. Because they are geographically dispersed, and opportunities to get together are intermittent, it is difficult to keep up the momentum generated by the meetings, as day

to day work pressures take priority. Thus the rhythm of the community is interrupted, weakening it.

For early career Teaching-Focused Academics, the opportunity to participate in external events gives them a sense of legitimacy within the community, and also allows them to interact with more experienced practitioners.

> *Em, done a bit of networking outwith the university. Yeah, I guess on the conferences and various things that I've been involved in. I have done some networking em, there, so things like going to the STEM Ambassador Scheme, so we went to a STEM Ambassador, [venue] evening thing, and we met some people there who were from [institution], and we have struck up a really nice, you know, network, not network, but not collaboration because we're not really collaborating on anything but you know, just knowing somebody else who's in the field but in an entirely different environment and we visited them, and that very much, they came here and, you know, and so I think people, so I would say that very much kind of came round from a bit of networking at a conference. I guess also, meeting people in the field, who are going to be, their names will pop up and you might think, oh, I've met them, so (whispers) I can't remember his name! I18*

For more experienced Teaching-Focused Academics, one of the important ways to encourage young academics is to allow them to participate in the wider community. In fact, this is seen as essential by some, and the lack of support given to early career academics is seen as being a serious shortcoming for institutional management.

> *Well, the thing that comes to my mind, that the lack, or the loss of provision for providing for middle ranking staff to go to international meetings is a major loss, which will probably be reflected in changes in attitude towards teaching and research activity in the next ten years or so. When I first came here, the professor of anatomy was very encouraging and he gave one certain amounts of money, my wife's attitude is – well it's part of your work. Don't take it out of our personal budget. Your personal income is not great anyway, so (laughs), you know, so subsidising one's own trips abroad, to a couple of hundred quid out of say, twelve hundred is not unacceptable. On the other hand, the fact that since the [Department] came into existence, the ability to obtain five hundred pounds a year towards travelling expenses has disappeared completely. And that's a serious discouragement. And the fact that the [grant award bodies] have also cut down on the money available for people to do this sort of thing is a serious problem from the point of view of the development of*

> *the research career and activity of junior members of academic staff. So, I think central government needs to address that somehow. And it isn't just a freebie. It's vital. I15*

Funding for early career academics is particularly important since the closure of the HEA Centre for Bioscience, since there are now fewer free events, and fewer events held in the regions. The trend is now to organise larger "international conferences" which cost several hundred pounds to attend. In contrast to Research-Focused Academics, who have travel, accommodation and conference fees included in their research grant budgets, it is unlikely that Teaching-Focused Academics have access to the same kind of funding, relying instead on departmental funds. While attendance at a free HEA Centre for Bioscience event meant that several academics from one institution could attend, the cost of conferences means that attendance must now be rationed, if allowed at all.

### 4.5.2 Role of learned societies

The HEA Centre for Bioscience was the focus for many Teaching-Focused Academics' external community. However, other external communities exist, and since the closure of the Centre for Bioscience, Teaching-Focused Academics have turned to their learned societies as a source of external community, who have responded by developing their education streams.

> *The society where I was a researcher, the Society for Experimental Biology, [is] now turning towards, paying more attention, I'd say, to educational issues as well. I think the tide is turning a bit, I think it's becoming more accepted, more important so from that area there comes support, and I think it's encouraging also now that from a researcher side, that people more and more acknowledge what we're doing. That's always encouraging. I03*

Learned societies, such as the Society for Experimental Biology, Physiology Society and Society for General Microbiology have picked up the baton and incorporated education into their conferences, giving Teaching-Focused Academics additional opportunities to

present their pedagogic research. These, to some extent, have replaced the HEA as a focus of community for the Life Sciences SoTL community.

> *I enjoy going to those conferences. I go to the [discipline] specific ones as well. There's the academic [discipline] group and I attend those meetings and have given talks there as well, and the [learned society] most recently. They had the [learned society] educational meeting in Bristol, and I had a few posters up there. I17*

For Teaching-Focused Academics involved in medical education, there are even more opportunities available.

> *Again organisations like ASME, the Association for the Study of Medical Education and the Academy of Medical Educators have both offered opportunities. I was at one time a very regular attender at meetings. Also the Ottawa Association, so there's a number of associations in medical education that I've been able to go to meetings. I14*

In both of these cases, there is the same sense of a community with a common purpose which Teaching-Focused Academics can become part of. Learned societies were also seen as a source of support with career development.

> *I've tried, the psychological society have a women's mentoring scheme which I've joined in, which is, I suppose it covers everything, in terms of academic careers, but that's been really useful, just to speak to somebody more experienced who's quite supportive. I21*

The experiences of Teaching-Focused Academics with learned societies shows the potential that they have to fill the gap left by the HEA Centre for Bioscience, and the subsequent reorganisation of the HEA. While still in its early days, interest in pedagogic research is on the increase, as demonstrated by learned societies taking it seriously as part of their remit.

## 4.6 Summary

There is evidence to support the separation of the Academic Activity System into two; one Teaching-Focused, the other, Research-Focused. Although the initial reasons for this may be historic, recent increased pressure from the demands of REF have succeeded in generating tensions which have split the two academic groups, resulting in two, separate Activity Systems which may be recognised by unique elements; namely a focus on disciplinary research, or a focus on teaching, and by extension, the use of SoTL as an artefact. This has been aided by institutional management decisions to physically separate research and teaching, and the introduction of separate contracts in some institutions. Teaching-Focused Academics have responded to this by forming communities of practice (Wenger, 1998) which fulfil their needs. While the formation of communities of practice has had limited success at a local level, there are some examples where it has been achieved, underlining the rejection of competition and embracing of co-operation between teachers in Higher Education (Garwood, 2011). The weakness of local communities of practice comes from a lack of awareness and will from management, who themselves are pressured into supporting research to the detriment of teaching. The success of the HEA Centre for Bioscience as an external community of practice was borne out as a significant community, which flourished as a national entity and which retained its autonomy (Roxå & Mårtensson, 2009, 2011) throughout its existence. There is evidence of a shared history which is still influencing current practice, although not in ways that could have been predicted. As the present role of the HEA has changed, it appears that Teaching-Focused Academics in Life Sciences now turn to their disciplinary Learned Societies to fulfil the need for a Community of Practice, left by the demise of the HEA Subject Centres. Interestingly, Kneale et al (2016) recommends the input of the HEA at a strategic level, influencing the composition of the UoA 25 panels and promoting the importance of pedagogic research.

This highlights the change in role of the HEA since the closure of the Subject Centres, from supporting individual academics' practice to operating at a level more remote than the lived experience of Teaching-Focused Academics.

# 5 The relationship between Rules and Division of Labour

In this chapter, continuing with Engeström's (2000, 2009) Activity Theory, I concentrate on the interplay between Rules and Division of Labour, and their effect on Teaching-Focused Academics. I examine how the evolution of Rules, designed to work for Research-Focused Academics, apply to Teaching-Focused Academics. I explore how the Activity System leads to a differentiated Division of Labour between Teaching-Focused Academics and their Research-Focused colleagues, driven by the demands of the REF. In order to examine this in more detail, I employ Alvesson's (2013) Grandiosity, to explore the nature of grandiosity in research and teaching, the zero-sum game played out in academia, and the illusion tricks that academics find themselves subject to, in particular the ambiguity of the nature of reward and recognition for Teaching-Focused Academics.

This chapter elucidates the work previously mentioned about the effects of REF at the level of individual (UCU, 2013; Jump, 2015b; Rhodes, 2015), by examining the contradictions and inconsistencies of institutional policy on academics, in particular Teaching-Focused Academics. The extent to which these contradictions occur may vary between institution, however, Teaching-Focused Academics in the study all reported situations which supported the findings of unrealistic expectations of research output, discrimination against certain categories of staff, unfair workloads, and discrimination in terms of reward and recognition. Differences may also be highlighted because of the nature of Life Sciences, where there is little crossover in terms of research between the disciplines and pedagogy.

## 5.1 Grandiosity in academic titles

In the previous chapter, I established that Teaching-Focused Academics have emerged as a distinct and separate Activity System from Research-Focused Academics due to tensions and contradictions that can no longer be contained within the previous Academic Activity System. One of the tensions in the new system that has to be addressed is that of the definition of "Academic". The accepted definition of an academic and the role that they play includes conducting both research and teaching, and carrying out administrative tasks. While the proportions of each activity have changed under influence of REF, both research-focused and teaching-focused academics engage in all three activities to a greater or lesser extent. Within the study, all participants were on full-time academic contracts, with six on research and teaching, and fifteen on teaching and scholarship ("teaching-only") contracts. Grandiosity first appears in this context with the use of academic titles. Referring back to Table 3.3 (p. 82) it shows the variety of titles given to the participants. Despite all participants holding academic posts, there is a differentiation in titles, particularly of the women in the study. There is an observation that men, even those with teaching and scholarship contracts, tend to hold on to the traditional titles of Lecturer, Senior Lecturer and Reader, with only one Senior Teaching Fellow being male. Women in teaching and scholarship roles are more likely to have titles which differentiate them from traditional academic roles, and this is most pronounced in the research-intensive institutions (Ancient and Red Brick) where there has been a formal separation of research and teaching roles. The one professor in the study, despite her interest and expertise with SoTL, was not awarded the title for her teaching and learning. This act of grandiosity underlines the importance of title to academics, and the prestige that accompanies it.

The traditional academic titles of Lecturer, Senior Lecturer, Reader and Professor appear in Table 3.3 (p. 82), and are mainly used by male participants, some of whom are still on a Research and Teaching contract. For those Teaching-Focused Academics on a Teaching and Scholarship contract, there is a variety of titles. In my own experience, I have been called Teaching Assistant, Associate Lecturer, Faculty Teaching Assistant, University Teacher and Senior University Teacher. The title which caused the most uproar with colleagues was that of Associate Lecturer, because it contained the word "Lecturer". To be a lecturer, therefore, is linked with disciplinary research, while there is a range of titles given to Teaching-Focused Academics, emphasising that they are somehow different to Research-Focused Academics. Thus the title used by an academic becomes a "positional good" (Frank, 1985, p. 101)– that is, if one is called a "lecturer" or a "professor" it confers a status on the individual which is missing from the titles "university teacher" or "teaching fellow".

## 5.2 Rules, Division of Labour, and the influence of REF

In this section I look at how the Rules governing academic priorities are applied differentially to Research-Focused and Teaching-Focused Academics, how this impacts on Division of Labour, and how Grandiosity, the Zero Sum Game and Illusion Tricks (Alvesson, 2013) can explain what is occurring.

Under the pressure of the REF to publish more world class disciplinary papers, Research-Focused Academics have no choice but to prioritise research activities over teaching and administration (UCU, 2013). However, although teaching and administration may be considered as secondary activities, Research-Focused Academics still carry them out, at a reduced intensity. The pressure of REF results in disciplinary research having a higher positional value, while teaching and administration have a lower positional value (Frank,

1985, p. 101). Teaching-Focused Academics, on the other hand, if they are to be considered to be academics, have to demonstrate that they are capable of conducting pedagogic research, alongside their teaching and administration, despite pedagogic research also occupying a lower status than disciplinary research, and a lower priority than either teaching or administration. This is borne out by the absence of any real discussion of SoTL within the recent White Paper on the Teaching Excellence Framework (Department for Business, Innovation & Skills, 2016c). For this group of academics, rather than their priority being research, driven by the demands of REF, their priority is teaching and administration, paradoxically, also driven by REF. The requirement for Teaching-Focused Academics to carry out pedagogic research, in contrast, is secondary to their other duties. Figure 5.1 portrays the differences in priority for these two academic groups.

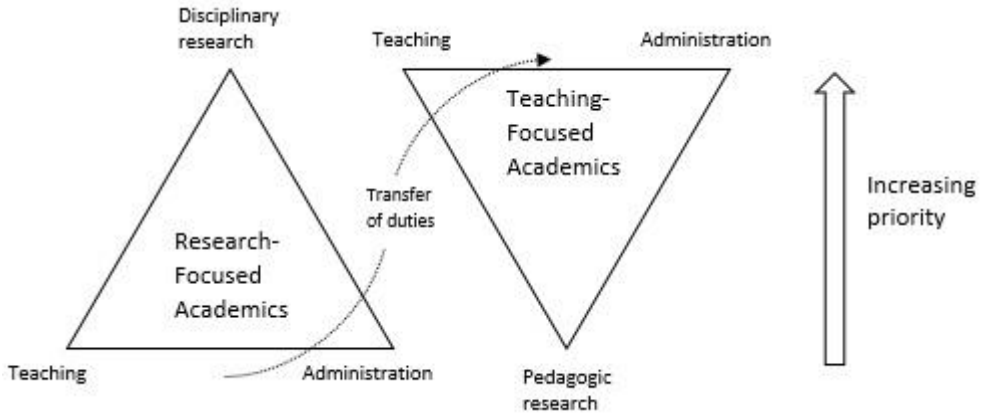


*Figure 5.1 Priorities of Academics, under the influence of REF*

Under the current system, driven by REF, while disciplinary research is prioritised because of its REF value, pedagogic research is not prioritised in the same way, because of its current lack of value in the REF. While Stern (2016) has recommended that more attention be paid to pedagogic research in REF, he suggests this is at the level of "major impacts on

curricula" (p. 23). However, currently, teaching and administration are the role priorities for Teaching-Focused Academics as they cope with large undergraduate or postgraduate-taught classes whose demands follow the course of the academic year, rather than pedagogic research. Teaching-Focused Academics report the transfer of teaching and administration roles from Research-Focused Academics to them, which maximises the amount of time devoted to disciplinary research, while limiting the time for pedagogic research.

Despite a lack of time available for Teaching-Focused Academics to carry out pedagogic research, the distinction between being a "teacher" and a "teaching academic" is important for Teaching-Focused Academics.

> *I do recognise that I work in a research intensive institution, and while that term is usually bastardised hereabouts, and more generally too, to mean laboratory research, I generally regard it more in terms of scholarly activity, a much wider remit. And so, although teaching is very important to me personally, I think teaching alone would not cut it in my present job. I am not a teacher, I am a university lecturer and there is an expectation there, certainly my own expectation as well, that there is scholarship involved in that. As I said, I did make a deliberate decision to move into pedagogic research and it does go alongside the teaching. I wouldn't say that either of them were more important, but in my present role I think either of them without the other is unsustainable, and I'm including doing pedagogical research without doing teaching. Now, we do have people in this institute that do that. I have as big a problem with that as I would with people in my present role, because there are other roles within this institution who just teach and who do not do any scholarly research into the discipline of teaching. I08*

There is a recognition in the above statement that being a Teaching-Focused Academic is distinct from being a teacher, and that pedagogic research, or scholarship is important in defining a Teaching-Focused Academic. However, institutions appear to have failed to follow up colleagues who are in Teaching-Focused Academic role but who do not engage in SoTL. This is both a tension and a contradiction. Rules regarding engagement with SoTL are not being applied; it is acceptable for institutions for Teaching-Focused Academics to be

primarily engaged in teaching, whereas a lack of engagement with SoTL can be ignored. Implicit in this is the positional value of disciplinary research and the lack of value of pedagogic research. The situation emphasises the low status of SoTL; instead of it being an integral part of the role of a Teaching-Focused Academic, as disciplinary research is for Research-Focused Academics, it is seen as an optional extra, with the negative implications for reward and recognition of Teaching-Focused Academics (Cashmore, 2009a, 2009b). There is evidence of a zero-sum game here in the altered priorities of the two groups; Research-Focused Academics prioritise disciplinary research, and responsibility is transferred for increasing teaching and administration to Teaching-Focused Academics, who in turn are unable to prioritise pedagogic research because of the demands of the increasing teaching and administration loads placed on them by institutional demands. Thus Teaching-Focused Academics are seen to be failing both by not carrying out disciplinary research, and by having only limited availability to carry out pedagogic research.

For some Teaching-Focused Academics, continuing to be an academic also means carrying out disciplinary research, albeit at a reduced level. This brings with it its own challenges, as the hierarchy endemic in the disciplinary research culture asserts itself.

> *I've moved to a much more teaching-focused role and I enjoy teaching so I guess that's quite high up [in my priorities]. Research, I love doing research even although, like everyone else, I probably don't get to do as much of it as I like, but I love finding things out so I'm thinking that's probably discovery as well. I21*

The requirement of continuing to carry out disciplinary research in a teaching-focused role is another pressure on Teaching-Focused Academics. In addition to teaching, administration and SoTL, they are also faced with producing disciplinary research to a standard acceptable for REF. For this Teaching-Focused Academic, this proved an

impossible task, as their status within their department made them unable to say no when they were given extra teaching at short notice.

> *I should have been entered [into REF], but well, some of my lovely senior colleagues decided just after term had started that I should do more teaching and so I had to drop some of my research commitments and that meant that I didn't get finished the paper that I would have, made me be in it. I21*

With seniority, therefore, comes the ability to dictate to junior colleagues what tasks take priority. Research carries with it more prestige, therefore is favoured by senior colleagues who wish to take advantage of that prestige, leaving the teaching and administration to junior colleagues. This execution of power over junior colleagues is yet another manifestation of grandiosity, where research can be seen as "positional goods" (Alvesson, 2013; pp. 69-71). Senior staff position themselves where the prestige lies, preventing junior colleagues from taking part in prestigious activities. For most Teaching-Focused Academics, however, the requirement for them to carry out research is to engage with the Scholarship of Teaching and Learning (SoTL). For the Teaching-Focused Academics in this study, all but two were required to engage with SoTL as part of their contract, and fourteen of the twenty-one participants had teaching and scholarship contracts, or were on teaching and scholarship career paths. For some Teaching-Focused Academics, there was an explicit expectation that time would be allowed for SoTL activities to be pursued. In contrast with disciplinary research, where peer reviewed journal papers are the expected dissemination vehicle, it was accepted that there were many ways that SoTL work could be disseminated.

> *Those of us in this school, we're all on teaching focused contracts, so we are all expected to engage in educational research or pedagogic research, whatever you want to call it, and to disseminate it in whatever way, not necessarily through publication, but that's one route, or through conferences and so on. So, it's expected, and so there's time allocated in my workload model to do that. I10*

On the surface, this signals a move to potentially raise the status of Teaching-Focused Academics to that more comparable to that enjoyed by Research-Focused Academics, by requiring all academics to engage in some kind of scholarship or research, whether that be disciplinary or pedagogic. However, grandiosity predicts that when everyone is able to participate, in this case, in some form of research, it loses its value (Alvesson, 2013; pp. 69-71). It is essential, therefore, that the zero-sum game is maintained (Alvesson, 2013; pp. 4-8), in order that research has a higher status than teaching, and that disciplinary research has a higher status than pedagogic research. There is evidence to suggest that research-intensive Russell Group universities have responded to the competing pressures of research and teaching by separating Research-Teaching and Teaching-Scholarship contracts, although the separation is less obvious in other types of institutions. However, this separation also perpetuates the zero-sum game that suggests that pedagogic research is "less than" disciplinary research, not least because there is a lack of support for its inclusion in REF. This is further explored in the following sections, by looking at the definition of SoTL as research, and the difficulties in perceptions of SoTL when the rules governing disciplinary research, and the influence of REF, are applied to it.

## 5.3 The complexities of defining SoTL as Research

SoTL, in the form of pedagogic research, can be regarded as a form of educational research which is carried out by practitioners, on their own practice and with their own students. The purpose of SoTL is to improve practice and the student learning experience, just as the purpose of disciplinary Life Science research is to further knowledge. However, the influence of REF has changed the focus somewhat to the production of peer reviewed articles which are judged to be "world class" in order to secure core funding on a five year cycle. Although regarding SoTL only as research reduces its definition, ignoring its

ontological aspects, this definition is one which institutions commonly confer upon it, finding it useful to approximate SoTL to research for reward and recognition, and career progression. At first glance, regarding SoTL as research appears to address the zero-sum game (Alvesson, 2013; pp. 4-8) which subordinates SoTL with respect to disciplinary research. However, the purpose of SoTL as research is to inform and improve practice, which in turn improves student learning, in contrast to REF-driven disciplinary publications. In this case, imposing the same rules on disciplinary research on SoTL results in an illusion trick (Alvesson, 2013; pp. 15-21), which traps Teaching-Focused Academics, as the real opportunities for reward and recognition are not matched (UCU, 2013; Jump, 2015b; Rhodes, 2015). Judging Teaching-Focused Academics' SoTL outputs by the same rules as disciplinary research results in it being judged as inferior in terms of quality and impact, not least because the rules of REF state that impact cannot be on one's own students. Rather than taking a holistic approach to SoTL, which encompasses the four dimensions of scholarship proposed by Trigwell et al (2000), management's view of SoTL is confined to the Communication dimension, in the form of peer reviewed publications. This narrow definition of SoTL owes much to the legacy of the REF, as it is one of the primary mechanism by which research focused academics are judged. SoTL, although viewed as a proxy for research to be done by Teaching-Focused Academics, is not valued as much as disciplinary research. Contrary to Research-Focused Academics' priority being research, as previously mentioned, Teaching-Focused Academics' teaching and administration load mean that SoTL is not prioritised in the same way (see Figure 5.1). Therefore the rule of prioritising research over teaching is not implemented in the case of Teaching-Focused Academics, which puts them in an awkward position when carrying out their pedagogic research. The lack of value placed on pedagogic research causes a contradiction in terms of reward and recognition, as requirements for career progression often do not align with

Teaching-Focused Academics' roles and responsibilities. This situation is an illusion trick for Teaching-Focused Academics, who find that their roles and duties do not match with reward and recognition schemes.

> *We should be given time to do development work in teaching, to be able to try new things, try them out, and you do tend to, if you do want to do that, you have to find the time for it. It's not part of your job description. It's expected! I get the feeling it's weird now, because when you go for promotion, try for promotion, you find out all these things are expected of you, but it's never, you're never given the time or even told that that's what you should be doing. So you often find out just by accident. I16*

In contrast to Research-Focused Academics, who have a clearly defined career path, which is transferable across institutions, and is understood globally, the Teaching-Focused Academic career path, although it exists, is poorly defined, poorly articulated, and poorly implemented (Cashmore, 2009a, 2009b).

While there were Teaching-Focused Academics who felt vulnerable and under attack from management, there were some Teaching-Focused Academics who work in institutions where there are clear career pathways for them, and who were optimistic for the future. Whereas male Teaching-Focused Academics were more likely to feel vulnerable, women, especially younger women recently recruited from a postdoctoral position, were more likely to feel more secure about their career prospects.

> *Yes! Em, yeah, lots of, absolutely, career stability. I'm not saying teaching is career stable, but I am, I'm absolutely saying it's more stable than research, so I was on contracts ranging from six months to five years and it was at the end of my five year contract, the thought of starting a whole new research project all over again, which was a possibility, em, I just didn't want to do. I18*

For Teaching-Focused Academics coming out of research contracts, the stability of a teaching contract is welcome respite. Those at the start of their Teaching-Focused career in HE were optimistic about the opportunities that they perceived the role would give them.

However, as careers progressed, there was little scope to develop, and a perceived lack of transferability between institutions. This creates a tension for Teaching-Focused Academics who perceived their horizons narrowing in comparison to their Research-focused colleagues. Even in supportive institutions, Teaching-Focused Academics felt that their career opportunities had been lessened because of their specialisation in teaching.

> *I suppose the one thing that there is is perhaps transferability might be an issue, so I'm very well supported, I feel very well supported here at [institution] and I don't feel that there is a limit to where I can go, but if I were to need to move on to a different part of the country, for example, then other universities don't necessarily have the same level of support for teaching and learning, so I think moving beyond [institution] might be more of an issue, unless I was going to make a sideways move more into the QA side of things, or whatever it may be. So I suppose that's the only thing. I10*

When Teaching-Focused Academics are subject to accepted rules regarding the value of research, in terms of what they are expected to do, they find discrimination against their choices, compared to the reward and career flexibility that Research-Focused Academics expect in their careers.

## 5.4 SoTL as a hobby

In contrast to Research-Focused Academics, Teaching-Focused Academics are not generally encouraged or supported to pursue pedagogic research for the purposes of REF. This signifies a contradiction in terms of defining what an academic is. It is also another example of an illusion trick (Alvesson, 2013; pp. 15-21) being played on Teaching-Focused Academics. While the majority of the academics in this study were obliged to "engage in the Scholarship of Teaching and Learning" in their contracts, they were not supported to do so, and institutional reward and recognition systems were variable in the extent to which they acknowledged contributions to pedagogic research, agreeing with previous findings (Cashmore, 2009a, 2009b). Understandably, Teaching-Focused Academics want to be

thought of as academics, and therefore want SoTL and pedagogic research to occupy a higher status within the sector. However, it is the responsibility of Teaching-Focused Academics to teach and carry out administrative tasks, which have been removed from Research-Focused Academics' workload in order to allow them to pursue their disciplinary research. Teaching-Focused Academics, therefore, have to fit in their SoTL activities around their work and domestic activities as best they can. Two of the practical barriers to successful engagement identified by Teaching-Focused Academics in this study are time and volume of work, which can cause tensions for them as they try to accommodate the various facets of their roles.

> *I think the barriers are really time. I think because of that, if you are interested in the scholarship of teaching and learning, that you really want to spend your time doing that, I think some of my colleagues are almost having to do that as a hobby, in their spare time, and that's rather a shame, and that also engenders a feeling amongst other colleagues that maybe it's something that you do do as a hobby. And therefore it's not something that we do as a core part of our role and, you see what I mean? We get into a problem that way. So I think that's really how I feel about what we've talked about. I05*

The pressures of teaching and administration reduce the time available for Teaching-Focused Academics to engage in SoTL. Not only is SoTL seen as a hobby by those who are actively engaged in it; the danger is that it is perceived as a hobby by external parties. There is no onus on management to ensure time set aside in workload models for SoTL if it can already be demonstrated that it is done as an "extra" activity. The tendency to treat SoTL as an extra rather than a core activity is further cemented as it does not contribute to REF. There is a reliance on Teaching-Focused Academics to be intrinsically motivated enough to pursue SoTL activities, without benefitting from the prestige of being included in REF. Even Teaching-Focused Academics who acknowledge that SoTL is included in their workload models, say that in reality, there is no time to engage in it during working hours.

The contradiction between disciplinary research and SoTL is clear. While institutions prioritise disciplinary research over teaching and administration and Research-Focused Academics are encouraged to prioritise their time undertaking research, the same cannot be said for Teaching-Focused Academics' engagement with SoTL. This creates a tension for Teaching-Focused Academics, who recognise the value of SoTL in supporting innovative and effective teaching and learning, but whose efforts to develop are frustrated by the domestic chores of being a Teaching-Focused Academic.

> *I think it's, I think the one thing that I find frustrating with the university is that they kind of see it [SoTL] as a little optional extra to be done when it sort of suits them, but they don't understand how much it links into both teaching, but learning experience and recruitment as well. Certainly the [subject] side is really strong in research and that's always really positive. Students want to come and learn from people who are experts in their field, they really do and it's so, some of my favourite lectures are ones where I'm talking about stuff that I've done and I've experienced and the feedback from the students at the end of the year is even sometimes when I think I've just wittered about my stuff, they're like that was really interesting, you know, that helps bring the topic alive, so, I think, for me, they're both linked together and they're important, and I suppose I'd like to do more teaching that's in the area of my research. I21*

The consequences of the division of labour between Research-Focused Academics and Teaching-Focused Academics is clear. While Research-Focused Academics are under pressure to prioritise disciplinary research, Teaching-Focused Academics are expected to prioritise teaching and administration, at the expense of engagement with SoTL. The expectation of SoTL as a proxy for disciplinary research, and its inclusion in the REF, therefore becomes antagonistic, as, in this scenario, SoTL and teaching are no longer complimentary. In contrast, SoTL and teaching are now in competition with one another, as SoTL is transformed from a means to underpin teaching and learning, into a strategy for feeding the institutional demands of REF. SoTL is also in competition with disciplinary research. This manifests itself in two distinct ways. The first, as already touched upon, is that workload and time do not allow for time to be spent on SoTL. Added to this is another

pressure for Teaching-Focused Academics who are expected to also carry out disciplinary research for REF – their time is further eroded by that additional requirement. While Teaching and Scholarship Teaching-Focused Academics face obstacles to engaging with SoTL because of workload, Teaching-Focused Academics on a Research and Teaching contract have even more competing pressures on their time. The situation for these Teaching-Focused Academics is bleak, as they cannot satisfy what is expected of them. As junior members of staff, this can be particularly frustrating.

The status of SoTL is a contradiction for Teaching-Focused Academics. SoTL has been appropriated by universities as a way to satisfy the "research" component of their academic role. "Scholarship" appears as a requirement of Teaching-Focused academic contracts and promotion criteria. However, this has been done without enough thought put into what is required of Teaching-Focused Academics. To reiterate, rather than taking a holistic approach to SoTL, which encompasses the four dimensions of scholarship proposed by Trigwell et al (2000), the institutional view of SoTL may be confined to the Communication dimension, in the form of peer reviewed publications. This narrow definition of SoTL owes much to the legacy of the Research Excellence Framework, as it is the primary mechanism by which research focused academics are judged. The rules for judging disciplinary research are imposed on SoTL outputs, which results in SoTL being judged as inferior. SoTL, viewed as a proxy for research, is justifiably not given the same status as disciplinary research.

> *I still don't think it's valued sufficiently, you don't get the time to do it. It's not rated anywhere near as highly as the scientific pure research. I think the university has actually put up barriers. We've definitely divided into a "them" and "us" camp. I16*

Despite the imposition of rules on Teaching-Focused Academics to engage in SoTL as research, SoTL is not valued by those same institutions, as there is a failure to create conditions similar to those which allowed disciplinary research to flourish. This sends out a confusing message to Teaching-Focused Academics engaging in it. In contrast to Research-Focused Academics, who can expect a certain amount of reward and prestige in return for their disciplinary research endeavours, there is no equivalent prestige for Teaching-Focused Academics. In fact, teaching awards are seen as detrimental by some Teaching-Focused Academics as they are seen as an inappropriate reward for teaching and scholarship instead of a more robust career progression. Teaching awards can be seen as an illusion trick – lip service paid to the importance and value of teaching which is not matched with equivalent career progression for Teaching-Focused Academics.

> *We've got teaching awards, we've got institutional awards for teaching, we've got national awards for teaching and then we've got things like HEA fellowships and various types of certification, and that's good. The only problem I have with that is most of those schemes that are put in place are run by people who are not practitioners, who don't actually teach. I think that tension is quite visible in a number of places. I think the bureaucracy is tending to counterbalance the value of that. Reward and recognition for teaching and for SoTL is simply nowhere in relation, I mean there's a lot of lip service being paid to it, but the reality is in relation to the reward and recognition for laboratory research, it's nowhere, it doesn't feature and that obviously is a sore point. I think it's a valid thing to say well you haven't done much to change that, have you? But then you say well I don't perceive myself to be in a situation where I can make too much noise because, you know, only twelve months ago I was having an interview where I was being told that my job was under threat, so once again, it's a very difficult schizophrenic situation. I08*

For some, ever-changing job descriptions mean that they have to reapply for their own jobs. This undermines any sense of stability they have in their role, as rewards they may receive for teaching become redundant if job specifications change.

There is a second way in which SoTL and disciplinary research compete, and that is embedded in the definition of university teaching. Universities aspire to, or are, research-led in their teaching. This can be interpreted as using education research in order to underpin the way one goes about one's teaching (Healey, 2000, 2005). It can also mean that teaching is done hand in hand with disciplinary research, so that students are informed of, and sometimes take part in, cutting edge research as part of their degree. This interpretation of research-led teaching requires that the teachers at university are active researchers themselves. That some Teaching-Focused Academics may not be actively researching within their discipline, can be problematic, both in terms of how teachers see themselves, and what they are able to offer students.

> *You have this teaching job, so do your teaching but also carry on with your [disciplinary] research. And then, unfortunately that just wasn't tenable, because I had such a heavy teaching workload that I wasn't able to actually carry on with my [disciplinary] research… we all had to be interviewed for our jobs and I was actually in a management position at the time and I was interviewed by people from the university but also one of the heads of school, who's a very good friend of mine, and the question he asked me in the interview was – how will you, as a teaching and scholarship person maintain your link with [the discipline] to be able to teach it, to final year undergraduate students at a Russell Group university. And I almost stood up and walked out the room because I just thought, well you know that I am distant to that, and if that's the criteria for me getting my job, then I don't really deserve my job, because I don't do [disciplinary] research and I can't keep up to date with the literature because I'm trying to develop my literature base in educational technology, and it's impossible, I believe, for an academic to have a two discipline profile, so that was the kind of point, actually, it was a really big point in my life where I went – I can't do this any more, because I don't actually think that I can teach [the discipline] at that level any more. I can teach first and second year textbook stuff absolutely fine and I can talk about [what] I've understood but any time a new thing comes out, a new technique, a new piece of ware, I can't keep up with it, but a university like mine, it's absolutely essential that everybody is completely up to date with that field of research, so I think that's the biggest tension facing teaching only or teaching and scholarship staff in our kind of fields, because they all struggle with it and they're all scared to admit it. I02*

This highlights one of the most serious tensions for Teaching-Focused Academics. Not only are they required to fulfil all three parts of the role of an academic: teaching,

administration and research (as SoTL) but they are set at a disadvantage when they teach at honours or postgraduate level, because they are no longer active in their disciplinary field. This causes tensions in their self-perception and in their ability to teach at a high level, as well as the way they are perceived by their colleagues and their management.

> *It's negative in terms of, I think it's a bit unfair, because some of the tasks that we're asked to do are very much research-related tasks. Like taking on project students, like marking projects, I think that's, you know, it's far easier for somebody to do that who's writing papers all the time, who has PhD students, who has Masters students, so it's very time consuming as well, and, I think, unfair. It's almost like they're telling you you're not allowed to do research, BUT, if a lecturer who's doing research, asks you to mark projects, you've got to mark projects. If they ask you to run projects, you've got to run projects. It seems to be when it suits. I13*

There is a contradiction in the division of labour for Teaching-Focused Academics. While previous quotes hint at Teaching-Focused Academics considered to be "lesser" academics as they are not active in disciplinary research, paradoxically they are considered capable of taking over the teaching tasks that require them to be research-active or research-informed. This contradiction contributes to a tension which Teaching-Focused Academics experience in their identity as a teacher and as a scientist – a form of imposter syndrome, as they question both their ability and their legitimacy as teachers of science in Higher Education.

Some Teaching-Focused Academics who recognised this tension, identified that they would appreciate the opportunity to get back into the lab, in order to update their research skills, which would, in turn, allow them to be better informed teachers at honours/postgraduate level. However, this was not considered likely to become a reality.

> *And in an ideal world I would love to be able to take a sabbatical once in a while and go back into the lab and just get back up to speed. In practice, I can't see how that works, sadly. But that would be an ideal situation, really, for someone who is no longer doing their own, you know, active research. I10*

The ability to keep up to date with disciplinary research was considered to be an added pressure for Teaching-Focused Academics. One proposed way to address that would be to have Teaching-Focused Academics teach basic science, and have Research-Focused Academics teach at higher levels. However, the evidence suggests that Research-Focused Academics were reducing their teaching commitments at all levels, in order to satisfy the requirements for REF.

Some Teaching-Focused Academics go as far as to state that rewards for Teaching-Focused Academics are trivialised, and are sceptical of their value.

> *I always say the easiest way to improve the student experience is to make the staff happier, and to reward staff engagement with students. It's all well and good having the prizes, you know, employee of the month and all that, but I think the only way, well, one of the best ways to improve student experience is to have a formal career path through the teaching side to reward good teachers. I17*

Despite the progress made by institutions in publishing career paths for Teaching-Focused Academics, and the optimism with which they have been welcomed, there is a persistent issue with the application of these career paths, which has not changed since the work of Cashmore (2009a, 2009b) highlighted the issues with the development and implementation of career paths for Teachers in Higher Education in the UK.

### 5.4.1 Funding for SoTL

While clear reward and recognition for Teaching-Focused Academics remains an issue, another difference in the application of Rules between SoTL and disciplinary research is in the area of funding. Life Sciences, in particular, is characterised by six- and seven-figure research grants, which are top-sliced by institutions, and which employ staff on short- and medium-term contracts. A source of prestige for a Research-Focused Academic, and by

implication, their department, is the acquisition of external funding. SoTL is not funded to the same extent as disciplinary research, and for many Teaching-Focused Academics, the source of their funding may be from internal Teaching and Learning development grants, rather than from mainstream external research funding bodies. This leads to both a lack of prestige, and to small scale projects which, although they may be valuable in a local context, are unlikely to have wider impact. Lack of funding limits Teaching-Focused Academics' ability to collaborate between institutions, in a way that research-focused academics take for granted.

> *I don't mean this in a pejorative way, and I'm talking about my own research as well, again it's almost like a cottage industry because it's not well funded so it's very difficult to do things on a large scale, it's very difficult to do multicentre studies, and until you can really get that kind of funding that allows you to take it up to the next level, you, know, it's almost like a vicious circle, you're not going to get into the REF, until we get some decent funding and do some decent work. I14*

This statement clarifies the difficulties of identifying SoTL as a proxy for research and judging it on existing criteria for disciplinary research, through the lens of REF. SoTL, previously described as a hobby, is described here as a "cottage industry", the reason being that it is not well-funded, and is done in a piecemeal way. Life Science research, in general, and Biomedical research, in particular, requires a great deal of financial backing in order to support the equipment, reagents, manpower, legal advice, access to experimental material, running costs, overheads and security needed to carry out the research:

> *Biology went from being a one man and a dog operation that you could deal with on a small scale, to being a big science, like physics, and you needed to have million pound grants and vast numbers of people working for you to be able to do anything, and it became increasingly untenable to be able to follow the model of science that I wanted to follow. I08*

To equip a research laboratory requires a large amount of research funding which comes from external funding bodies. In contrast, pedagogic research, although it should be funded

to allow Teaching-Focused Academics to carry it out, does not have the same high cost as that for disciplinary research. To judge it on that criterion, therefore, is inappropriate. However, that is not to say that pedagogic research should be done without funding. The current lack of funding restricts the scale of pedagogic research projects in different ways, mostly with regards to the division of labour. While Research-Focused Academics surround themselves with teams of postdoctoral research fellows, technicians and PhD students, Teaching-Focused Academics do not have access to the financial backing required to employ research or teaching assistants. For the purposes of career progression, institutions often make a distinction between internal and external funding; the former having no impact on career progression. Yet again, grandiosity is present, with a judgement made on the source of funding, which impacts on the status of academics. It is unclear where Teaching-Focused Academics can go for external funding. Previously, the HEA provided external funding for small to medium projects carried out by practitioners. However, changes to the organisation of the HEA, as well as a change of focus of its mission have meant that the number and type of projects funded have changed from practitioner-based to work that is commissioned on behalf of the HEA.

> *I think the biggest barrier is that there aren't clear sources of funding for research, so in my [disciplinary] career, you know, I've been able to get grants for significant amounts of money from [funding body], from [funding body] that have allowed us to employ research assistants full time for three years, and really allowed you to conduct research in a very very rigorous way, and I think that my experience has been that the majority of funding sources for educational research tend to be smaller, and so it doesn't really encourage the kind of multi centre, collaborative high level research that's possible in other disciplines because, you know, they're well funded, so I think that's been the biggest barrier. I14*

Ability to disseminate SoTL outputs widely is also a growing issue for Teaching-Focused Academics. A lack of funding extends to the ability of Teaching-Focused Academics to attend meetings and conferences. Previously, the HEA Centre for Bioscience organised free

events around the UK, which Teaching-Focused Academics were able to attend and present their work. The Centre acted as a catalyst which energised the community and gave it currency and sustainability. Changes to the way the HEA is now run means that all meetings and conferences are charged, and the fees are substantial for Teaching-Focused Academics who may not have control of their own budgets. There is another issue, regarding REF, which is that papers submitted have to be "world class", meaning an international audience. In order to become known, it is vital for Teaching-Focused Academics to attend mainstream, international conferences, which also come with a price attached. One noticeable exception to this trend is the QAA Scotland International Conference, which has a limited number of free places for practitioners employed at Scottish universities. Apart from that, Teaching-Focused Academics are expected to pay for attendance at conferences. Another worrying trend is that of open publishing: journals which charge the author to publish an article, rather than relying on subscriptions to fund them. Journals may charge £500-£1000 to publish articles, which puts a financial strain on departments who are enthusiastic to have Teaching-Focused Academics publish SoTL outputs.

The lack of support which Teaching-Focused Academics have control over impacts in terms of the scale of projects that can be carried out, the time it takes to complete them, contact with a wide range of colleagues, and also the status of Teaching-Focused Academics in terms of academic leadership. Rather than having a team to carry out the work while they direct at a strategic level, Teaching-Focused Academics carry out SoTL activities, on their own, with occasional assistance from students.

> *Another big [barrier], and that's something that none of us here have quite grasped yet, actually, you know, so you might come up with some great ideas, you know, but we don't personally have time to sit down and crunch the data and do what needs to be done and do the focus groups and so on, so you can apply for money, and you can get your grant in, but it's people that you need,*

> *not equipment, or whatever, it's people and time, and we've never quite got ourselves to the point where we're really getting in, for example, a research assistant to do some of these jobs. We have used student interns for some of these types of jobs quite a bit, and that's been successful, but, you know, there's no capacity in the school admin team to take on extra work, so even if you get the money and you say this money is for admin support, getting that admin support is actually quite difficult because there's not usually enough money to actually employ a person and, but to buy out time is not practically possible, you see what I mean? And that's actually quite a biggie, and the student interns is quite a useful resource from that point of view but then trickier if you want to deal with more confidential type data. I10*

Several issues of funding for pedagogic research are highlighted in the previous quote. Teaching-Focused Academic workloads are such that many research projects can get as far as data collection, but the time required to analyse the data is not available. This is especially true for qualitative analysis, where there may by the additional pressure of an unfamiliar paradigm. Money is also an issue in that it is often ring-fenced for one purpose when it is required for another, or that it is not sufficient for what is actually required, that is, the employment of a research assistant. There is a third, ethical, issue, surrounding who is able to see the data that is being used. While it is both laudable and efficient to use student interns, there are some types of work that they cannot do because of confidentiality, and therefore, a research assistant who is ethically appropriate is what is required. The availability of education grants is also an issue, for several reasons. Sources of funding for education projects have decreased. The HEA, who used to fund a variety of projects at different levels, now funds fewer projects. As more Teaching-Focused Academics are required to demonstrate acquisition of external funding despite not being "research-active", these grants become more competitive, as Teaching-Focused Academics from all disciplines compete for a small number of grants, compared to Subject Centres funding Teaching-Focused Academics in their disciplinary areas. It also means that Teaching-Focused Academics in disparate disciplines are in direct competition with experts (disciplinary researchers) in education research. This, unsurprisingly, places HEA grants out of the reach of an average practitioner. Currently, in 2016, the HEA is not currently offering

research grants, and of its five current commissioned research projects, one is based in Australia, three in England, with the fifth being carried out by a European commercial consultancy firm (https://www.heacademy.ac.uk/project/hea-review-research-literature-access-retention-attainment-and-progression). The European Union is potentially a lucrative source of education funding, but there are many caveats to project-funding, such as the number and location of partners, the number of nation states involved and their financial status, and the research pedigree of the researchers, again which puts this type of funding out of the reach of ordinary practitioners, and the potential for UK HEIs is currently unclear as a result of the EU referendum. For Teaching-Focused Academics who manage to secure a large grant, there are other obstacles in their way, as they take on yet another role as Principal Investigator.

> *I'm co-ordinating this very large grant and I kind of felt that I kind of needed some training in how to deal with people so I'm kind of hoping that this university leadership course will give me some of those skills. So it is about tailoring those courses to what you want to develop at any one particular time. I need to go on a course about finance, because I'm hopeless with managing finance on my grant, so I do need to do that at some point as well, so you kind of, every opportunity is there. I10*

Teaching-Focused Academics who are used to prioritising teaching and course administration, can find themselves trying to negotiate new skills, either with no experience, or with little training. This adds to the anxiety that they feel with the increased workload and responsibilities of trying to juggle teaching, administration and research.

There is another contradiction which exists at an institutional level. In general, Teaching-Focused Academics from research-intensive universities are employed on teaching contracts, so although they are obliged to carry out SoTL activities, there is no pressure on them to be included in REF. However, other universities, such as post-1992 or research-informed universities, may see SoTL as a means to engage with REF and increase their REF

profile. However, these Teaching-Focused Academics are in a position where they have to do teaching, administration *and* research, and this negatively impacts on the quality of all of their activities, as well as their own wellbeing.

> *I think what has changed is that our university was a good new university, it was a good polytechnic before that and I think maybe because higher education has effectively been privatised, there is a push to become a more research-focused university. And it's a mistake, I don't think it's actually going to help. You know, even if you just want to be hard headed in terms of income, research income tends to come in and then come straight back out because it's already earmarked for certain projects, and the majority of our income comes from undergraduate student fees, and it just seems a bit daft to me to sideline that in favour of something that's not going to help the university financially. Yeah, that's my view. I11*

Teaching-Focused Academics in this type of university find themselves in a particularly precarious position. Their institutions aspire to be research-intensive despite a lack of infrastructure or support. This leads to a kind of institutional identity crisis, as they eschew their traditional strengths of innovative and supportive teaching, to chase an unachievable dream of research-intensive status. Even more damaging is these institutions' insistence on disciplinary, scientific research at the expense of SoTL.

> *I think the most harmful statement that's been made in the past twenty years is this "We are a research-led institution". Well, you're not, not if you are excluding all of these people who are doing research that you don't find acceptable for one reason or another. That is a barrier. I08*

Institutional identity crisis has become enshrined in some post-1992 organisations to the point that their actions no longer match with what they profess. Although they maintain the façade of putting teaching and learning first, and although they maintain good NSS scores, their purpose has become research, due to the overwhelming influence of REF. This makes it difficult for Teaching-Focused Academics involved in pedagogic research to maintain their position, when compared to colleagues carrying out disciplinary research.

> *Well even in a post 1992 institution like [this institution] I think that'll probably put me out on a limb. If you don't do research even in this institution, you are kind of, em, isolating yourself, because our institution currently is kind of heavily emphasising research, and trying to reconfigure itself. I17*

Often, senior management encounter contradictions in their role when dealing with Teaching-Focused Academics. While Teaching-Focused Academics are encouraged to pursue scholarship and pedagogic research, their priority is to the domestic functions of the department. As a Head of Teaching in a research-intensive university states:

> *The support for teaching and learning and pedagogy is more moral support and trying to allow people a reasonable amount of support often in terms of other more junior members of staff that can help support their work, rather than perhaps the ability to support them with what they would most prefer, I think, which is more time to do scholarship of teaching and learning. I guess, as a Head of Teaching, you know, my main role is obviously to try and get that teaching done in a high quality and effective way, looking at peoples' other areas that they need to work on, such as their research, so it's striking a reasonable balance for the school, I think, and a lot of the time it's trying to encourage people in the scholarship of teaching and learning but to make sure that they can actually achieve that not just, with the balance of what they need to do in terms of their general work for the school. Now that might sound discouraging in a way but I'm very aware of the difficulty that colleagues might have when they, say, find they really want, getting sucked into a really big project, that you feel that they're not going to be able to handle, with the workload balance that we need to achieve. And where possible, we would try to help them with that, but I try to encourage them and bring realistic expectation I think, is partly the role that I think is important. I05*

So, while there is an acknowledgement that Teaching-Focused Academics want to be involved in pedagogic research, it is the line manager's job to discourage engagement with it, to a certain extent, because teaching and administration are the priorities of the department.

There is another contradiction in the Rules governing Teaching-Focused Academics, disciplinary and pedagogic research, and that is inclusion in REF itself. Each institution can devise its own rules to maximise its REF impact. For some Teaching-Focused Academics, it is not possible to be included in REF, either for disciplinary research or pedagogic research.

While this may be an institutional decision, other factors come into play, such as a change of role, where former researchers find that although they have the requisite papers, their research is no longer under consideration for inclusion in REF.

> *Yeah, like fourteen or something like that [disciplinary papers] that could have been REF returnable, that weren't, yeah. None. Because it was all publications from 2007, or something like that, which is when I first started publishing in my PhD, so yeah, I think I had about fourteen. Fourteen first author papers that were REF returnable but they couldn't. I19*

Some Teaching-Focused Academics were invited to submit disciplinary research papers they had written. However, the outcome of their submission was not communicated to them, and they were left to speculate on their inclusion in REF.

> *I was asked, we were all asked as a school to put any papers in that we thought could go towards the REF and I put my papers in from my last postdoc which met within the five years, however many years, three years, whatever I had to be, and I put them in for the REF because we were asked to do that, and I gave them to [line manager], and I've no idea what happened. I've no idea if I've been REF returned. I18*

For others, the effect is indirect, and it is the behaviour of their REF-active colleagues that impacts on their work.

> *It doesn't affect me personally because it's written into my contract that I'm not expected to be REF returnable, or something, something to that effect anyway, I'm not expected to be REF returnable. It affects me indirectly, I suppose because the pressure of the REF on other members of staff, who are on research and teaching contracts, it's obviously quite intense so to get support for teaching and learning initiatives can be a bit difficult to get at the moment, as things are really cranking up for the REF. I10*

Exclusion of Teaching-Focused Academics in REF sets them apart from Research-Focused Academics, which adds to the perception that they are "lesser" academics, reinforcing the zero-sum game (Alvesson, 2013; pp. 4-8) being played between Research-Focused and Teaching-Focused Academics. Therefore, it can be seen as damaging to Teaching-Focused Academics to be excluded from REF. One strategy to overcome this could be to pool SoTL

REF submissions from different areas of the university. However, this has logistical difficulties which become barriers to success to building an Education REF submission. Where there is no School of Education to co-ordinate an Education REF submission, there is a lack of interest or support from institutional managers. This may appear damaging to Teaching-Focused Academics who are excluded from REF, both within the discipline and in education.

> *We, because we have never managed to build an institution-wide framework for those of us who are involved in SoTL, we don't have a multi-disciplinary organisation within the institution. We have not managed to get ourselves included in REF and that has been damaging to us. And that is a failure. It's a failure on my part, but I think more it's a failure on senior management, because there's a lot of people in this institution and most institutions across who do what I do, or something similar to what I do, and they're being sidelined in many respects. They're being thought of as lower level than they actually are. So, I've been talking about academic freedom, I've been talking about grants and publications and yet, you know, we are not regarded in the same way as laboratory researchers, because we have not organised ourselves as a community. I08*

Referring back to Wenger's (1998) Communities of Practice, in this case, although there are people within the institution who are engaged in pedagogic research, there is not a strong enough common purpose with which to gather them together to form a Community of Practice. This contrasts with the earlier assertion of Teaching-Focused Academics forming a Community of Practice distinct from Research-Focused Academics. While the Teaching-Focused Academic community is strong amongst its members, it has failed to make an impact on those outside it, resulting in a feeling of isolation for Teaching-Focused Academics who wish to have their work taken seriously.

A lack of organisation in order to prepare a SoTL REF submission is a recurring theme, although some Teaching-Focused Academics were aware of the pressure of REF on their colleagues. Despite rules favouring Research-Focused Academics, the reality is that

inclusion in REF, despite its rewards and prestige, is a gilded cage, and Research-Focused Academics may find themselves in the situation where they are required to deliver ever increasing amounts of research papers to satisfy the requirements of REF.

> *I think if they'd asked or prepared us in advance there's no earthly reason why we couldn't have been included in either a separate subject area, in education, or even in the subject-specific… Having said that, it's so horribly competitive I'm quite glad I'm not required (laughs) to, I don't… I think it's a terrible threat hanging over people's heads, whether they're in the REF or not. I16*

The competitive, individualistic nature of REF is highlighted, contrasting as it does with the collaborative nature of Teaching-Focused Academics. Not only is competition rejected by Teaching-Focused Academics, but they also recognise the pressure it places upon their research-focused colleagues. However, the status that inclusion in the REF gave academics was also acknowledged and was an inducement for some Teaching-Focused Academics to be included.

> *And I think that if you are REF returnable, that gives you a certain status, I do think that, and you know, I want to contribute. I want to know that my outputs do actually contribute to that area, actually. I feel somewhat frustrated that there isn't a better, joined up approach. Having said that our school is taking a very different approach to REF this time, so they are, they will not be returning as many but making sure that what they do return is A1 type standard. So you know, and I feel it a little bit frustrating as well that the teaching research journals, they don't have great impact factors and it's, I can guess that it's difficult then to kind of stand up and say – hey, I've done this paper, you know we're only allowed to submit to papers which then go round other people, unless they're a certain, three star and above type of thing. I mean, again, I find that kind of frustrating. There's a lot of really good work that goes on below the radar. I09*

The REF, in some respects, is self-defeating for institutions who may have an interest in developing a pedagogic research submission for REF, as only 3* and 4* designated research (world-class) is deemed worthy of inclusion. The work of Kneale et al (2016) demonstrates that only about half of institutions submitted to UoA25 (Education) in REF 2014. Her report states that there were more than average 1* and 2* papers in the UoA25 submission, and

only 9% of papers and 8% of impact case studies pertained to higher education, and therefore to SoTL. Therefore, if a Teaching-Focused Academic is carrying out pedagogic research which is of importance to their students' learning, or which has been shared and acknowledged locally, or even nationally, it is still not considered of a high enough standard to be included in REF, and therefore keeps practitioner pedagogic research as a secret. The narrow breadth of "acceptable" REF research acted as a barrier for SoTL to be included in REF, as the system appeared to be skewed in favour of disciplinary research.

While a lack of organisation within institutions who do not have a School of Education is a barrier to getting Pedagogic Research into REF, the situation is even harder for Teaching-Focused Academics who work in universities which have a School of Education. Practitioners within Life Science departments trying to compete with full time educational researchers in a School of Education find themselves demoralised as they are perceived to be failing both as a disciplinary and pedagogic researcher.

> *Other universities don't count teaching only staff, they categorise them differently, but there's always been this kind of undercurrent that because they count against us in REF which is not nice, actually, considering the value that these stars contribute, it's really, really demoralising. And then the other side of that discussion is that people say to me, well why are you not in REF then? For education? You know, you say you're so good in education, why are you not in REF for it? And I say I'm trying my hardest to do this properly but the sort of education at [this institution] is a five star department where every single person is four star REF returnable, they ain't gonna put me in, so you're lost. You're trying but you're seen to be failing from both sides. So I think that's a really big challenge and it's one of the reasons that I'm kind of making that move to the school of education, to say, well, I'm going to do this properly, but of course they're going to beat me with – you will be in REF 2020 or else, and that's going to be quite hard. I02*

While lack of organisation and a central entity (e.g. a School of Education) is a barrier to Teaching-Focused Academic engagement with REF, the existence of a School of Education in an institution can also be seen as a barrier for Teaching-Focused Academics' SoTL

outputs to be included in REF. The role of Teaching-Focused Academics appears to be misunderstood, as it is seen through the lens of REF. Their contribution to teaching and administration is ignored, as is their indirect contribution to REF, as Research-Focused Academics would not be able to achieve the demands of disciplinary research without Teaching-Focused Academics taking their teaching and administration from them. REF has coloured the vision of academia to such an extent that everyone is judged by their ability to be included. Exclusion, even when it is governed by rules, is seen as a failure. However, an attempt by a Teaching-Focused Academic to be included in REF for Education is a risky move as Teaching-Focused Academics then find themselves competing with professional education researchers, supported by Schools of Education. Teaching-Focused Academics, if they wish to be included in REF, still have to compete with these researchers in an endeavour to have their practitioner research judged as three- or four- star quality.

## 5.5 The spectre of administration

It was not only teaching commitments which were viewed as a tension for Teaching-Focused Academics. The third component of the Academic role, Administration, was also seen as a barrier to engagement with SoTL. As with teaching, Research-Focused Academics were encouraged to offload their administration activities to Teaching-Focused Academics. This resulted in even less time available for engagement with SoTL. While it could be argued that the act of teaching could inform a practitioner's SoTL activities, it is difficult to explain how endless hours of course administration contributes to engagement with SoTL. Administration becomes an illusion trick (Alvesson, 2013; pp. 15-21) as it takes time away from scholarly activities, but is seen as a necessary part of the Teaching-Focused Academics' role.

While it may be advantageous for research focused academics to pass administrative workload to Teaching-Focused Academics, the result of this may be a workload which is overwhelming, especially for an inexperienced member of staff. Early career Teaching-Focused Academics could feel that they were at breaking point.

> *I'm drowning in it [administration]. Absolutely drowning in it. It's taking up hours and hours of time. That's the biggest, the biggest, to the extent that I don't want to coordinate as much next year, because I'm coordinating and still getting given projects to mark, de de de de, and I'm starting to, a week ago, really starting to buckle and that's when things came to a head over not being asked and I just blew. I blew a fuse and that's because I was buckling over the last few months. Write this paper, write that paper, mark those essays, mark that exam, that was as deputy, and I had my own course to run with 460 students, and then my other course with 500 students. It's just, it's, you're buckling under the strain. I13*

As well as the amount of administration that Teaching-Focused Academics were being asked to do in their roles, departmental and institutional administration systems came in for a great deal of criticism from Teaching-Focused Academics. For some, the lack of co-ordinated administration systems was a problem:

> *I find we have lots of badly thought out administrative tasks that are completely unnecessary, so I spend a lot of my time doing them, so it's fairly high in activity but a lot of our systems aren't properly interlinked so you end up, for example, putting students grades in three or four different systems, and you think, I just want to do this once. I21*

While identifying a lack of co-ordination in administrative systems was a problem, the introduction of a synchronised administration system, rather than solving previous issues brought its own problems.

> *Everything is being done centrally in our institution. So they tried to get us some over-arching, all-encompassing software to do timetabling and rooming and at the very last minute, during this summer, they said it wasn't going to be able to do it, so this is it running at the same time that we've validated every single module in the university to change the whole module structure, so that timetabling system that was supposed to bring that in has crashed and now everybody's running around trying to do it by hand. Trying to coordinate the*

> *activity of every academic and every student and every room and every lab in the university in the weeks preceding the next academic semester. So there's that kind of thing and even when the system, the old system was working it was awfully bureaucratic, so you'd put in for some rooms, and they'd put you in, say you wanted a three hour lab, they'd give you two hours one day and an hour on another day just to split up the sessions, and if you're running different groups they'd deal with the groups on different days in different sessions and just no common sense. So that does impact directly on your teaching and learning. I got a couple of really crap rooms, really crap rooms that everybody moans about and they've never done anything about it and they've moaned about it every year I've been here and you often get lumped into that room. And you say, well, this isn't appropriate for my teaching. I don't need this room. But every year you get the room. It's competitive as well, so you have to compete against the other faculties to get the rooms that you want. So, it's bureaucratic. I17*

Rather than making Teaching-Focused Academics lives' easier by relieving the administrative burden, the imposition of administrative systems is often not well planned, leaving Teaching-Focused Academics to shoulder the burden of the chaos left in the wake of the failure of the new system.

Administrators themselves came in for criticism by Teaching-Focused Academics, although there was a distinction between high level administrators, who were distrusted, and local administration teams, who were valued for their contributions to teaching.

> *We've got a really really active teaching team here, admin team, about eight, so yes, we have very good admin support. We could always do with more is the bottom line. Our experience here, and I'm sure it's across most universities, is since the bigger fees have come in and we're making bigger commitments to students there's an awful lot of policies just been rafted in, and chucked out to schools to deal with, and the admin load that has come with that has been huge. And at the same time we've ended up with a big increase in our student numbers, so we have, you know, the admin team have coped admirably, but you could easily take another couple of people on and still be running to keep up. I10*

Departmental teaching and learning was kept afloat by the co-operation between secretarial teams and Teaching-Focused Academics. Conversely, high level administrators

were seen as making no positive contribution to the running of departments or institutions, but instead, acting as an obstacle to its smooth running.

> *And I'm rather cynical about administrators… They provide work which is not really necessary, and even though they may be academically highly qualified, still manage to make booboobs and mistakes in timetabling and things like that, and it all has to be handled at the time when the students present themselves to try and accommodate them. And I have a high degree of flexibility in that I can pull something together very quickly and produce something sensible for the students but I also realise that if I'd had better information and preparation time it could have been 40% better. So, yes, I don't have a tremendous faith in administrators making life easier. In fact I think they make life more difficult. And you can quote me on that! I15*

The need for Teaching-Focused Academics to do administration by themselves was also questioned, as it altered the role from academic to secretarial. In times of restricted budgets, Teaching-Focused Academics queried the use of their time to carry out menial tasks which could be done by a secretary.

> *I think we should have more [secretarial] support. I see myself doing things some days that my husband will look and say have you become a secretary? So I don't know then, sometimes I ask myself, is this really part of our role now? Or I think, it's a lack of structure, I don't know, I still don't know. I04*

While Teaching-Focused Academics were assumed to be doing their own secretarial tasks, paradoxically, it not only decreased the amount of time they could spend on SoTL, but ultimately was more expensive for departments. The lack of structure of Teaching-Focused Academics' roles appears to suggest that departments did not know what to do with the Teaching-Focused Academics as a resource.

The move to doing one's own secretarial work was seen as a detrimental consequence of the advent of personal computers. It was seen to have changed the nature of the academic role, by deskilling the collaborative process that formerly existed between academics and support staff.

> *I mean, all right, when I first arrived, one used to rough out a manuscript and almost hand write it, give it to the secretary and two days later it would come back and you could correct the spelling errors, if nothing else, and that took time. These days one has to do everything on one's laptop, prepare teaching material, write stuff, write grant applications, etc, etc, so that although deployment of secretaries has fallen away, the load is still greater upon the individual academic members of staff… Because we're doing it all ourselves. So, rather than having forty hours a week to devote to teaching or teaching development or maybe twenty hours a week to teaching and twenty hours to research, one's now got fifteen hours of pushing bits of electronic secretarial work, which I don't think is a positive move. I15*

As with the previous example, this serves to illustrate the paradox of losing secretarial help, as more expensive academic hours are spent on secretarial tasks, which could be done by a secretary, freeing up more time for the Teaching-Focused Academic to engage in academic pursuits.

Administration is seen by some Teaching-Focused Academics as a barrier to scholarship, and by default, to career progression.

> *Well I think I've mentioned time (laughs) and being part time, sometimes I'm thinking I'm employed on a 42, well, a 45 week contract which means that I'm not paid for seven weeks during the summer and I am entitled to some holiday, so that means that most of my time is during term time and during term time you're expected to get on and do your teaching and administration. And so your workload is rather too high to get on. I20*

There is a contradiction between division of labour and the application of rules in some cases, where a Teaching-Focused Academic can carry out their role, only to find out that what is expected of them in terms of promotion, is not what they have been doing. This leads to confusion as Teaching-Focused Academics can be refused promotion, even although they carry out the roles assigned to them, and accept a gruelling workload.

## 5.6 Summary

Within the Teaching-Focused Academic Activity System, SoTL is a Tool or Artefact which Teaching-Focused Academics use to improve their teaching practice and students' learning experience. However, under the influence of the Rules governing REF, and the importance of REF to institutions, some senior management teams may appropriate SoTL as a Teaching-Focused Academic equivalent of disciplinary research, and the position of SoTL within the Activity System evolves to become an Object, which sits between the Teaching-Focused Academic and Research-Focused Academic Activity System. However, this reification of SoTL into "research" is problematic for several reasons, with evidence for grandiosity in the form of positioning, zero-sum games and illusion tricks (Alvesson, 2013). The definition of SoTL, although contested, is demonstrably more than research outputs, encompassing knowledge of literature and theory, dissemination of pedagogic research on practice, reflection on practice, and a student-centred disposition. This holistic view of SoTL is largely ignored by those outside the Teaching-Focused Academics' community of practice. Senior management's view of SoTL as a kind of research with which to serve REF ignores the ontological nature of SoTL, which may cause tensions with Teaching-Focused Academics. Despite evidence of attempts to include SoTL in REF, none of the examples discussed in this study have currently come to fruition, highlighting the findings of Kneale et al (2016) as to the difficulties of identifying pedagogic researchers in different areas of an institution, management support for inclusion and quality of research and impact compared to a School of Education. While some Teaching-Focused Academics desire recognition for their work as research, there has been a lack of support from colleagues, departments and institutions, and this can be seen as a way for Research-Focused Academics to maintain their position within an institution by making pedagogic research lesser, via a zero-sum game (Alvesson, 2013; pp. 4-8). This has occurred whether or not the

institution has a School of Education. For those institutions which do not have a School of Education, SoTL appears to have failed to be included in REF because of a lack of organisation. For those institutions which do have a School of Education, SoTL has failed to be included in REF because it is judged to be of inferior quality to that produced by full-time disciplinary Education Researcher, agreeing with Kneale et al's (2016) recent findings on pedagogic research included in REF 2104. This leads to the practical considerations of viewing SoTL as research, when compared to educational research done by those who would consider Education as their field. However, it is more likely that SoTL, in the form of pedagogic research, is qualitatively different, as its purpose is to share and disseminate practice rather than to contribute to new theory. Current Rules applied to Research-Focused Academics allow them to maximise their time spent on research, while Teaching-Focused Academics have increased teaching and administrative duties. This relegates SoTL (as research) to a subordinate position, which is carried out when and if Teaching-Focused Academics have the time to engage with it. The result of this is the tendency towards Trajectory 1 (Roxå et al, 2008) where expertise in SoTL is confined to a few enthusiasts, rather than Trajectory 2, where there is a shared expertise between all the members of a department. Therefore, SoTL is not afforded the privileged position disciplinary research has. This in turn means that Teaching-Focused Academics would find it difficult to produce SoTL (as research) to a world class standard, such as is required by REF. There are practical reasons why SoTL does not achieve these standards; there is a lack of funding opportunities for Teaching-Focused Academics, and what funding is available, is not adequate to conduct large scale studies, or employ research assistants. What funding there is, is also hard to obtain, as Teaching-Focused Academics must compete with professional Education Researchers. The position of SoTL alongside mainstream education research also puts it at a disadvantage, as Teaching-Focused Academics' work is judged alongside Research-Focused

Academics in Education. The imposition of Rules which favour disciplinary research disadvantage SoTL. These Rules also ignore the contribution Teaching-Focused Academics make to teaching and administration, and their indirect contribution to the institution's pursuit of REF. Therefore Teaching-Focused Academics are seen to be inadequate both in terms of the research they do not carry out, as well as that which they do.

# 6 Chapter 6: Threshold Concepts in SoTL

In this chapter I look at the role of SoTL within the Teaching-Focused Academic Activity System, where it exists as a Tool/Artefact in Engeström's (1987, 2000) Activity Theory. I examine individuals' engagement with SoTL, using Models of Scholarship (Antman & Olsson, 2007; Trigwell et al., 2000) and Meyer and Land's (2003, 2005) Threshold Concepts. I explore epistemological and ontological barriers to engagement with SoTL, arguing that because of these barriers, married to the previously discussed issues of Rules and Division of Labour encountered by Teaching-Focused Academics, that, despite reasons for its inclusion, SoTL should not be included, in its present state, in REF. In this chapter I shall refer to identification of "thresholds" within Trigwell et al's (2000) model of scholarship. I conceptualise these findings into identifying Threshold Concepts in the discussion in chapter 7.6.

## 6.1 Intrinsic barriers to engagement with SoTL

In the following section, I look at the ontological and epistemological barriers to SoTL research being of robust, high quality, REFable material. There is some legitimacy in the argument that SoTL, in the form of pedagogic research, should be included in REF (Fanghanel, Pritchard, Potter, & Wisker, 2016, p. 8), and indeed some of the participants in this study called for the inclusion of pedagogic research in REF and questioned why it was not included. However, there is also a counter argument voiced by some of the participants that putting SoTL in REF is counterproductive, as the time taken to develop and carry out SoTL is, paradoxically, time taken away from teaching. Those arguments aside, there is another argument which I investigate in this chapter, which is the epistemological and ontological considerations of engagement with SoTL. In order to look at the practicalities of

SoTL as pedagogic research, I investigate the barriers to engagement with SoTL using Meyer & Land's (2003, 2005) Threshold Concepts, dividing SoTL into the four dimensions described by Trigwell et al's (2000) Model of Scholarship, which covers engagement with education literature and theory, production of pedagogic research outputs, reflection on practice and conception of learning. This addresses the concerns of Kneale et al (2016) who identified lack of quality, and lack of engagement with education theory when considering pedagogic research for inclusion in REF UoA 25.

## 6.2 Threshold Concepts in SoTL

Competing priorities in workload are not the only tensions Teaching-Focused Academics face when attempting to engage with SoTL. Engagement with SoTL, while transformative in supporting Teaching-Focused Academics to deliver evidence-based, student-centred learning, also comes with its own challenges. Using Meyer and Land's (Meyer & Land, 2003, 2005) Threshold Concepts, and Trigwell et al's (2000) Model of Scholarship, the epistemological and ontological challenges can be elucidated. This sheds a light on the difficulties Teaching-Focused Academics face in engaging with SoTL, in addition to the practicalities of an overburdened workload.

Trigwell et al's Model of Scholarship consists of four dimensions which cover the constituent parts of SoTL, namely Informed (engagement with literature and theories of education), Communication (making one's pedagogic research public), Reflection (being critically reflective of one's practice) and Conception (seeing teaching and learning in a teacher-centred or student-centred way). Kneale et al (2016) found that barriers to pedagogic research being included in REF included perception of its credibility, suggesting that pedagogic researchers within the disciplines developed their expertise in research

skills and familiarised themselves with educational theories. There is evidence to suggest that Threshold Concepts exist within each of the dimensions of Trigwell et al's (2000) model, which could explain why pedagogic researchers have issues engaging in these areas. In addition, there is evidence of Threshold Concepts in dimensions not articulated by Trigwell et al's (*ibid*) model of scholarship. Each of Trigwell's (*ibid*) dimensions of scholarship is examined in detail in the following sections, followed by the examination of the other threshold concepts uncovered by this study. Table 6.1 reminds us of the levels of each of the four dimensions, referred to in the following sections.

*Table 6.1 Trigwell et al's (2000, p. 163) four dimensional model of scholarship*

| Level | Informed (ID) | Reflection (RD) | Communication (ComD) | Conception (ConD) |
|---|---|---|---|---|
| 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 |

### 6.2.1 Informed dimension – Engaging with literature and theory

As mentioned in Chapter 4, using Engeström's Expansive Learning Theory (1987) informed, scholarly teaching, was seen by participants as being a theoretical as well as a practical activity (Antman & Olsson, 2007). However, for Life Science Teaching-Focused Academics, engaging with education theory carries the hallmarks of a Threshold Concept. There is an epistemological challenge for Life Science Teaching-Focused Academics engaging with education theory, and with pedagogic literature. Teaching-Focused Academics exhibit a range of experience with pedagogic literature from very little (ID1), to engaging primarily with the disciplinary literature (ID3). They also express reservations in their ability to fully engage with, and understand mainstream education theory and literature, although they may use it in general terms. Education theory is, for these Teaching-Focused Academics, "The Elephant In the Room" (Hutchings, 2007).

For some Teaching-Focused Academics, the entire notion of SoTL is alien, and they exist in a pre-threshold state. Although, this was not a common response, Teaching-Focused Academics whose careers had taken a more traditional, research focus, and who had not benefitted from a PGCert in the early stage of their career, knew very little about SoTL.

*I don't really know what it [SoTL] means. I15*

For those that did engage with pedagogic literature, the level of engagement varied, ranging from informal theories of learning (ID1)…

*I don't to be honest, base it much on theory. It's very much just what works. I16*

…to engagement with pedagogic literature (ID3).

> *I do pride myself on reading widely and the literature is a big influence. You know, you read things and think, gosh, you know, that's a really good idea, that's a good model, I'd like to follow that model, so in that sense there are many wide things. I08*

There was evidence of a wide range of levels of engagement with literature and theory, and evidence of a natural progression of knowledge and understanding between ID levels 1-3, echoing Trigwell et al's (2000) descriptors of the Informed Dimension, although there was also some evidence of the occurrence of irreversible transformation. The introduction of the PGCert played a large part in easing new Teaching-Focused Academics into familiarity with pedagogic literature and theory, and was referred to as an initial point of contact.

#### *6.2.1.1 The role of the PGCert in encouraging engagement with pedagogic literature*

The role of the PGCert which staff complete as part of their academic probation in facilitating the opportunity to engage with pedagogic literature was important. For some, the definition of SoTL is a marriage of practice and theory.

> *I suppose I think of it [SoTL] as research into teaching and learning, and mixed with pedagogy as well, looking at existing theories and how you implement them and how you practice and how, what different approaches there are based in teaching and in learning and how to balance those to get the best outcomes for students, as well as for the teachers, if that makes sense. But I suppose with the scholarship, a bit more, yeah, thinking about writing up papers about research and teaching. Or teaching and learning. I21*

It came as a surprise to some Teaching-Focused Academics that a body of literature existed to help them in their role as a teacher in HE. The experience of discovering pedagogic literature through the PGCert, with the support of the people involved in it was transformative and irreversible. Also implicit was the troublesome nature, not necessarily of the pedagogic literature itself, but of adopting the role of a teacher in HE.

> *[PGCert was] eye-opening to some extent in that there is a whole field of academic research out there that I wasn't aware of, and it was inspiring to be able to talk to people about different ways of teaching or different ways of approaching problems in teaching, because when I arrived and started my job it was sort of me in my office by myself going, oh shit, how do I do this job? I12*

The PGCert was not always a positive experience for new Teaching-Focused Academics. For some, the demands of domestic tasks meant they were unable to take advantage of the opportunities that learning about SoTL had to offer.

> *I feel, it's all, it's just when I think of PGCert, and all these, it's fluffy, it's not defined. It's just too fluffy for me… I think I would have had a better chance at embracing it had it, had I had more time to do it. At the minute, it's a bind. And it's just something that I've got to get done…In terms of activities, what have I done? Done a case study, but I felt, and I'll be honest, when I was doing the case study and when I was writing up the report, I felt I was writing what I thought they wanted me to put in. I just felt, I don't know, I was looking to fit in with their remit and what needs to be said in order to tick a box. I13*

Unlike the previous example, this Teaching-Focused Academic exhibited the troublesome nature of engaging with pedagogic literature. Rather than using the PGCert study as an opportunity to engage with pedagogy, this Teaching-Focused Academic took an instrumental approach to the activity, and consequently, was not transformed by the experience. The only effect it had on her was to make her suspicious of it. She felt pressured by outside influences (in this case, her tutors on the PGCert) to include elements in the report that she did not comprehend, calling it "fluffy" or ill-defined. This indicates that the literature may have been conceptually difficult for her to understand, or that there was a ritualization of inclusion of "standard" pedagogic literature that was included without the Teaching-Focused Academic having an understanding of it. In contrast to the previous examples, where Teaching-Focused Academics were actively looking for pedagogic literature which fitted their needs, this Teaching-Focused Academic experienced pedagogic literature that she felt someone else was forcing upon her.

#### *6.2.1.2 Post-PGCert encounters with pedagogic literature*

While the PGCert has done much to improve Teaching-Focused Academics' initial encounters with pedagogic literature, Teaching-Focused Academics further on in their careers had a complex relationship with pedagogic literature. While they indicated that they engaged with a variety of SoTL activities, this varied from individual to individual. This group of Teaching-Focused Academics understood the importance of going to pedagogic literature when thinking about improving their teaching and learning, as the following example illustrates.

> *We shouldn't just do as it always has been done, or on a hunch, or whatever we fancy or whatever is easiest…we also, I think, should look at the pedagogical literature and see what other people have done, and when there's evidence there that's something that's effective. I03*

While Teaching-Focused Academics engaged with the literature, especially discipline-based pedagogic literature, their purpose was not to find out about education theory, but to enhance their practice, and share it with their peers.

Teaching-Focused Academics with more experience with SoTL felt uncomfortable engaging with mainstream pedagogic literature and theory at a deep level. This was evidence for the existence of a threshold, and it revealed itself primarily as a lack of understanding of the language. This is understandable, as the Teaching-Focused Academics involved were encultured in the discourse of science, with its objectivity, quantitative paradigm, and use of the passive voice. To be confronted with education literature, its more discursive style and perceived lack of rigour in its methods, was difficult for these Teaching-Focused Academics to reconcile, pointing to a threshold concept in understanding the discourse of pedagogic literature (Meyer & Land, 2005; Green, 2010). This may not be so much of a problem when reading pedagogic accounts of developments distinct in Life Sciences, as

they are written by fellow Life Scientists, but become an issue when originating from other fields.

> *In biosciences, we are of course, trained scientists so we have this scientific thinking at the back of our head and it's, sometimes it's a bit difficult to develop the "eduspeak" to get into the frame of mind that allows you to write that gets you the grants and allows you to publish and so on. I05*

The alien language of pedagogic literature is a barrier to Teaching-Focused Academics in conducting their pedagogic research projects, as it confines them, in the main, to other Life Science accounts of practice as their underpinning evidence. In addition, they also feel that it is a barrier to their ability to apply for and secure teaching and learning grants in order to develop their pedagogic research further. This situation has been exacerbated since the demise of the HEA Subject Centres, a major source of funding for practitioner research, as funding calls are now general, and every discipline competes for the same limited amount of funding.

> *I guess that what I have noticed over the last ten years or so is, the competition for these sorts of teaching [grants] is now huge and I think again, similar to my career, I think I was really really lucky in getting into it at a time where the grants were actually easier to get and I can't imagine, at the last HEA there were over 250 applicants, and I just kind of think that was just, you know, you don't face that level of competition in the research councils, and then chasing a small pot of money as well, so it's, yeah, it's difficult to start out now… There's a lot of borrowed language which I find a little irritating from time to time, and I just don't necessarily find the papers particularly readable, and I guess mine aren't either. (laughs) Because you do tend to pick up on that, I don't know, odd style of writing, I suppose, so, I think that was some of it, the language, but feeling on the outside, kind of feeling that when you were writing grants you were competing with people who had a real track record I think in terms of doing this sort of research, and em, you know, kind of feeling, well, you know, yeah, you just felt a little bit inadequate. And you kind of have to just get over that and to, I have published and I have got grants and I do know that I can do it. I think my worry is that I don't necessarily enjoy it. And I think that prevents me probably from doing more. I09*

In addition to discourse acting as a barrier to understanding, it also acts as a barrier to participation, fuelling feelings of isolation or inadequacy, especially when comparing

oneself to others familiar with the discourse. Teaching-Focused Academics perceived themselves to be at a disadvantage competing with others who understood the discourse. This decreased sense of inclusion also had implications for Community, as it shows the bounded nature of the Life Science pedagogic community, and the apparent absence of an equivalent mainstream community.

Despite these challenges for Teaching-Focused Academics, many of them, especially those well established in their teaching and scholarship career, persist in pedagogic research within their discipline. Although Teaching-Focused Academics may be prolific in the variety of projects they undertake, they concentrate on activities which are "science-like", whilst avoiding activities which are troublesome. It is, therefore, difficult to establish Teaching-Focused Academics producing articles at ID Level 4, as there is a reluctance to let go of the scientist identity and the tools of the scientist, and become mainstream. This becomes apparent when a Teaching-Focused Academic makes the decision to move out of the discipline, into Education full time, and the priorities and realities of being an educational researcher become apparent.

> *I do think that the value of the educational research in a disciplinary focus is undervalued and I think (inaudible) researchers could benefit from people who know about educational research to help them in curriculum development and I don't see that at the moment… that will become a tension, but the plan to resolve it in the year after, I will probably be teaching in the school of education, like an MA in online learning or distance education, or something. I'm in something of a weird transition mode at the moment. I02*

This comment illustrates the stark difference between Teaching-Focused Academics who may have a strong reputation within Life Sciences as a practitioner researcher, and the move to mainstream education research. Practitioner researcher within a Life Science

department is a somewhat safe position, not least of all because at the moment, SoTL is not regarded as being REF returnable. Therefore, its value as promoting and sharing good practice is internalised to a certain extent, shared with practitioners with similar outlooks, but not subject to the kind of external and rigorous scrutiny that mainstream education research in REF would be. The lack of external scrutiny perpetuates the lack of engagement with mainstream pedagogic theory and literature, keeping practitioner researchers within their disciplinary pedagogic literature. This, however, may change because of pressure to publish for the purposes of REF, or as a requirement of future TEF.

However, there are also other barriers to engagement which stop them becoming fully immersed in education literature and theory. More experienced Teaching-Focused Academics are more likely than early career Teaching-Focused Academics to express their reservations regarding their engagement with pedagogic literature. Despite having experience with pedagogic research and scholarship, mid-career Teaching-Focused Academics lack confidence when engaging with associated literature.

> *I've done the data analysis, but I haven't done the reading. I haven't done this literature searching to embed it, and I know that's going to take time and I know that I should do it, and there's something in my head that says – oh, I've got other things to do. I09*

Having more experience of a wider range of pedagogic literature appears to make Teaching-Focused Academics more wary of it, as they delve further into it. In this sense, this demonstrates a Threshold, any conceptual space will have "terminal frontiers, bordering with thresholds into new conceptual areas" (Meyer & Land, 2005, p. 374). The terminal frontier in this case is the threshold between Life Science pedagogic literature, and mainstream literature and theory. Teaching-Focused Academics may engage in displacement activities to avoid engaging with it, or may admit their fear of it. Rather than

becoming more comfortable with mainstream pedagogic literature and theory as they become more experienced, they experience liminality, or disorientation, as they become more aware of their limitations (Wisker, 2016), moving from an unconscious to a conscious ignorance.

> *[I approach pedagogic literature] 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, PedR speak came very naturally, because I suppose it's qualitative rather than quantitative research and a lot of the terminology was familiar to them. I10*

The troublesome nature of pedagogic literature is reiterated, described as a foreign language, and identified as something which is bounded and outside the experience of the Teaching-Focused Academics. There is also the identification of academics from other disciplines being more familiar with the discourse, as it is closer to their own subject discourse. This adds to the feelings of alienation that Life Science Teaching-Focused Academics encounter when they are faced with pedagogic literature not couched in the familiarity of the discipline.

> *I think some of it was the language, that feeling of not really getting to grips with the style, the language, how things were written, you know, the literature base, that took a long time, and I put a huge amount of effort into trying to do that and when I did the MA [in HE], I got ahead of the literature in terms of what there was out there in research-led teaching but then I let it, after that I guess I let it drift a little bit. I09*

Teaching-Focused Academics find themselves in difficulty when trying to keep up with advances in pedagogic literature. While it may be possible when there is the motivation of completing a part time degree or CPD course, when that is removed, it becomes harder to achieve. This echoes previous concerns of Teaching-Focused Academics who were no

longer able to keep up with disciplinary research, which they felt impacted negatively on their ability to teach within Life Sciences at higher levels. However, this is further impacted by the different value placed on disciplinary and pedagogic research, so that the day to day tasks of a Teaching-Focused Academic precludes spending an extended amount of time on pedagogic literature.

> *For a lot of us scientists and mathematicians, we just went – what? What are you talking about? You might as well be talking Chinese. I haven't got a clue what you're talking about, you know. So I think there is that element of it. I think it's like moving into a very different type of research to the quantitative, genetic type research I was used to. And that takes time, to get your head round. I10*

The time taken to become intimate with pedagogic literature, while being discussed at one level in the preceding extract, is a serious issue at another level. Kelly, Nesbit & Oliver (2012) discuss the extended nature of the transformation from STEM to SoTL, citing that the amount of time and effort required is often overlooked, or trivialised.

> *"The research culture associated with STEM that has emerged over the last century has spawned generations of scholars trained in specific ways of thinking within and about their discipline. Changing these thought processes, changing epistemological beliefs and attitudes, takes time, at both the community and individual level. Acknowledging the extent of the distance between STEM and SoTL seemed to be an important first step in clarifying why the journey seemed so hard." (Kelly et al., 2012, p. 4)*

There is also an ontological threshold, as Teaching-Focused Academics cling on to their disciplinary identities, while attempting to negotiate the unknown. According to Trigwell's model, Teaching-Focused Academics who are prolific in SoTL activities demonstrate engagement between Levels 3 and 4 (ID). However, while Levels 1-3 deal specifically with engagement with pedagogic literature, Level 4 strays from engagement with literature, to conducting research projects. While the Teaching-Focused Academics are conducting

research projects, their engagement with the literature remains at level 3 (ID), mainly within the discipline. There is a dissonance with Trigwell's model, which will be further explored later in this chapter.

### 6.2.2 Communication dimension

The second of Trigwell et al's dimensions is *Communication*. This dimension deals with academics making their work public, via presentations at conference, and peer reviewed articles or books. The Communication Dimension is closely linked with the Informed Dimension, as, with all scholarly work, there is a need to underpin one's findings with appropriate literature and theory. It has already been demonstrated that Teaching-Focused Academics in this study experience barriers to engagement with pedagogic literature and education theory, preferring to rely on the familiarity of discipline-specific pedagogic literature.

The Communication Dimension is important in terms of REF, as it is the direct equivalent of disciplinary publications, when in the form of peer reviewed journal articles, and, to a lesser extent, textbooks. However Trigwell et al's model takes a broader view of communication, categorising a variety of forms of communication, from informal conversations with colleagues (ComD 2), to conference presentations (ComD 3) and peer reviewed journal articles (ComD 4).

Teaching-Focused Academics evidenced a variety of SoTL communications, from informal conversations, to presentations, journal articles and books. Part of the credit for this participation is due to the introduction of the PGCert, which means that even in the early part of their career, Teaching-Focused Academics are encouraged to communicate their practice, giving them confidence in their abilities.

> *Mostly in my own head in that I tend to, an idea comes in my head and I think, oh, it's not good enough, and I won't tell anyone after, so it's really just my own insecurities, really, I think if I went ahead and said I've got a great idea, I'll write a proposal, the department would be there to support. I have to be brave enough to take that step. I12*

Some of the earliest experiences Teaching-Focused Academics have in communicating their SoTL is presenting their work at local conferences. Many institutions have instigated annual teaching and learning conferences and encourage staff to contribute in a variety of ways.

> *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. I12*

Even early on in a Teaching-Focused Academic's career, they have a sophisticated view of SoTL, which comes from a synthesis of early engagement with literature, through the PGCert, and their own scientific background. The link between engaging with SoTL and its relevance to one's practice is reiterated.

> *I think if you get it documented and you collect it and you analyse it, and you're thinking of, you're doing it for a conference or a paper, or whatever, you're automatically updating your courses you're doing, like we've changed the parameters this year based on the feedback we got last year, so you are kind of automatically improving your, the way that you teach, which for me is brilliant because I was not trained to be a teacher, so it's very much learning on the job. I18*

The views that Teaching-Focused Academics express about the communication of SoTL are more developed than their understanding of pedagogic theory. This leads to presentations which are descriptive practice narratives.

> *A lot of people give presentations, but it's kind of like the presentation that I was talking about that I did for the HEA six years ago is it's just a description of what I did. That's kind of the level. It never really ever goes beyond that level. I01*

This Teaching-Focused Academic identifies the lack of theoretical underpinning in conference presentations, and reflects that she also, in the past, presented practice narratives which are little more than a description. Implied, is that her practice has developed beyond that. This, in turn, is a transformative, irreversible process, which is also troublesome in nature. Now that this Teaching-Focused Academic is aware of the lack of theoretical underpinning, she is also aware of her limitations, which could result in a loss of confidence. Equally, she may also become dismissive or judgmental of others' work if it does not contain reference to literature that appears appropriate.

The tendency to use practice narratives reflects the purpose of SoTL. In contrast to REF publications which contribute to the expansion of theory, the purpose of SoTL outputs is to improve upon practice, both the author's and within the wider practitioner community. This is somewhat at odds with Antman & Olsson's (2007) model of scholarship which suggests a relationship between understanding of pedagogic theory and improvements in scholarly practice. While this may be true in theory, in practice it is possible to communicate developments of practice with very little (or any) underpinning theory. For some, SoTL is exclusively about development of practice.

> *I would understand it [SoTL] as providing evidence for good practice, em, yes, both in the sense of, yes, I think you should look at what you're doing, and if you come up with good ideas, you ought to report those, and report those to other colleagues, and you should be willing likewise to listen to what other people say and change what you're doing. And yes, I think that's it. I20*

Teaching-Focused Academics reiterate the importance of SoTL in developing and improving their practice. This is important both in terms of them as teachers in HE, but also reflects the prominent position that teaching occupies in their role. The reservations expressed at engaging with mainstream pedagogic literature and theory manifests itself in a lack of underpinning literature in the communication of SoTL.

Teaching-Focused Academics discussed the importance of making one's findings public, and the co-operative nature of teaching and learning. This highlights the importance of communication at ComD 2, and underlines the purpose of SoTL communication as a means to improve and share practice, rather than to develop or extend theory.

> *I think it should be more of a sharing environment, and if I found something that worked well in a class, I'd be the first to want to tell everybody - oh, try this, this has worked really well, as opposed to being like - oh that's worked really well for me, I'm going to keep it a secret so I look brilliant and everyone else looks rubbish. I don't think that belongs in teaching, because it should be about the greater good of the students, and you can't do that with competition. I19*

The challenge of communicating SoTL can be a barrier if Teaching-Focused Academics have little experience of it. There is a willingness to participate, but there is a feeling that achieving it may be out of reach. This is seen as a barrier to Teaching-Focused Academics' development as scholarly practitioners and pedagogic researchers.

> *in my personal practice I've never written an academic paper, there are sort of several that I'd quite like to write if I had time, I think, I suppose I see it like learning from what you're doing and learning from the feedback that you get from students and colleagues, and changing your practice, not teaching the same thing for ten years. So I guess I see it in quite a personal context. I21*

While the lack of experience can be overcome by careful support, the topics which the Teaching-Focused Academic identified as potential papers are practice- rather than theory-based. Once again, we see that the purpose of SoTL is to improve practice, rather than contribute to theory.

While early career Teaching-Focused Academics are enthusiastic about communicating SoTL, this may be accompanied by a naivety of what is required. Mid-career Teaching-Focused Academics who have gathered more experience of SoTL are more likely to be able to see their shortcomings where SoTL is concerned. The same barriers are discussed with

regards to communication as with literature – alien language, methodology, research methods, handling data (Salmona et al, 2016).

> *But, so I have found it a struggle, em, I find that there's a, I don't know, it's dressed up sometimes in a really impenetrable language, even more so than I think scientific research at times. I think that people use terms differently, whereas I think in science, a scientific term is what it is, and people in that discipline will use it in exactly the same way, whereas I don't think that's necessarily the same case for sort of teaching and scholarship language in that sense. I09*

Language is a particular concern. There is a difference in the discourse between the use of language in science and the use of the same language in SoTL, which is troublesome for Teaching-Focused Academics, who struggle with the use of language, both in terms of reading and using it in pedagogic contexts.

### 6.2.3 Conception dimension

The third dimension of Trigwell et al's (2000) model of scholarship is the Conception dimension (ConD), which is concerned with how teachers conceptualise teaching and learning. Trigwell proposes that there are two levels to this dimension; inexperienced teachers will have a teacher-centred conception of teaching and learning, while more experienced teachers will have a student-centred conception. However, the picture is more complex than a linear progression from one conception to the other. Positive engagement with SoTL via the PGCert early in one's teaching career can facilitate a move towards a student-centred conception, while no engagement with SoTL results in the perseverance of a teacher-centred conception. Changes in conception are related to an ontological shift in some of the Teaching-Focused Academics. However, there is also some evidence to suggest that there is an ontological disposition of some individuals to be student-centred,

highlighted by their empathy towards students and their sense of solidarity with them as they learn.

In contrast to the informed and Communication dimensions, which are characterised primarily by troublesome language, evidence of Threshold Concepts for the Conception dimension are more grounded in counter-intuitive knowledge. This comes from the idea of the teacher as an expert. Those of us who have experienced higher education over the past thirty years will recognise the propensity of the transmission model of education – didactic lectures, where students sit passively listening to expert academics. Unsurprisingly, if we then become teachers, this is our default position of how teaching and learning should be, and it takes a paradigm shift to change these assumptions. Of course, as student-centred learning becomes more prevalent in both school and higher education, that should change. However, this transition takes time, and is dependent on a number of factors which will be discussed below.

Central to scholarly teaching is the notion of student-centredness. Early career Teaching-Focused Academics demonstrate both teacher-centred and a move to student-centred conceptions of learning. Teaching-Focused Academics with a positive experience of their PGCert and engagement with pedagogic literature are more likely to moving towards a student-centred conception of learning. For one Teaching-Focused Academic, reflecting on her first academic year reveals dissatisfaction with a transmission model of education.

> *I only started the start of September, and teaching started mid-September, so I had very little run up in my first year, so really it was total firefighting, get the information across to them, but definitely didn't feel very satisfied with that approach, either for the students, or for me. I19*

It is common in some universities to employ Teaching-Focused Academics at the start of the academic year and give them immediate teaching responsibilities. For inexperienced

teachers, initial approaches to teaching are influenced by the way they have been taught, which is in most cases, is a transmission approach. However, even in the space of one year, this Teaching-Focused Academic is already expressing the opinion that it does not benefit students, or the teacher, to teach in that way. The dissonance between the approach to learning that is being implemented and the outcomes it produces are troublesome for the Teaching-Focused Academic, demonstrating liminality as she negotiates her understanding of teaching and learning.

Similarly, in the following example, the Teaching-Focused Academic reflects on how more could be made of student opinions, and how academics often ignore their ideas of improving education.

> *You're listening to your students and I think our students tell us stuff all the time about how we could change, how we could make things better, but I think a lot of the time it goes unheard. I18*

Moving towards a student-centred approach to teaching and learning involves an acknowledgement of changing one's approach to teaching. Reflecting on her own student experience, this Teaching-Focused Academic addresses the new learning in the PGCert as an alternative to the transmission model, and embraces it enthusiastically.

> *Most of the lectures I took as an undergrad were very much somebody at the front preaching at you, and you sat there taking notes as frantically as you can, so, it's nice to see that it does work in a different way, and, yeah, I would like to think that I can make it work. I12*

While Teaching-Focused Academics can be encouraged to embrace a student-centred approach to teaching, those with a negative experience of PGCert are likely to persist with a teacher-centred conception of education. This is not to say that they do not care about their students. In fact the opposite is true. The teacher-centred early career Teaching-

Focused Academics express concern for their students' education, but believe that it is their actions that make the students learn.

> *I'm a teacher…Because I care. And I care that students understand what I'm talking about. And I care that they grasp the concepts…Yes, it's about the, about students understanding what I'm teaching. I13*

This Teaching-Focused Academic obviously cares about her students. However, her strategy to support their learning is about her role in transmitting information to them, taking a teacher-centred approach. In this sense, the Teaching-Focused Academic holds on to their preconceptions of learning, taking up a defended position (Flanagan, Taylor, & Meyer, 2010), unwilling to let go of their preconceptions of teaching.

For Teaching-Focused Academics with a teacher-centred conception, their practice is the priority, rather than what students do to develop their own learning. Their lack of engagement with SoTL proves to be a barrier to their development of student-centredness. This may be a lack of experience as a teacher, or it may stem from a lack of engagement with, for example, the PGCert, or with pedagogic literature.

Teaching-Focused Academics with more experience express a student-centred conception of teaching and learning. This is not unexpected, as they are actively involved in teaching and scholarship. There is evidence within this group that the move to a student-centred conception is a transformative, integrated, irreversible, reconstitutive experience (Meyer & Land, 2003) which can only be experienced by the individual.

> *Yes, that's interesting, isn't it? Well, it started out from really just wanting students to have better learning opportunities and that sounds really weird, but it was all about that for me, for years. 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? And that was when my kind of [disciplinary]*

> *background kicked in, and I started to think, well, I know how to design an experiment so surely I can design an experiment around testing the impact of learning and teaching? I02*

This Teaching-Focused Academic reflects on a number of issues associated with a student-centred conception of learning. He charts his own development from teacher-centred to student-centred practitioner. Interesting is the reliance on his background as a scientist in designing the research. The mid-career Teaching-Focused Academic identifies as a scientist, and utilises his experience as a scientist in order to answer pedagogical research questions. There is a synthesis of two identities, that of scientist and pedagogical researcher. This statement from an experienced Teaching-Focused Academic encapsulates the dimensions of Trigwell's model.

> *Well I look for solutions in the literature, and I look for solutions in the changes in my teaching practice that I made and now I'm waiting to see have we helped the students or not? So, if it has helped it's something for me to carry on, to take forward. If it hasn't helped it would indicate for me it's for me to stop and think about a different solution. I04*

Experienced Teaching-Focused Academics describe themselves in terms of being a facilitator, whose role is to guide students in their learning, rather than being involved in the transmission of knowledge. While this could be seen as some as an attempt to downgrade the importance of the role of the teacher, to those with a student-centred conception of teaching, it is a way to support students to actively pursue learning themselves.

> *I see myself as a teacher as a facilitator, I suppose, kind of akin to a personal trainer, and I think my role is not to, I can't make them learn, and I suppose what I want to do is enthuse them about the subject so that they want to go and learn for themselves. That in an ideal world I guess, that's my philosophy, if I have such a thing… it's not my style to stand up and give a one hour lecture without pause, you know, I try to be as interactive as I can, given large numbers and so on. I10*

This example highlights the awareness of the Teaching-Focused Academic that whatever he does, ultimately the students themselves are responsible for their learning (Biggs, 1999). While the role of the teacher changes, this is not to say that the authority of the teacher is undermined, however, teaching becomes more like a partnership.

However, although Teaching-Focused Academics with a student-centred conception of learning understand their role as a facilitator of learning, it cannot be said of every teacher.

> *We had Alan Waterboys around, and one of the questions he asked us was: How would you describe yourself in terms of teaching, and he gave a few little examples; guru, policeman, some of my colleagues said they were policemen and gurus, which worried me a lot and I said I was a tour guide. So people can get on the bus and I'll take them to their destination if they want to. Or they can just sleep gently in the back. I17*

In the variety of examples of descriptions in this example, we see that some academics see themselves in a teacher-centred role; that of a policeman whose job it is to enforce the law and monitor criminal activity. The role of the guru, on the other hand, is less clearly teacher-centred, despite the reservations of the Teaching-Focused Academic. While we might think of a guru as being an expert, handing out wisdom to his disciples, in fact the Sanskrit word guru means "teacher, guide, counsellor, mentor or master". So while "master" could be perceived as a teacher-centred term, "guide", "counsellor" and "mentor" are more student-centred.

Empathy with students is seen as vital for designing student-centred learning.

> *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. I03*

Although there are signs here of an oscillation between teacher-centred and student-centred conceptions of learning, there is a sense that the teacher is moving towards a student-centred conception of learning.

However, external influences can hamper Teaching-Focused Academics' engagement with student-centred learning, so that, although they acknowledge the benefits of it, they are unable to implement it as they would like because of, for example, time constraints.

> *However, most of my teaching is standard, didactic style of teaching. As is most of my colleagues'. Although we're all very aware that there are other ways that we maybe should be embracing, however, you also get into the cycle that the more teaching you do, the easier it is to do didactic teaching compared to some of the more, maybe, exciting methods of teaching, and I think that's maybe a prominent problem common to the Russell Group universities. I05*

In this case, although a student-centred model of learning is known to benefit students, it is not always possible because of workload and time constraints. This is a manifestation of the issues with Rules and Division of Labour that were set out in Chapter 5, which actually harm Teaching-Focused Academics' ability to develop and implement student-centred learning.

### 6.2.4 Reflection dimension

The final dimension of Trigwell et al's (2000) model is the Reflection Dimension (RD). Central to the notion of effective university teaching is the reflective practitioner (Schön, 1983). All of the Teaching-Focused Academics interviewed showed evidence of reflecting on their practice, irrespective of their experience with SoTL. However, differences lay in how Teaching-Focused Academics acted on their reflections. Those with a more developed engagement with SoTL were more likely to be able to find solutions to problems, while those who did not, were able to articulate issues, but were less likely to find an informed

solution, leading to frustration. While engaging in reflection itself cannot be defined as having the qualities of a Threshold Concept, the issues which emerge as a result of reflection may be thought of as having threshold-like qualities, as they are troublesome in nature. The tools, skills and knowledge that Teaching-Focused Academics need to address the issues determine the success of the outcomes, and liminality is exhibited if experience is not sufficient to address them.

Reflection manifests itself in a number of ways within the group. This Teaching-Focused Academic talks about reflecting on what she can do to change her teaching, although there is no reference to either students or pedagogic literature.

> *I find the way that I am I'm very much a reflective practitioner so I'm always thinking about how I can change my teaching and learning from what other people do and sort of trying things out and reflecting on them and changing them. I21*

For a Teaching-Focused Academic at the start of their career, there is reflection on action (Schön, 1983). However, the outcomes of this reflection may be intuitive changes to practice, which are not grounded in evidence. To develop and move on, this kind of reflection requires the Teaching-Focused Academic to build on their knowledge of pedagogic literature and theory.

Perhaps the most interesting part of the following statement is the acknowledgement of the length of time it takes in order to become student-centred, and the need to experience it for oneself. Development as a reflective practitioner requires time, both to acquire practical experience and pedagogic knowledge.

> *If I look back at my lecture slides from ten years ago, to the ones that I do now, they're just unbelievably different in terms of how I would approach a teaching session and that's, so now I try to talk to staff, and tell them, this is, if I could*

*give you one thing it would be that insight, into what your role as a teacher is. But I don't think it's possible, people kind of have to learn it themselves. I02*

Being a reflective practitioner is more than reflecting on one's practice and the effect it has on student learning. Being able to see things from another's point of view is also important.

*I guess I simply have the mindset of when I do something I want to do it properly, and well, give me quite a lot of satisfaction to see my students learning well, and enjoying the course, and I think I tend to put myself in the students' shoes quite a lot, and I tend to think back of the time when I was a student and I also think that we have a huge responsibility for students when we take them on, and we can't just deal with the good students and forget about those who are mediocre or struggling a bit and I think it's just a sense of responsibility and a sense of satisfaction when I get it right… my biggest strength, I think is probably that I always have a tendency to step out of myself and see myself, from the others' perspective. I03*

In this case, the ability to empathise with students is both reflective and conceptual, and ontological in nature. Conversely, lacking the pedagogic experience to address reflections can mean that, while the issues can be identified and articulated, the solution is elusive.

*There are the weaker ones that need our help more than the bright ones. The bright ones will go on and graduate whatever you do, which sounds very cynical but I think there's a certain amount of truth in that. Our job is really to address the people who are struggling, and I think, maybe I've become too dogmatic and pedagogical in that sort of scenario…they [students] haven't got the facility to carry out a [library] search in a constructive manner, which is, I think, a weakness, which ought to be addressed in our teaching scenario. But don't ask me how you do it! I15*

The identification of a lack of skills and knowledge in students is clearly articulated here, as is the need for support, especially in the case of the weaker students. The Teaching-Focused Academic has clearly reflected on this problem. However, he is unable to provide a solution, despite identifying that there is an issue with students' library search skills, which will negatively impact on them during their degree and beyond, unless something is done about it.

## 6.3 Thresholds outside Trigwell's Model of Scholarship

While the evidence strongly suggests the existence of thresholds in the Informed, Communication and Conception dimensions, and less so in the Reflective dimension of Trigwell et al's (2000) Model of Scholarship, there is evidence for the existence of thresholds which do not sit well within in the model itself. These have been alluded to in earlier sections of this chapter, and now will be considered in further detail.

While considering the Informed and Communication dimensions of the Trigwell Model of Scholarship, it became apparent that there were other areas which were troublesome for the Teaching-Focused Academics. These thresholds were related to both of these dimensions, but not explicitly about pedagogic literature or publication of pedagogic research. They were, instead, clearly related to Teaching-Focused Academics' engagement with a qualitative paradigm outside their disciplinary knowledge, and the methods and methodologies employed to carry out qualitative pedagogic research.

As with the Informed dimension, troublesome language is a recurring theme. The alienness of the language leads to hidden meaning, which the Teaching-Focused Academics are unable to access. This hidden meaning extends to research methodologies, research methods, data handling, data types, and foreign paradigms.

Approaching pedagogic research as a scientist is a starting point for Teaching-Focused Academics. As with the Informed and Communication dimensions, Teaching-Focused Academics talk in a scientific-research way about pedagogic research, shying away from the discourse of education.

> *I see that as scholarship of teaching and learning, so I think everything that I've done as an academic is under the umbrella of the scholarship of teaching and learning, is about thinking and evaluating experiences and trying to collect data and do things in a hypothesis related way in all of my teaching activity and I guess I didn't know that for a long time, and I still don't, I guess I don't think about it that deeply as a concept, "The Scholarship of Teaching and Learning" and I think deeply about hypothesis related research around trying to prove the impact of interventions on student engagement and student learning, and that's the kind of area that I think of, and if that's an area of scholarship then, yeah, that's what I do. I02*

In this case, there is a separation in the definition of "research" and "SoTL". The Teaching-Focused Academic thinks in terms of his own experience of research, planning his pedagogic research in terms of hypotheses and impact, and changes due to an intervention. This is synonymous with a controlled experiment, where one condition is changed under experimental conditions, and changes are measured. The Teaching-Focused Academic attempts to reconcile this approach to SoTL by asking if it is an area of scholarship, which it is. The strength of practitioner/pedagogic/educational research is that it borrows from many fields, therefore it is legitimate to apply science-like methods to answer questions.

For Teaching-Focused Academics who attempt to engage with more traditional pedagogic research methods, these may prove troublesome in nature. The qualitative paradigm is recognised as foreign to the Teaching-Focused Academics, the use of Likert scales, which are not quite quantitative, approaching text as a data source, and how to handle it appropriately are all seen as alien, and troublesome.

> *I think it was getting to grips with qualitative research, it was getting to grip with statistics so you could do with Likert scales, drawing out textual themes, it was, I mean, I can do it, but I don't necessarily think that I find it easy. It's not as something that comes as second nature, and part of me just thinks – gosh, you know, give me some enzyme graphs and I'm OK. (laughs) I09*

While qualitative methodology and methods may be alien to those used to dealing with numbers and measurable quantities, the importance of being able to convince colleagues was also recognised, and in the case of life science colleagues, they would be more convinced by evidence gathered by methods they were familiar with.

> *It is about evidence, I think, and it's about putting in an intervention and then seeing whether it has a demonstrable effect, whether it has the effect that you want to see, or whether it has a different effect, so I think, without it, you can do all the interventions, exciting things that you like, but unless you actually find out whether it's actually made a difference then how can you have the evidence to say to the rest of your school, the rest of the university, we need to use x and we need to use y because it improves this skill, or that skill, so it is about evidence, and I think that's important and I guess again that comes from a lot of people I think who come into this from the sciences, that's kind of probably what they would say as well, it's the evidence base that's important. I09*

As with the previous example, the emphasis is on evidence of impact or change, something that can be measured, rather than taking a more qualitative approach to understand how things are. The need for measurement drives the Teaching-Focused Academics, not only because they are scientists, but because their audience is also composed of scientists, who demand evidence in a form that they can understand. Shifting paradigm is highlighted as a challenge for Life Science academics, even when they are supported through the formal route of a postgraduate degree programme. Recognising that there is a difference is not a guarantee of negotiating it successfully.

> *I'm doing my Masters degree at the moment…I know how difficult it is to get the data sometimes, and also doing other projects, I've been involved in other projects. I just wrote another one that I hope is going to be funded, we never know, do we? But I think I'm quite active in the scholarship, if that is scholarship, trying to get some publications, which I think is the hardest for, I don't know if it's fair to say for us, but it is for me. I think it's a completely different language we need to get engaged with, isn't it? To the same, it is, I've started to analyse my data, and writing up my thesis, I think it's one of the biggest challenges for us [coming] from the science background to the social sciences now. I04*

The theme of changing paradigms is further taken up by the Professor in the group, who understands the challenges of convincing those outside SoTL engagement that it has value for Higher Education.

> *I think if there's anything I would like to achieve, I think it would be a better understanding of people outside looking in, because I think people like you and me, and others who have been involved in it [SoTL], probably have a very good understanding of the value of it, and have a good idea of what they're trying to achieve… The way it's measured by people outside looking at it. They're using a different paradigm, they're using the same kind of paradigm that they use when they're measuring their Research Excellence Framework and you can't do that. I think it needs a different mindset, and I suppose that's what I would really like to try and push a bit. But you know, I think it is coming and I think we're probably better off in this university and even in our college, than a lot of people in other places, so, we're getting there. I14*

Although this interview extract was recorded before the suggestion of TEF, it is somewhat prescient in its sentiment. SoTL is different in nature to disciplinary research, and needs to be approached and treated appropriately. Likewise, the necessity to value and publicise expertise in SoTL is something that TEF should aspire to.

> *I just wanted to say that I have a feeling that in the future, a lot of these activities, these SoTL activities should become more important and more transparent, is it transparent? So that external people will be able to see whether academics and teaching staff at universities do these sorts of things because if I was paying for a child of mine to go to university I'd like to be sure that the people teaching my children have got experience and are willing to try new techniques and use evidence for what they're doing so I have the feeling that in the future, this might all be more extensive than it is now. I20*

## 6.4 Summary

By using Trigwell et al's (2000) Model of Scholarship as a framework for exploring Thresholds in SoTL (Meyer & Land, 2003, 2005), tensions in engagement with SoTL have been unearthed. These manifest themselves as barriers to understanding and engaging with pedagogic literature and education theory in the Informed Dimension, communicating

SoTL outputs in the Communication Dimension and negotiating a student-centred approach to learning in the Conception Dimension. There is less evidence for the existence of thresholds in the fourth of Trigwell's dimensions, Reflection, as all of the Teaching-Focused Academics were capable of reflection on their practice; however, their ability to solve issues thrown up by this reflection on practice were influenced by their engagement with and understanding of the other dimensions of SoTL. Of interest is the identification of areas where thresholds exist, which were not directly addressed by Trigwell's model of scholarship; namely negotiation of the qualitative paradigm, methodologies, methods, and subsequent handling and analysis of qualitative data. Table 6.2 is a summary of where possible thresholds encountered by this group exist, and how they manifest themselves. While these findings support Kneale et al's (2016) assertions that there may be issues with quality and engagement with theory, they also support the recommendation that more is done to support the development of pedagogic researchers within university departments. These findings regarding Threshold Concepts will be discussed further in chapter 7.6.

*Table 6.2 SoTL thresholds identified by using Trigwell et al's (2000) Model of Scholarship*

| **Dimension of scholarship (Trigwell et al, 2000)** | **Level** | **Threshold Concept dimension (Meyer & Land, 2003; 2005)** | **Troublesome knowledge** |
|---|---|---|---|
| Informed | Informal theories of learning | Transformative<br>Irreversible<br>Integrative | |
| Informed | Engaging with the literature in general terms | Transformative<br>Irreversible<br>Discursive<br>Bounded | Alien knowledge<br>Conceptually difficult knowledge<br>Troublesome language |
| Informed | Engages with the literature; particularly the discipline literature | Transformative<br>Irreversible<br>Discursive<br>Bounded | |
| Communication | Communicating with colleagues | Transformative | |
| Communication | Writing papers | Transformative<br>Irreversible<br>Integrative<br>Discursive<br>Bounded | Troublesome language |
| Conception | Student-centredness | Transformative<br>Irreversible<br>Integrated<br>Bounded | |
| *Analytical* | How to approach/handle data | Transformative<br>Irreversible<br>Integrative<br>Bounded | Alien knowledge<br>Ritual knowledge<br>Tacit knowledge<br>Conceptually difficult<br>Troublesome Language |
| *Analytical* | Understanding research methods | Transformative<br>Irreversible<br>Integrative<br>Bounded | Alien knowledge<br>Tacit knowledge<br>Conceptually difficult<br>Troublesome language |
| *Paradigm* | Definition of SoTL | Transformative<br>Irreversible<br>Integrative<br>Bounded | Conceptually difficult knowledge |
| *Paradigm* | Understanding pedagogy | Transformative<br>Irreversible<br>Integrative<br>Bounded | Alien knowledge<br>Inert knowledge |
| *Paradigm* | Understanding qualitative paradigm | Transformative<br>Integrative<br>Bounded | Troublesome language |

# 7 Discussion

In this chapter I discuss the main findings of this study, contained in chapters 4, 5 and 6, in the context of Activity Theory and the theoretical framework outlined in chapter 2. I explore the nature of the tensions and contradictions contained within and between Activity Systems. I begin with a discussion of the emergence of Teaching-Focused Academics as a distinct academic identity, evolving from that of the Academic, under pressure of REF. I discuss how Teaching-Focused Academics' academic identity is intertwined with the strength of its community of practice (Wenger, 1998), focusing on the support offered at local and wider levels, and how that support, or the lack of it, impacts on Teaching-Focused Academics.

I then follow with a discussion of how SoTL emerges as the Teaching-Focused Academics' Activity System Object 3. I look at how the imposition of Rules and Division of Labour results in the evolution of SoTL as a proxy for disciplinary research, in order for Teaching-Focused Academics to be viewed as academics, and the limited success that this has had within the academy. I also look at the tensions and contradictions which result in unintended consequences for Teaching-Focused Academics due to the pressures of the REF, exploring how the shift in focus of HE's central mission disempowers this group.

Finally, I discuss the place of SoTL in REF, exploring Threshold Concepts (Meyer & Land, 2003, 2005) in SoTL, strengthening the case for SoTL's exclusion from REF. As part of that discussion I also critique the models of scholarship proposed by Trigwell et al (2000) and Antman & Olsson (2007), offering suggestions as to how the models could be extended to aid understanding of development of SoTL.

The research questions which drove this study are reiterated below. In the following sections of this chapter I address the extent to which each of the questions has been answered, any outstanding issues, and suggestions for further work in the area.

*To what extent are Teaching-Focused Academics a distinct academic group?*

*To what extent does REF impact on the role of Teaching-Focused Academic?*

*What are the barriers to engaging with SoTL for Life Science Teaching-Focused Academics in UK institutions?*

*To what extent can engagement with SoTL be regarded as a Threshold Concept?*

The extent to which each of the research questions has been answered will be dealt with in the following sections of this chapter, with conclusions and recommendations in chapter 8.

## 7.1 Teaching-Focused Academics – Community and Identity

In this section I return to the idea of Teaching-Focused Academics as a distinct Community of Practice with an emerging Academic Identity which differs from that of their colleagues, the Research-Focused Academics. While Activity Theory (Engeström, 1987, 2000) takes into account the notion of Community, and the influences of and on individuals and the tools and artefacts that they use, I further explore the notion of Community of Practice and its influence on identity, as it pertains to Teaching-Focused Academics in this study, using Wenger's (1998) Communities of Practice.

Wenger (1998, p. 73) defines a tripartite structure to a Community of Practice. These are: 1) mutual engagement, 2) a joint enterprise and 3) a shared repertoire. For the Life Science Teaching-Focused Academics, all three are apparent in their engagement with SoTL. Teaching-Focused Academics' mutual engagement is demonstrated by their engagement with SoTL. This is not to say that they are all experts. There is delineation between local

communities, which can be seen as weak in some areas, due to the vagaries of local management support. In contrast, the example of the HEA Centre for Bioscience was one of a strong community of practice which flourished despite being a group of individuals who were geographically distant (Wenger, 1998, p. 130). Engagement is demonstrated over a wide range of abilities and levels of expertise, from those starting out on their careers as teachers in HE, to others much further on, and more experienced. There is a sense of co-operation which defines the Life Science SoTL community, which is both appreciated and defended. In terms of identifying joint enterprise, this is two-fold; the pursuit of SoTL, and improvement of learning for students. The pursuit of SoTL is not for its own end. While Teaching-Focused Academics are engaged in making their work public, the actual purpose of this is not to further their own careers, but to benefit their own, and others' students. The shared repertoire of the Community of Practice is more complex, as the array of equipment, techniques and experiments, and disciplinary knowledge is shared with Research-Focused Academics, who also use them to teach. What makes Teaching-Focused Academics distinct is that they are more likely to use of SoTL as a theoretical underpinning to how they teach. SoTL, in this sense, can be thought of as a Boundary Object (Wenger, 1998, p. 105), which acts as a source of discontinuity across the borders of the Teaching-Focused Academic and Research-Focused Academic Communities of Practice. As such, engagement with SoTL also acts to separate the two communities, as Teaching-Focused Academics pursue expertise with SoTL, while institutional priorities mean that Research-Focused Academics concentrate on disciplinary research. Of interest is the asymmetry of brokering (Wenger, 1998; pp. 108-113) across the boundaries of the Research-Focused and Teaching-Focused communities. While it is possible that Teaching-Focused Academics may seek the disciplinary expertise of Research-Focused Academics to develop discipline-

specific teaching innovations (as is my own experience), it is less likely that Research-Focused Academics would seek the pedagogic expertise of Teaching-Focused Academics.

Communities of Practice are defined by barriers and connections which evolve over time. While SoTL acts as a Boundary Object, artefacts such as disciplinary knowledge or equipment may act as a connection. However, advances in disciplinary knowledge or equipment may result in them also taking on the identity of Boundary Objects. This was recognised by Teaching-Focused Academics further on in their careers, who questioned their continuing ability to teach at higher levels, where keeping up with new disciplinary knowledge was essential. There was little sense in the interviews, of brokering taking place; that is "connections provided by people who can introduce elements of one practice into another" (Wenger, 1998, p. 105). While Teaching-Focused Academics recognised the issue of keeping up to date with disciplinary knowledge, none of them identified a mechanism to address it. Similarly, there is a tendency to approach SoTL "as a scientist"; while Teaching-Focused Academics are familiar with SoTL, they still retreat back to their disciplinary norms when approaching pedagogic research. Teaching-Focused Academics and Research-Focused Academics can be thought of as separated communities because of what they do (prioritise teaching or research), by their engagement with knowledge (SoTL and discipline or discipline). A third Boundary Object may be identified, which is REF. While disciplinary knowledge, although potentially a barrier, could be addressed by brokering a collaboration with research-active colleagues, REF excludes Teaching-Focused Academics from participation because of conventions of impact. Both SoTL, and REF are reified; the difference is that with REF comes an enormous amount of power and influence over the academy. While SoTL has little influence outside the Teaching-Focused Academic community of practice, REF influences both the Research-Focused Academic and Teaching-Focused Academic communities. The extent of this influence and its consequences will be

dealt with when I discuss the imposition of Rules and the Division of Labour in later sections.

Identity is bound up in Communities of Practice. Individuals gain identity from their engagement with a community, from their experience of participation within the community, from learning, and how they interact with others, locally and globally (Wenger, 1998, p. 149). Teaching-Focused Academics' identity is formed from their shared engagement with SoTL, and with their interactions with others such as Research-Focused Academics and university management.

One of the results of the separation of the communities is that Teaching-Focused Academics emerge with a distinct academic identity, separate from their research-focused colleagues. It arises from the separation of academics due to institutional pressures to produce world-class research for REF, in terms of contract, role and sometimes, the physical separation at work. The tensions and contradictions between these two Activity Systems are apparent. However, both Activity Systems interact with the Institutional Activity System, of management, policy and governance. The intricacies of these other Activity Systems, while of interest, are not within the scope of this study. Therefore, they will be referred to only in the context of where they interact with the Teaching-Focused Academic Activity System.

## 7.2 SoTL expertise – Trajectory 1 or Trajectory 2

Roxå et al's (2008) work on the importance of engagement with SoTL resonates with this group. As has been discussed, local communities of practice may be weak and undefined. The Teaching-Focused Academics engaged with SoTL in these situations take on the role of

the “pedagogic expert” within their department, concentrating on their individual development (Roxå et al’s (2008, p. 280) Trajectory 1). This situation arises and is allowed to proliferate because of the elevated status of research. So, while advancement of disciplinary knowledge is encouraged, and research is held in high esteem, there is a lack of momentum to do the same with SoTL. In contrast, the strength of the HEA Centre for Bioscience in forming and maintaining a community of practice was more akin to Trajectory 2 (Roxå et al, 2008, p. 280), where there was expertise shared between the members of the community. However, in contrast to Roxå et al’s proposal, that Trajectory 2 is “*more promising for the institution in terms of organizational development*” (Roxå et al, 2008, p. 280), the dispersed nature of the community means that while the members of the community come together to make the Centre for Bioscience “the institution” in Trajectory 2, as they return to their respective home institutions, Trajectory 1 persists, and they find themselves isolated at a local level. This situation is one that persists at many universities, because of an inability to change the culture.

Teaching-Focused Academics identified as being most prolific with SoTL outputs, have a wider experience of community. At this stage in their careers, there is evidence of a split in what constitutes their community. For some, their colleagues in their department remain important to them for a sense of community. These teaching academics belong to departments where their role is more clearly defined, they have a sense of autonomy, and they are allowed to pursue lines of pedagogic inquiry that interest them. Primarily women, their Teaching-focused roles can be perceived as being “appropriate”. For other Teaching-focused academics, their local environment does not foster a sense of community. However, instead of allowing this lack of support to discourage them from their engagement with SoTL, these mid-career Teaching-focused academics pursue opportunities outside their locality. These Teaching-focused academics consciously seek

out a supportive community of practice in the wider sense. The community most commonly discussed was the HEA Centre for Bioscience. This entity is bounded in space and time, as it existed between 2000 and 2010 and therefore represents a unique community of practice for a specific group of people who were present at the right time. The HEA Centre for Bioscience highlights the importance of the existence of a community of practice, as, for many of the mid-career Teaching-focused academics, it was the only source of support for teaching and pedagogic research that they had. The HEA Centre for Bioscience acts as a focal point, in the same way that the PGCert cohort acts as a focal point for early-career Teaching-focused academics; a place where it is "OK" to talk about teaching and learning in HE. In contrast to the HEA Report on SoTL (Fanghanel, Pritchard, Potter, & Wisker, 2016) which emphasised the importance of the UKPSF in supporting teaching and learning, no interviewee mentioned the UKPSF, and were disparaging of the current HEA structure, mentioning that, as practitioners, they no longer felt included or supported by the HEA. This, in turn, led some of the interviewees to believe that the natural successor to the HEA Subject Centres was, in fact, the learned societies. This highlights the failure of the HEA to understand, or address, the need for teaching and learning support at a disciplinary level, and the inclination of Teaching-Focused Academics in life sciences to seek such support. Teaching-Focused Academics' concept of community is horizontal, which is at odds with the vertical nature of the culture of research. This can be traced back to academics' motivation (Deci & Ryan, 2000). Taking Blackmore and Kandiko's model of the Prestige Economy (2011, p. 405), and comparing it to the conceptual space inhabited by Teaching-Focused Academics, there is a fundamental contradiction of motivation. The Prestige Economy (Blackmore & Kandiko, 2011, 2012) appears not to function for Teaching-focused academics in the way that it is seen to work for Research-focused academics. In terms of tensions and contradictions, these can be

defined as coming from both the external pressures brought to bear from Research-focused academics, and from institutional culture. Research-focused academics exist in an environment where the rules of engagement are clear: obtain external funding grants, carry out world class research, publish papers, develop an international reputation, and be rewarded within the institutional system which has evolved to this point for over four decades. In order to be able to achieve these things, within the prestige economy, there has to be some way to offload low prestige parts of the academic role, to maximise the time, energy and resources to enable a Research-focused academic to do so. In reality, the experiences of Teaching-focused academics suggest that they take on the majority of teaching and administration to allow Research-focused academics to concentrate on disciplinary research. Research-focused academics, through the Prestige Economy (Blackmore & Kandiko, 2011, 2012) as reward for their academic achievements, may choose which parts of the academic role to give their attention to. Conversely, the pressures of achieving world class research for REF success could be seen by some as being too much to bear. At the same time, Teaching-focused academics are excluded from the advantages that are conferred on their research colleagues by the prestige economy, because their role is not recognised in the same way as the role of the Research-focused academic. The role is relatively new in academia, it is populated by an increasing number of young women disillusioned with the demands of a research career, with the result that the voice of the Teaching-focused academic is lost amongst the louder, more prominent Research-focused academics, who use their position to broker deals for themselves. The prestige economy looks somewhat bleak for Teaching-focused academics. In contrast to their Research-focused colleagues, there is a lack of prestige for Teaching-focused academics (Figure 7.1).

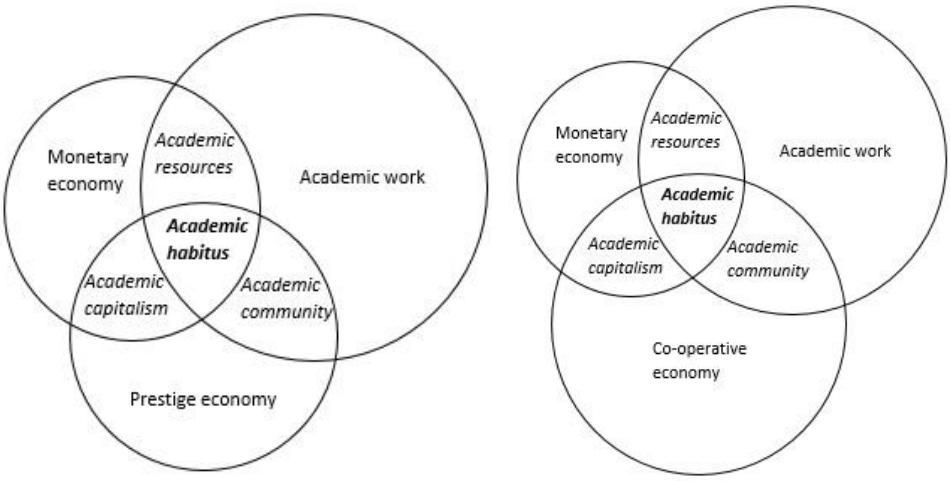


*Figure 7.1 Prestige Economy (Blackmore & Kandiko, 2011, p. 405) adapted to show how it exists for Teaching-focused academics.*

I propose an adaptation of Blackmore and Kandiko's representation of the prestige economy in Figure 7.1. While academic work does not decrease for Teaching-focused academics, both the monetary and prestige economy are much smaller, in terms of priorities, reward and recognition (Figure 7.1; *left*). This affects all aspects of academic life, as resources are scarce for Teaching-focused academics to be able to do their role, and little attention is paid to their academic achievements. However, taking this a step further, it can be argued that the Prestige Economy does not exist for Teaching-Focused Academics at all, and should be substituted by "The Co-operative Economy" (Figure 7.1 *right*). This is highlighted in the transformation of Teaching-Focused Academics in their conception of learning, from teacher-centred to student-centred. This fundamental ontological shift moves the focus from *Prestige* to that of collective co-operation, and communal support. The Research-Focused Academic Activity System which is influenced by the Institutional Activity System, is then contradictory to the Teaching-Focused Academic Activity System, as what defines the heart of one system is the polar opposite of the others.

## 7.3 Status of SoTL – Grandiosity and Prestige

In this section of the discussion, I look at the imposition of Rules on the Teaching-Focused Academic Activity System and how this serves to discriminate against them. In order to look at this more closely, I refer to Alvesson's Grandiosity (2013) and how the zero-sum game and illusion tricks can be used to explain the situation Teaching-Focused Academics find themselves in. As part of this, I also explore how the Prestige Economy (Blackmore & Kandiko, 2011, 2012) affects Research-Focused Academics but fails to have any effect on Teaching-Focused Academics. I further discuss the influence of REF in determining how Rules are made within the academy, and what, if anything, can be done about it in order to mitigate its effects.

Despite a call for SoTL to be viewed as the Teaching-focused academic equivalent of disciplinary research and the recommendation that pedagogic research be included in REF (Stern, 2016), the reality for these Teaching-focused academics is that it is not equivalent. Teaching-Focused Academics' role priorities mean that they cannot spend their time engaging in SoTL; indeed, SoTL was described as being a "luxury" or a "hobby" or a "cottage industry". Taking this to its logical conclusion, if SoTL were granted the same status as disciplinary research, then Teaching-focused academics would be able to eschew teaching and administration duties in favour of SoTL/Pedagogic research. Therefore the Rules of what work is prioritised is different when applied to Research-Focused Academics and Teaching-Focused Academics. It is interesting to pause for a moment and reflect on where rules come from and who implements them. Both Research-Focused and Teaching-Focused Academics are subject to their institutional Rules. There are also Rules which come from external bodies: government agencies, funding councils, charities, professional societies. All of these have influence on academic roles. Research-Focused Academics prioritise

disciplinary research because of the pressures of institutional rules which demand priority given for research publications for REF. Funding bodies want to see research progress in a timely and efficient manner, and future funding may rest on this. These pressures on Research-Focused Academics means that they may have no option but to minimise contact with students, and reduce teaching and administration loads. This shifts teaching and administration on to Teaching-Focused Academics. This is to be expected, as it is written into Teaching and Scholarship contracts, but an unintended consequence is that time for SoTL as a research activity is reduced. Teaching-Focused Academics pick up teaching and administration and, rather than pedagogic research being prioritised, it is relegated into third place in terms of priorities. This promotes a perception that disciplinary research is to be coveted (Grandiosity increases) and pedagogic research is not (Grandiosity decreases). In Alvesson's terms (2013) in the zero-sum game, as the status of disciplinary research increases, the status of pedagogic research decreases, and with it, the status of the academics engaged with both activities either increases or decreases. The zero-sum game (Alvesson, 2013; pp. 4-8) is related to the Prestige Economy (Blackmore & Kandiko, 2011, 2012), in that it refers to activities that Research-Focused Academics engage with, but not those of Teaching-Focused Academics. The zero-sum game is driven by the importance of REF and the application of Rules which favour disciplinary research activities. This is borne out by discrepancies in reward and recognition (Cashmore, 2009a, 2009b) and discrimination between groups of academics (UCU, 2013; Jump, 2015b; Rhodes, 2015).

Some of the Teaching-Focused Academics considered that including SoTL and pedagogic research in REF would be a positive outcome for them. However, they identified a number of barriers in supporting SoTL's inclusion in REF. Despite some attempts at organising a local REF submission for pedagogic research in several institutions, none of them came to fruition. This was seen by some as a failure of themselves to organise, or of management to

recognise and support the contribution of pedagogic researchers. However, it could also be argued that the purpose of pedagogic research is not to satisfy the terms of REF, but is to disseminate and share practice between practitioners. Therefore, the inclusion of pedagogic research would not be appropriate in its current form.

## 7.4 REF and the paradox of SoTL

We also have to consider the Paradox of SoTL. In order for Teaching-Focused Academics to develop their pedagogic research to standards required for REF, as suggested by Kneale et al (2016) and Stern (2016), not only would they have to spend more time developing their research to world class levels, but the fact that they would have to forego time teaching negates the purpose of their academic role. Even if it were possible, that would rely on another category of staff being employed to take over Teaching-focused academics' teaching and administration duties. This would lead, in turn, to another group of "academic" staff on the losing side of the zero-sum game which resulted in improved status for the Teaching-Focused Academics. The "other" group in this case is the casualised, or zero-hours lecturer, whose presence is increasing in UK universities (Grove, 2014). This situation is encouraged by the imposition of rules regarding REF on Teaching-Focused Academics. However, as it has been shown that these academics are a distinct group, with different goals and priorities, the rules do not result in a positive outcome, but lead to frustration, and impede the satisfactory completion of their work.

One of the strongest themes to come out of the interviews was that of the status and value of Teaching-Focused Academics within their institutions. In contrast to the communities of practice discussed in the previous section, which develop through shared ideals and goals, with the aim of supporting and empowering Teaching-Focused Academics, the perception

of Teaching-Focused Academics within institutions is more complex, with each institution reacting differently. It is impossible to discern a pattern between universities; for example there is no guarantee that all research intensive institutions treat their Teaching-Focused Academics better or worse than all Post-1992 universities. In fact, Teaching-Focused Academics within the same institution in this study report different experiences. However the issue which was raised with most clarity was that of REF and how it affected the roles of Teaching-Focused Academics within institutions.

Institutions handle how they deal with REF differently. Some institutions expect all staff on academic contracts to contribute to REF, while others, mostly Russell Group institutions, have completely separated academic contracts to research- and teaching-focused, to maximise the quality of papers for REF whilst maintaining teaching. There is also a middle ground where there no separation of contracts, but there is an implicit understanding of who will go forward to REF and who will not.

The group within this study was composed of academics who were expected to contribute to REF, and those who were not. For those who were expected to contribute to REF, they expressed that while they were active in disciplinary research, this was not a problem. They expressed gratitude in being included in REF, as this gave them a means to further their careers and also gave them a kind of job security. For those who were in institutions where every academic was expected to be in REF but they had not produced the requisite four 3* papers, this caused anxiety, as Teaching-Focused Academics in this position were threatened with redundancy, or made to feel that they were inadequate. The hype surrounding REF appears to blind management to the contribution that these academics make to teaching, and, ironically, to REF, as they take the burden of teaching and associated course administration away from their research-active colleagues. This was

particularly sensitive for one early-career Teaching-Focused Academic who had been given teaching from senior colleagues, which had sabotaged her chances of being included in REF because she had no papers to submit. Although both men and women were subject to this treatment, it was more likely that men would be criticised as being "departmental baggage", and threatened with redundancy. This gender divide reinforces academic stereotypes; that women make better teachers because they take on a nurturing role, whereas men who do the same are more likely to be perceived as inadequate, and their research abilities, and therefore their academic identities called into question (Garwood, 2011). Male Teaching-Focused Academics, therefore, were more likely to call their SoTL activities "my research" and identify it in terms of potential contribution to REF, while also being more aware of the consequences of failing to be included in REF, either for disciplinary or pedagogic research.

The situation is more optimistic in institutions where there is no expectation of being in REF, either through role or contract. These Teaching-Focused Academics express relief that they are no longer in the competitive arena of REF, although for some early-career Teaching-Focused Academics who have just left a research career and who have papers eligible for REF, it is disappointing that these papers are now being ignored. However REF does affect these Teaching-Focused Academics indirectly in a number of ways. As discussed with reference to Teaching-Focused Academics expected to be submitted in REF, not being included is seen as a failure, perpetuating the zero-sum game (Alvesson, 2013; pp. 4-8). For teaching and scholarship contracted Teaching-Focused Academics who are not expected to be in the REF, this can create a second class system, where Teaching-Focused Academics are regarded as "less than" research-focused academics, again perpetuating the zero-sum game by lessening the status of teaching. Looking at the composition of the sample for this study, it can be seen that there is a gender divide, with the men in the sample in "research

and teaching" promoted roles, and the women to be more likely in unpromoted or teaching-only roles (with one exception). While the sample is not extensive, it does reflect commonly held perceptions of teachers in Higher Education, that it is a more female role to teach and nurture, while the male role is the "hard" research.

Where Teaching-Focused Academics are seen as being "lesser" academics, in relation to their lack of contribution to REF, a situation of privilege appears. Research-Focused Academics may be perceived by Teaching-Focused Academics as being supported institutionally to carry out their research, making minimal or no contribution to teaching or administration. However, it is likely (but not within the scope of this study) that they are under unbearable pressure to perform, as even those Research-Focused Academics who want to contribute to teaching are discouraged to do so by managers. This shifts teaching and administration on to Teaching-Focused Academics, and perpetuates the role as a female role. However, there is more to this than is initially obvious. As previously discussed, the Prestige Economy (Blackmore & Kandiko, 2011, 2012) inhabited by Research-Focused Academics is extensive, and is supported by institutional rules and norms. This has the potential, and is demonstrated in a local sense, that if prestige is afforded to teaching, those used to being included in the Prestige Economy will expect that prestige in teaching and learning will be theirs. Teaching-Focused Academics appear to have a natural reticence when describing their achievements. This may come from the ontological transformation to student-centredness, which puts the students and their achievements in focus, while the Teaching-Focused Academic becomes peripheral. That peripheral position is vital in effective student learning, however, it does highlight the contradiction between SoTL-informed learning, and traditional didactic, lecturer-centred teaching. I will come back to this when I discuss the proposed TEF, as it could become a major issue within its implementation.

## 7.5 The realities of engaging with SoTL

In this study, Teaching-Focused Academics said time was the biggest barrier to engaging fully with SoTL and that it was perceived as an added extra, rather than a core responsibility. Time is an issue for Teaching-Focused Academics because, unlike Research-Focused Academics, who are encouraged to spend more time in disciplinary research, the focus of Teaching-Focused Academics is the teaching and course administration which has to be done. Most of the Teaching-Focused Academics in the study were contractually obliged to "engage in SoTL", but even these people belittled the status of SoTL, describing it as "a hobby" or a "cottage industry". Similarly, as academic members of staff, they were often expected to do their own administration, leading one of them to openly question their role as an academic or a secretary. Administrative support, when it was available, was stretched to its limits, and while Teaching-Focused Academics praised the support they got, they acknowledged it wasn't enough to allow them the space to pursue pedagogic research projects. One of the casualties of this was that collected data was often not analysed or written up. There was a general feeling, even amongst Teaching-Focused Academics who had done a great deal of pedagogic research, that it was not considered to be a core part of their role, despite being written into their contract, and expected of them.

One of the suggestions that was mooted by several of the Teaching-Focused Academics, including those who had previously been successful in disciplinary submissions to REF, was that SoTL, in the form of pedagogical research (PedR) should be included in the REF. Teaching-Focused Academics suggested compelling reasons for the inclusion of PedR in the REF; it has the potential to raise the standing of teaching and learning in HE, it raises the profile of teachers and it makes teachers more "academic". Many of the Teaching-Focused Academics described attempts by departments or institutions to gather evidence for a

PedR submission to REF. None of these were successful and reasons cited were lack of support from management, lack of awareness of the process, or lack of interest. Many of the Teaching-Focused Academics expressed disappointment in their management for lack of interest, or lack of organisation in pulling together a REF submission for PedR, and cited their own publications as being possibly included. However, a REF submission in Unit of Assessment (UoA) 25 (Education) is more complex than having the requisite four papers within the timeframe of the exercise. In order to understand the challenges involved it is necessary to look at the rules governing submission (with a caveat that these rules may change in time for REF2020).

1. Individuals submitting to a UoA should submit their best four papers.
2. Only submissions deemed to be 3* or above will receive subsequent funding.
3. A paper may not be submitted by more than one individual in an organisation.
4. Submissions should be accompanied by Impact Statements (minimum 2 impact statements).
5. Impact statements cannot be about the impact to one's own students.

Taking each one of these statements at a time, and looking at them objectively from the point of view of the kind of work produced by the Teaching-Focused Academics, a picture emerges of the barriers posed by REF to this kind of research. Much of what is said here supports the work of Kneale et al (2016), in terms of support, quality, impact and opportunity.

The Teaching-Focused Academics in this study are situated in Life Science departments in a range of UK institutions. Some of these institutions have Schools or Departments of Education. This is the first issue. A university with a School of Education is likely to already

have a UoA25 REF submission, made up of papers, books and other publications written by people who are research-active in education. It is highly unlikely that Teaching-Focused Academics from Life Sciences who, by their own admission, do their PedR research in their spare time, would be judged by their institutional REF panel to be of sufficient quality to match the submission from the School of Education. Similarly, an institution without a School of Education is compiling its REF submission in education from people who are not professional education researchers. That leads me to tackle point 2.

In the previous REF (2014) subsequent funding went to UoA submissions which were judged to be a minimum of 3* quality. The REF definition of 3* quality is "Quality that is internationally excellent in terms of originality, significance and rigour but which falls short of the highest standards of excellence." ('Assessment criteria and level definitions : REF 2014', n.d.) It is highly unlikely that Teaching-Focused Academics would produce four papers of this quality. For institutions which do not have a School of Education, it is unlikely that they even possess the expertise required to judge what the quality of the Teaching-Focused Academics' outputs actually is.

One of the strengths of the Teaching-Focused Academics is their sense of collaboration and co-operation. They distance themselves from the competitiveness of disciplinary research, and many of them explicitly state that they chose a teaching career to escape the competitive culture that exists in disciplinary research. Teaching-Focused Academics also remark on the loss of collegiality that they experience as REF takes hold of their institution, and everyone thinks of themselves. Collaboration means that when Teaching-Focused Academics publish papers, they do so as teams. If they are all now required to produce at least four papers in order to be included in REF, this sets up a potentially devastating situation. Teaching-Focused Academics may stop collaborating in the open way they do so

at the moment, with their colleagues, and some will preferentially collaborate with colleagues in other institutions, rather than their own departmental colleagues. There may be disagreements as to which author "owns" a particular paper, especially if it is judged to be of higher quality. At a practical level, asking for four papers from each individual shifts the focus to quantity, and adds more work on to already busy academics. This requirement is potentially destructive to teaching teams, and therefore, destructive to student learning. The consequences of a drop in quality of the "student learning experience" is also potentially damaging, as institutions also pursue top ratings in student experience surveys, such as the NSS, PTES and PRES.

The inclusion of a minimum of two Impact Statements is interesting as it was introduced into REF 2014 to demonstrate that research which was publicly funded had some "benefit". In the case of Teaching-Focused Academic PedR, the origin of impact seems obvious. If Teaching-Focused Academics spend time developing evidence-based approaches to student learning, putting students at the heart of their approaches, evaluate their developments, and demonstrate that they are improving student learning, one would imagine that this would make a compelling case in an Impact Statement. However, there is a caveat to this, which is explored in point 5.

The inability to look at impact on one's students excludes nearly all Teaching-Focused Academic PedR from REF, not from the point of quality, but because Teaching-Focused Academic PedR is done to evaluate the learning experiences, and therefore the impact, on the Teaching-Focused Academics' own students. This requirement of REF that one's own students are excluded from any accompanying Impact Statement seems to have been written with the objective of excluding small-scale Teaching-Focused Academic PedR. This

requirement also encourages Teaching-Focused Academics to collaborate, not with their close colleagues, but with colleagues in other institutions, potentially damaging collegiality.

It seems unlikely that Teaching-Focused Academic PedR as it is currently practised has a place in REF. Although it is research into pedagogy, the purpose of Teaching-Focused Academic PedR is not competition. Indeed, the purpose of Teaching-Focused Academic is co-operative, with the Teaching-Focused Academics in this study explicitly defining themselves as teachers in HE as co-operative, rejecting the competitiveness of disciplinary research. The abortive attempts at organising a Teaching-Focused Academic PedR REF submission described by many of the Teaching-Focused Academics is understandable, given the explanations given in the above section. However, rather than describing Teaching-Focused Academic PedR as being "less than" REF-submittable disciplinary research, it should be thought of as qualitatively different, and serving a different purpose. This agrees with the work of Roxå et al (2007, 2008) who suggest that the most effective strategy for using SoTL is for a co-operative approach to improve teaching and learning, where SoTL infuses the local culture, rather than a few "go-to" people who are viewed as experts.

The role of the Teaching-Focused Academic also precludes Teaching-Focused Academic PedR being included in REF. Teaching-Focused Academics, in general, are employed to teach. This means that they have high teaching loads, and associated high administrative loads. Teaching-Focused Academics also have pastoral roles, often looking after the welfare of their students as well as their academic progress. This means that in reality, PedR *is* a hobby, as it is squeezed in between the necessary tasks that the Teaching-Focused Academic has to do for the smooth running of their courses. If Teaching-Focused Academic PedR was to be developed to 3* REF quality, this would necessitate that Teaching-Focused

Academics' teaching and administrative workloads were cut, preferably to the current levels of Research-Focused Academics. The precedent for this requirement already exists in the reduced teaching loads of Research-Focused Academics, sanctioned by management. This creates a practical and a moral dilemma. In practical terms, cutting Teaching-Focused Academic teaching and administrative loads means that there needs to be a category of staff created to take over those workloads. While teaching is often passed on to PhD students, or hourly paid adjunct staff, particularly in the USA, this is the role currently occupied in the UK by the Teaching-Focused Academics themselves. It is not only counterproductive to take Teaching-Focused Academics away from teaching, it means that if Teaching-Focused Academics concentrate on PedR, their expertise in practice is lost to students. If their teaching is substituted by PhD students, we end up with the paradoxical situation where experienced teachers give up their teaching for inexperienced teachers who have not developed in Trigwell's (2000) four dimensions of scholarship.

There are a number of Teaching-Focused Academics who are against the submission of Teaching-Focused Academic PedR in the REF. These Teaching-Focused Academics come from the mid-career range, and can be described as being uncomfortable within their department cultures. These Teaching-Focused Academics tend to have made a commitment to SoTL, have invested time in gaining postgraduate qualifications beyond PGCert, and have published and presented more widely in PedR than their colleagues. It may seem counterintuitive that these Teaching-Focused Academics are against PedR in REF. However, their greater experience with it suggests that they realise the tensions between research and teaching, and recognise the paradox of giving up teaching in order to fulfil the demands of REF. Other Teaching-Focused Academics, who expressed being in favour of PedR being included in REF do so because of an understandable desire to be thought of as "academics"; however it appears that it is not desirable for PedR to be

included, as the purpose of PedR is uniquely different to the purpose of disciplinary research.

It is clear from the evidence contained in this thesis, with reference to the importance of communities, that the overriding sense of community for Teaching-focused academics is one of collaboration, which is in stark contrast to the culture of research, which, since the introduction of RAE/REF has become increasingly competitive. Interviewees repeatedly discuss the collaborative nature of teaching and learning, describing a social constructivist viewpoint, even for those Teaching-focused academics who are unaware of what social constructivism is. There is something instinctive about Teaching-focused academics' need to collaborate, whether with colleagues or with students. However, they witness the demise of collaboration within their own departments, and the loss of collegiality which has descended upon UK Higher Education, as Research-focused academics compete with one another.

However inappropriate the inclusion of PedR in REF is, the UK HE landscape is about to change. The current Conservative government is about to instigate a "Teaching Excellence Framework" for HE in England. This will have a profound effect on higher education in the UK, as there will be an agenda for "excellence" based on metrics, most of which are outside the control of either teachers or institutions. The direct link of TEF results on the ability of institutions to raise fees, and the implicit deregulation of new providers further unsettles the sector. In all of this upheaval, the importance of scholarship and the place of SoTL and PedR is being lost.

## 7.6 Threshold Concepts in SoTL

While the inclusion of SoTL/PedR may be contested for a number of reasons, it remains that there is evidence for epistemological and ontological barriers to engagement with SoTL, which might impact on the quality of research outputs. In chapter 6, I used Trigwell et al's (2000) Model of Scholarship as a framework to investigate the possibility of Threshold Concepts in SoTL. According to Meyer & Land (2003, 2005) Threshold Concepts are identified as being *transformative, integrated, Irreversible, troublesome knowledge* and *bounded*. Troublesome knowledge can further be divided into *ritual, inert, conceptually difficult, alien, tacit or troublesome* language (Perkins, 1999). There is evidence that Teaching-Focused Academics experience liminality in all dimensions described by Trigwell et al's model. Therefore, engagement with literature and educational theory, making one's work public, reflection and conception of teaching and learning are all troublesome in some way. In addition, there is evidence to suggest liminality and possible threshold concepts beyond Trigwell et al's model, which are ontological in nature. In the following sections I take a more conceptual view of the threshold concepts encountered by the Teaching-Focused Academics in the group.

### 7.6.1 Experiencing liminality

Keefer's (2015) and Wisker's (2016) work on the doctoral experience is a useful place to look at the existence of threshold concepts experienced by Teaching-Focused Academics engaging with SoTL. Just as PhD students experience "periods of confusion and disorientation" (Keefer, 2015, p. 17) as they negotiate their doctoral experience, academics engaging with SoTL may face the same confusion. Using Trigwell et al's (2000) Model of SoTL, and exploring how Teaching-Focused Academics experienced the different aspects of SoTL, liminality can be identified in all four dimensions of the Model. The experience of

liminality is not linear; that is, as Teaching-Focused Academics progress to a more sophisticated view of SoTL, they do not necessarily grow in confidence about it. There are a series of ebbs and flows of liminality experienced by the Teaching-Focused Academics at every stage of their SoTL journey.

### 7.6.2 Definitions of SoTL

There is still a debate on the definition of SoTL. Boshier (2009) and Yan Huang (2008) contend that  While Trigwell et al's (2000) model of scholarship is a useful and comprehensive start to defining SoTL, it is my experience, and that of the Teaching-Focused Academics in this study, that the definition of SoTL is complex and shifting. Each participant was asked to define SoTL, and each answer was different. This reflects the confusion with which SoTL is viewed. Definitions of SoTL ranged from not knowing what it was, through to everything that one does as an academic. Pedagogic research was identified as SoTL, as was evaluation, data collection and formulating hypotheses. Impact on students, reflection on practice were also mentioned as being part of SoTL. However, reservations were also expressed as to the usefulness of the definitions. No one in the study referred to any literature which attempted to define SoTL, so despite literature which attempts to do so (for example, Antman & Olsson, 2007; Kreber, 2002a; Kreber 2005; Trigwell et al, 2000) there was no consensus amongst the participants. The definition of SoTL is troublesome, and appears to have the characteristics of a Threshold Concept, as a clear understanding of what constitutes SoTL would be transformative. One of the biggest barriers appears to be a lack of knowledge of the literature surrounding SoTL itself. It may be that this is something that is missing from PGCerts and support for academics engaging in SoTL as a meta-concept. At the moment, it seems that Teaching-Focused are being asked to do SoTL without being informed as to what SoTL is, and the implications that flow from this. Webb

(2015, p.120) also found it difficult to pinpoint SoTL itself as a Threshold Concept, although acknowledged its troublesome nature.

### 7.6.3 Changing paradigms

Contrary to expectations, Teaching-Focused Academics who are new to post expressed confidence in their views of SoTL. This confidence could be the result of engagement with the PGCert during probation. This assertion is further strengthened by the evidence of Teaching-Focused Academics with no PGCert who had no experience or knowledge of SoTL. However, the confidence that these Teaching-Focused Academics have is aligned with a naïve knowledge of SoTL. While they talk of reading literature, basing their teaching on evidence, presenting at conferences, and even when they express a student-centred conception of learning, there is some evidence for mimicry (Meyer & Land, 2005); while the PGCert gives Teaching-Focused Academics confidence in engaging with SoTL, it may also be responsible for individuals trying to prove that they know more than they actually do in order to be worthy of a teaching-focused academic role.

Of more interest is the feeling of liminality expressed by Teaching-Focused Academics with a great deal of experience of SoTL. Despite their wealth of experience, their publications, invited talks, and a genuine student-centred conception of learning, these Teaching-Focused Academics express the most reservations of engagement with SoTL. Anxiety about mainstream educational research is prominent, so that while Teaching-Focused Academics may be comfortable with reading about other examples of practice within Life Sciences, they are hesitant to engage with mainstream educational research and the implications of crossing to an unfamiliar paradigm. This is expressed in terms of not understanding the language, or the rules, or the discourse of the unfamiliar and alien material. Reservations are also expressed about research methodologies and methods which were unfamiliar to

Teaching-Focused Academics. The idea of rigour was also one that Teaching-Focused Academics also struggled with, in relation to qualitative research. As a group of people used to dealing with measurements and figures, it was difficult for them to accept the qualitative paradigm. Liminality was evident as they expressed a need to approach pedagogic research "like a scientist"; using quantitative methods, objectivity, controls, repetition. Similarly, very few of the Teaching-Focused Academics in the study had moved outside their disciplinary practice research to publish or present at mainstream education conferences; this was the exception to the experience of the group. So while they were happy to present to other Life Scientists interested in pedagogic research, few had taken up the opportunity to do the same to a wider audience. This is of interest when compared to Trigwell et al's (2000, p. 163) model of scholarship. For both the Informed and Communication dimension, the authors suggest that conducting research, having synoptic capacity, and publishing in international scholarly journals are required to be at the top level. The Teaching-Focused Academics in this study stop short of that transformation to mainstream education research, instead always retreating back to pedagogic research couched within the discipline. The Threshold Concepts here then appear to be with engaging with an unfamiliar research paradigm, in terms of literature, publications, methodologies, research methods and rigour. This agrees with Webb (2015, p.120), who identified "Conceptions of Research" and "Subjectivity" as Threshold Concepts in SoTL. It is interesting to note that Webb did not identify either of these as being bounded. However, this study of Life Scientists, who were all unfamiliar with a qualitative paradigm, evidenced boundedness in these Threshold Concepts, suggesting that it is discipline-specific.

### 7.6.4 Conception of Teaching

A move from a Teacher-centred to a Student-centred conception of learning (Biggs, 1999) is a significant Threshold Concept. Moving to a student-centred conception of learning is

transformative and irreversible, and is related to development of understanding of education literature. Therefore, as a teacher becomes more familiar with the literature, and develops their practice, they are more likely to accept a student-centred conception of learning. This conception is also counter-intuitive, and therefore troubling in nature. Teaching-Focused Academics in the study with little engagement with SoTL have a firm teacher-centred conception of teaching and learning. They talk about “their teaching” what “they do” for their students. They also tend to teach in a didactic way, putting their energies into lectures. In contrast, Teaching-Focused Academics with even a little knowledge of SoTL and pedagogic literature tend towards having a more student-centred conception of learning, and are more adventurous in attempting student-centred activities. It could be argued that moving to a student-centred conception of learning has the potential to downgrade the role of the teacher. However, that opinion may be expressed by those who have not experienced the transformation to an understanding of student-centredness. Webb (2015) makes no mention of conception of learning, however there is evidence that it is a Threshold Concept.

### 7.6.5 Reflection

While it may be suggested that scientists, because of their positivist training, find it difficult to reflect, there was no evidence in this study to suggest that the Teaching-Focused Academics were unable to reflect on their practice. On the contrary, all of the participants in the study were able to offer reflections on their practice, and were able to articulate situations where they had identified an issue and attempted to improve upon it. Reflection was troublesome when Teaching-Focused Academics found themselves unable to address an issue they had identified. There is a tension between whether reflection itself, the identification of reflection or the ability to address the results of reflection is a threshold concept. While there is evidence to suggest that reflection is not a threshold concept within

this group, the identification of it as reflection may be. The ability to address the results of reflection may be threshold in nature but are not a part of reflection itself. Rather they are the development of experience of SoTL, pedagogic literature and conception of learning.

### 7.6.6 Ontological thresholds

There is some evidence for what Webb (2015, p. 120) terms "Disposition of a SoTL Scholar". Nearly all of the Teaching-Focused Academics in this study were engaged with SoTL. They expressed a positive attitude towards it, despite the lack of reward and recognition it received in contrast to their Research-Focused colleagues' work. They also talked about the benefits of meeting other people like them, the benefits of communities inside and outside their institutions and departments, and sadness that their chosen pathway was not taken more seriously. "Disposition of a SoTL Scholar" exists, and is transformative, however, it is limited in this study. As previously noted, Teaching-Focused Academics were still scientists, and approached their SoTL and pedagogic research as scientists. They were troubled with mainstream education research and retreated back to disciplinary pedagogic literature, and produced disciplinary pedagogic outputs themselves. So the outcome of this is a transformation, not to an educational researcher, but to a hybrid who understands both pedagogy and discipline (Shulman, 1986). However, this causes problems because, as already explored, the loss of up-to-date disciplinary knowledge leads to uncertainty about their ability to teach, while their experience with SoTL is not the same as that of an educational researcher. This is troublesome, but may also be transformative. Another way of thinking of this is "Multiple Standpoints", which in this case is the ability to understand both the discipline and pedagogy, and can be thought of as part of the transformation of changing paradigms.

## 7.7 Summary

Looking closely at Trigwell's model of scholarship, it has already been discussed that the model does not quite reflect the experiences of the Teaching-Focused Academics in this study. There are a number of threshold concepts concerning SoTL which do not fit into Trigwell's model of scholarship, but which are troublesome for the Teaching-Focused Academics. These threshold concepts relate to negotiating a new paradigm, and mastering the skills and processes required to perform pedagogic research. While not explicit in Trigwell's model, they occupy a space between the Informed and Communication dimensions, and can be thought of under the umbrella term "Paradigm dimension". This fifth dimension includes understanding different methodologies and data collection methods (Salmona et al, 2016), thinking inductively rather than deductively, how to approach qualitative data, how to analyse and interpret qualitative data, along with the ontological shift that has to occur to move from a positivist stand point. Each of these elements can be thought of as bounded and troublesome, as they are alien to the Teaching-Focused Academics. This appears to contribute to the Teaching-Focused Academics' reluctance to engage with mainstream pedagogic literature, and to confine themselves to pedagogy within the discipline, which gives the Teaching-Focused Academics a measure of protection against the unknown. Keefer (2015), exploring doctoral liminality, describes these threshold concepts as a "black box". Similarly, for Teaching-Focused Academics who are engaging with qualitative paradigms from a positivist standpoint, they also represent the unknown.

The elements which make up the Paradigm dimension (qualitative methods and methodology, qualitative data analysis, qualitative data interpretation, inductive thinking, multiple standpoints) show most threshold-ness (Salmona et al, 2016). This is not

unexpected, as each element is alien to Life Scientists, whose training is in following a positivist paradigm, designing experiments to collect quantitative data, interpreting the results of quantitative analysis, and basing everything on the scientific method. They can also be traced back to understanding educational literature and theory. To conquer these threshold concepts requires an ontological shift to go against years of scientific training. The Paradigm dimension, therefore, is key to development of Teaching-Focused Academics' engagement with SoTL. The troublesome nature of the Paradigm dimension goes some way to explain why the Teaching-Focused Academics in this study get stuck at disciplinary levels of SoTL.

# 8 Conclusions and Recommendations

This study has revealed the experiences of a diverse group of Teaching-Focused Academics, working in Life Science departments in a range of UK universities. Investigating the main influences on the working lives of Teaching-Focused Academics, I have uncovered evidence which supports the emergence of Teaching-Focused Academics as a distinct academic identity, separated from Research-Focused Academics by the pressures of REF. I have also taken a critical view of the intention of many institutions to include SoTL in REF 2020, examining the reasons why SoTL should not be included, given current REF regulations, as well as examining the place SoTL has within the academy.

## 8.1 Teaching-Focused and Research-Focused Academics – separate but equal

Engeström's (1987, 2000) Activity Theory proved to be a useful framework to cope with the complexity of role and identity of Teaching-Focused Academics. Establishing Teaching-Focused Academics as a distinct Activity System revealed a series of tensions and contradictions within and around that system. It is apparent that Teaching-Focused Academics are not perceived as equal to Research-Focused Academics in status, and consequently, their value to institutions remains unacknowledged, and taken for granted to a great extent. The themes uncovered in this study expose the lack of clarity of Teaching-Focused Academic career progression, the lack of status of Teaching-Focused Academics and SoTL with regards to REF, and the unrealistic expectations of management towards the role that Teaching-Focused Academics have within the academy. However, the study has also shone light on the camaraderie that exists between Teaching-Focused Academics; their search for legitimacy, and their belief in and dedication to their role. As such, there is

evidence in the study to support Teaching-Focused Academics as a separate Community of Practice (Wenger, 1998), in terms of their beliefs and practices, which have diverged from the traditional academic role. Taking a closer look at the Teaching-Focused Academic community, and its relationship to academic identity, the distinct academic identity of Teaching-Focused Academics is revealed as emerging from a combination of internal and external influences. Central to the emergent Teaching-Focused Academic identity is a rejection of the competitiveness which characterises disciplinary research. Teaching-Focused Academics within the study, both explicitly and implicitly, talked in positive terms of the importance of co-operation and sharing, emphasising the collaborative nature of learning. Many of the Teaching-Focused Academics had made a conscious decision to leave a research career behind, or had been attracted to teaching in higher education over the course of their careers. Either way, the decision to become a Teaching-Focused Academic was seen as a positive by the group. Once that decision had been made, the Teaching-Focused Academics, although collaborative, were ambitious, both in terms of furthering their career, but also in doing the best for their students. Engagement with SoTL was important in terms of defining Teaching-Focused Academics as academics and as teachers. However, this identity was mixed with a strong sense of identity as a scientist. The identity of these Teaching-Focused Academics emerged as a hybrid; both scientist and teacher. Engagement with SoTL enabled Teaching-Focused Academics to extend their repertoire of educational skills, which in turn developed their conception of teaching. Familiarity with education research, and carrying out that research themselves also gave Teaching-Focused Academics answers to reflections on their practice, which was absent from those Teaching-Focused Academics whose engagement with SoTL had been minimal or interrupted in some way. However, while Teaching-Focused Academics viewed the decision to specialise in teaching and scholarship as a positive, it was still felt that this left them at a

disadvantage in terms of transferability of career. The separation of research and teaching also left Teaching-Focused Academics feeling unable to keep up to date with disciplinary research, which they felt was a necessary part of being a university teacher. While this had limited impact on initials years, it was felt that there was a tension where honours and Masters level teaching occurred, where there was an absolute requirement for teachers to be up to date with current advances within the discipline. One way to overcome this feeling of separation would be to look at the nexus of the Teaching-Focused and Research-Focused Academic Activity Systems, and the role of boundary objects; in this case SoTL and disciplinary research. There is scope for a two-way exchange of expertise, both in terms of subject knowledge, and the people who broker the relationships. This, however, is hampered by the dominance of the Research-Focused Activity System, where competitiveness is a key attribute.

## 8.2 Engaging with SoTL

This study exposed a number of barriers Teaching-Focused Academics have to overcome to engage with SoTL. The study also unearthed, indirectly, the pressures that Research-Focused Academics find themselves under, bringing me to the conclusion that although there are more clearly defined and better rewards for Research-Focused Academics, there is also a greater pressure upon them in terms of performance, which makes their higher status somewhat of a gilded cage. The Teaching-Focused Academics in this study, while disappointed at their status and lack of recognition, also acknowledge that they perceive the competitiveness of REF as a negative aspect of university life, and one which they do not aspire to. They strive for a coherent, co-operative community of practice (Wenger, 1998). This is particularly evidenced in the strength of feeling towards the HEA Centre for Bioscience, and its demise in 2010. In addition, while there is a diverse understanding of

SoTL, its role as pedagogic research is clearly seen as a means with which to improve practice within the Teaching-Focused Academic community rather than fulfilling the purposes of REF.

Teaching-Focused Academics also face practical barriers to engagement with SoTL. External barriers to engagement with SoTL which Teaching-Focused Academics encounter can be traced to the impact of REF on academic life. REF has a direct impact on Research-Focused Academics, who must concentrate on producing world class disciplinary research at the expense of their teaching and administrative duties. However, these academics can also reap the rewards of successful REF submissions. The priority of research over teaching forces more teaching and more administration on to Teaching-Focused Academics. The result of this transfer of labour is that Teaching-Focused Academics identify time as a major constraint to engagement with SoTL. However, there is more to REF's effect on Teaching-Focused Academics than just time. The emphasis on research has an effect on the perception of Teaching-Focused Academics and the roles that they do; therefore Teaching-Focused Academics, and teaching and administration, are seen as "lesser" activities. This also means that SoTL, despite it being a form of research, is regarded as a less important form of research, especially in the competitive world of Life Sciences and biomedical research. While the impact of REF is to affect the division of labour, forcing Research-Focused Academics to spend increasing amounts of their time with disciplinary research, the outcome for Teaching Focused Academics is to inherit more teaching and administration. The fashion for greater accountability and the "Quality" agenda (Hoecht, 2006) pushes administrative tasks to the fore, which in turn pressurises time for teaching, leaving no remaining time for SoTL activities. The result of this is not only to divide the labour tasks, but to demote Teaching-Focused Academics to the position of administrative assistants. While this is a common theme, from the outside it appears counterproductive

that universities employ academics to do secretarial tasks. And yet, that is precisely what they do. Rather than create functional multi-role teams, institutions appear to pursue a short-sighted policy of removing secretarial support as some kind of money-saving strategy. The outcome of this, however, is that less time is available for Teaching-Focused Academics to engage in academic activities. And yet, Teaching-Focused Academics do pursue these activities, as they are seen to be both a necessary part of the job, as well as an indulgence, as seen by colleagues and management.

There is a movement to include SoTL (in the form of pedagogic research) in REF (Kneale et al, 2016; Stern, 2016). Indeed, some of the Teaching-Focused Academics in this study expressed a desire to have their pedagogic research recognised in the REF, and were somewhat frustrated that it was not. At first sight, this seems a sensible strategy for a number of reasons. Being included in the REF brings with it a certain status which is viewed favourably in academia. Teaching-Focused Academics, in this context, seeking to raise the status of teaching and pedagogic research could be convinced that including SoTL in the next REF (in 2020) would bring that increase in status. However, this is unlikely to happen as SoTL cannot compete with educational research in terms of REF: quality of publications, impact specifically excluding one's own students, and scale of research. Additional to that is the already full workload of Teaching-Focused Academics, overburdened with teaching and administration. SoTL is identified as a "hobby"; however, this is not because of its amateur status, but rather that it is only possible to be done in one's own time, and is pursued by enthusiasts. To then ask overburdened Teaching-Focused Academics to produce REF quality SoTL is unlikely in the current culture. Just as disciplinary researchers are excused teaching and administration to pursue and produce world class research, so Teaching-Focused Academics would have to be excused those same duties in order to develop world class SoTL. And, in the current culture, done with little or no funding. The purpose of SoTL

should also be taken into consideration. What has been uncovered in this study is that Teaching-Focused Academics see the primary purpose of SoTL as a means to share and communicate practice, supporting colleagues within the sector. If SoTL, or Practitioner Research, were to become normalised into the REF structure, it is inevitable that sharing and communication would suffer.

While these external barriers impact on Teaching-Focused Academics and SoTL, internal epistemological barriers also exist, which hamper the understanding of Teaching-Focused Academics, and can be viewed through the lens of Threshold Concepts (Meyer & Land, 2003, 2005). This is an important consideration, not only for the development of the individual practitioner, but also for the future of teaching and learning in higher education.

## 8.3 SoTL as a Threshold Concept

There is evidence of the existence of Threshold Concepts in the engagement with SoTL. Conversely, these are most clearly demonstrated by Teaching-Focused Academics with more experience in SoTL, who are more likely to be able to identify their shortcomings and difficulties of understanding. The Threshold Concepts identified in this study are understanding and synthesis of education theory, writing for publication at international levels, developing from reflection-on-action to reflection-in-action, and the transition from a teacher-centred to a student-centred conception of learning. These thresholds are not apparent in early career Teaching-Focused Academics, who instead, exhibit confidence in their abilities to engage with SoTL, and who are introduced to pedagogic research in a controlled manner through completion of their PGCert. The role of the PGCert has addressed early engagement with SoTL, and is apparent in helping to develop Teaching-Focused Academics' reflection and conception. However, the PGCert may be the last formal

support for pedagogy that Teaching-Focused Academics encounter. This translates into a lack of confidence for Teaching-Focused Academics further on in their careers, particularly with their engagement with mainstream education literature, and with the wider education community. The occurrence of threshold concepts at this level points to a need for further support for Teaching-Focused Academics engaging in pedagogy. While there is evidence that completion of higher degrees (MSc, MEd, EdD and PhD) can have a profound effect on the abilities and attitudes of Teaching-Focused Academics, for some this is too much of a commitment when added to already heavy workloads. There appears to be a need for a different kind of support, for example, the mid-career SoTL Leadership certificate offered by the University of British Columbia, which seeks to address this deficit. Indeed, similar threshold concepts have been identified in the multidisciplinary cohort of this course, to those identified in this study (Webb, 2015).

The Threshold Concepts identified in this study covered three out of the four areas of SoTL, using Trigwell et al's (2000) Model of Scholarship: Informed, Communication, Conception and Reflection. Most prominent was a lack of confidence in engaging with mainstream pedagogic literature and education theory (Informed Dimension, Level 4). The reasons for this were cited as a lack of understanding of the language, alien language, or fear of the unknown. It was common for Teaching-Focused Academics experienced in SoTL to confine themselves to Life Sciences-based SoTL journals. This limited the ability of Teaching-Focused Academics to engage with pedagogic discourse outside Life Sciences, and could be seen as a further set of threshold concepts. As such this could also be seen as bounded, as Teaching-Focused Academics viewed mainstream education research to be outside their immediate experience. Engagement with pedagogic research, even at a disciplinary level, had an impact on their own outputs, as they confined their outputs to Life Science pedagogic journals, or sought alternative outputs such as books for a specific Life Sciences

audience. Trigwell's Communication Dimension Level 4 requires academics to be publishing in international mainstream journals. This appeared to be a barrier to Teaching-Focused Academics within this study. Even so, engaging with Life Sciences pedagogy did have a positive effect on Teaching-Focused Academics' conception of learning (Conception Dimension), which was more likely to be student-centred, and also supported their development of reflection-in-action (Schön, 1983), as pedagogic publications provided Teaching-Focused Academics with ideas with which to improve their practice. The change in conception and approach to reflection is in both cases transformative and irreversible. It should be highlighted here that regarding Reflection as a Threshold Concept within this study is not straightforward. All of the participants in the study were able to demonstrate reflection. However, the barrier to success was not in the reflective process itself, but the development of enough pedagogic expertise with which to take the consequences of the reflection forward.

The most significant finding with regards to Trigwell's model is that Threshold Concepts were identified which could not be placed neatly within the model as it stands. These Threshold Concepts sit between the Informed and the Communication dimensions, and are the bridge between them. Methodologies, research methods, discourse in pedagogic research all came up as issues which were barriers to engagement with SoTL at the highest level. Participants displayed feelings of liminality, expressing a yearning to be able to use scientific methods as they were easier to comprehend. Data analysis was also cited as being a barrier, with participants acknowledging that numbers were much easier to deal with than words. All of this contributes to a set of Threshold Concepts which could be arguably called "Analytic" or "Paradigm Thresholds".

The identification of Threshold Concepts in more experienced Teaching-Focused Academics was significant, because there appears to be a level of SoTL that can be achieved which is then stalled. Importantly, the barriers appear at the level of engagement which is required to produce pedagogic research of a quality required for REF. Without significant changes to working practices, workload, and support in developing SoTL to these levels, it is difficult to see how Teaching-Focused Academics could possibly compete with full time educational researchers in terms of REF. That is not to say that SoTL as it is currently practiced has no value. On the contrary, SoTL has transformed teaching and learning practices for these Teaching-Focused Academics. However, it is apparent that its purpose is not for REF, and it would be a mistake to redefine it as REF-returnable research. Part of the explanation of the appearance of evidence for Threshold Concepts at this level is the existence of ontological thresholds, and the reluctance of participants to let go their old identity of a scientist. As Teaching-Focused Academics, this sense of identity is a difficult one, as in order to be successful Teaching-Focused Academics, they cannot let go of their identity, but must try to balance two sides of a new identity. It is only be reconciling their dual identity that Teaching-Focused Academics will be ontologically transformed.

## 8.4 If not REF

I have argued that it is inappropriate for SoTL (in the form of PedR) to be in REF, *as it currently stands*. While I agree with Kneale et al (2016) on many points, I have to disagree with them in regards to inclusion of pedagogic research in REF. There are several reasons for this disagreement. Firstly, there is a lack of sufficient quality of SoTL outputs which can compete with the outputs of internationally recognised Schools of Education, who have full time research teams and research grants. This is a practicality; only outputs regarded as 3* or 4* (world-leading in the discipline) are considered of high enough quality to attract

funding. It is difficult, therefore, to see how an individual practitioner, investigating their own practice, or their students' learning, could attract such attention as to making their research comparable to fully funded research undertaken by teams of full time researchers. A second reason is that practitioners, like the ones in this study, are researching within a paradigm that they have little experience in, which can (although not always) result in outputs which are somewhat naïve. Alternatively, practitioners research within the paradigm that is familiar to them, again resulting in outputs which have a particular "bioscience" flavour. While there is nothing inherently wrong with this, it does restrict the repertoire of practitioners, and therefore the kind of outputs that are produced. Thirdly, and most importantly, the purpose of SoTL outputs is not to satisfy the rigours of REF, and world class research, but to inform the community of practice of teaching and learning practices which may improve student learning. While REF explicitly excludes the influence on one's own students, this is seen as counter-productive in terms of SoTL. Just as important is informing the community of practices which do not work, in order that others do not repeat the mistakes of their colleagues. As such, practitioners engaged in SoTL contribute to knowledge, as Trigwell et al's (2000) Model of SoTL requires. However, the distinction is that this contribution is not to education theory, but to teaching and learning practice. This is appropriate, as SoTL fits comfortably into the role of "Tool/Artefact" within the Vygotskian/Engeström (2000) Teaching-Focused Academic activity system. SoTL, as has been demonstrated, also appears as Engeström's (2009b, p. 56) Object 3, emerging between the Teaching-Focused Academic and Research-Focused Academic activity systems. This is in response to pressures of REF, and also as a desire for management to judge Teaching-Focused Academics as academics, therefore requiring them to engage in research. SoTL, while the outputs can be viewed as pedagogic research, is not for the purposes of REF, and should not be viewed as such. Indeed, changing the focus of SoTL

outputs could be detrimental to student learning experiences. However, the emergence of SoTL as Object 3 (Engeström, 2009, p. 56) between the Teaching-Focused Academic and Research-Focused Academic Activity Systems has another significance. It can be viewed as a boundary object between the two communities of practice (Wenger, 1998); a form of trading currency between Teaching-Focused Academics, who have expertise in teaching and learning, and Research-Focused Academics, who have expertise in disciplinary research. While the evidence shows that the two communities have been torn apart, SoTL represents an opportunity for exchange between the two communities. This exchange is also facilitated by the people who hold the knowledge, and could be seen as an opportunity for Teaching-Focused Academics and Research-Focused Academics to broker mutually beneficial relationships. It is also an opportunity to recognise SoTL as more than just research, but to include its ontological dimensions of reflection (Schön, 1983) and conception of learning (Biggs, 1999, pp. 16–19). At the moment, however, although it is desirable, there is no pressure which would necessitate such brokering to occur; this may change with the introduction of TEF to England.

There is a way in which SoTL/PedR could be incorporated into REF, and which may be a way forward with TEF, if Johnson's and Stern's aspiration of parity of esteem between research and teaching is to be believed. The proposition is that no disciplinary research of whatever quality, be it 3* or 4* is accepted for review into REF without a co-requisite of SoTL/PedR outputs from the same department/institution. Rather than pedagogic research being included in UoA 25 of the REF, it would be a separate requirement of disciplinary submissions to REF, taking into account that Teaching-Focused Academics' roles are as practitioner researchers, rather than educational researchers. This proposal means that Research-Focused and Teaching-Focused Academics would be forced to recognise the necessity to work together in order to produce pedagogic as well as disciplinary outputs.

The pedagogic outputs themselves would be distinct from education research of the kind done by Schools of Education, and would require a new set of rules with which to gauge them. Pedagogic research done by Teaching-Focused Academics within disciplines is distinct and different to educational research done by educational researchers, who would be described as Research-Focused Academics in this study. The scholarly outputs of Teaching-Focused Academics should be judged for what they are, opportunities to share practice, rather than forcing them to conform to the dominant discourse of research and REF.

## 8.5 Competition or co-operation

The Higher Education Academy's role in the development of Teaching-Focused Academics' engagement with SoTL is strangely absent from this study, other than the nostalgic references to the HEA Centre for Bioscience. Teaching-Focused Academics themselves were disappointed by the HEA in its current form, instead remembering the former Centre for Bioscience in fond terms. The reasons for this can be traced to the current set up of the HEA, in contrast to the Centre for Bioscience, whose emphasis was on community engagement, take a top down, individual approach to teaching and learning in HE in the UK. The desire for co-operation and openness clearly came out of the Teaching-Focused Academics' interviews, along with a rejection of competitiveness. However, the HEA appears to promote competition in its redesign of the UKPSF, and the stratification of its fellowship programme. Even the names: Associate, Fellow, Senior Fellow and Principal Fellow impose a hierarchical structure on teachers, and the means to claiming fellowship is by individual contribution. The four tier structure has introduced competition into the role of teacher in Higher Education. This is at odds with what Teaching-Focused Academics in this study clearly voiced that they wanted, and valued.

## 8.6 Hope for the future

It is clear that there is a widening separation of Research-Focused Academics and Teaching-Focused Academics, brought about by the practicalities of division of labour, but also through the application and interpretation of rules which favour one group over another, and the addition of SoTL as a tool for teaching and learning by Teaching-Focused Academics, which has been requisitioned by management to mean "REF-able research" in a bid to maximise the research agenda. If Teaching-Focused Academics and Research-Focused Academics are truly to be "different but equal", there has to be a cultural shift within institutions. The question of reward and recognition aside, there is an opportunity for academics to collaborate, using each other's strengths. Combining two of the issues highlighted during this study, that of Teaching-Focused Academics losing disciplinary expertise, and the need for research-led teaching, one of the ways this could be addressed is by creating collaborations of Research-Focused Academics and Teaching-Focused Academics. In this scenario the Research-Focused Academic could contribute their disciplinary expertise while the Teaching-Focused Academic contributed their teaching expertise. This fulfils a brokering relationship between the two communities (Wenger, 1998, p. 105) which appears to be absent, or at least, not encouraged, at the moment. This is not to say that this arrangement is not in place within institutions at the moment. However, the evidence suggests that such arrangements are the exception rather than the rule, and tend to be a one-way flow of disciplinary expertise. The reasons for the absence of this type of model may be traced back to the pressures of the REF, and its impact on workload. Research-Focused Academics are too preoccupied with the next REF and their disciplinary research outputs, while Teaching-Focused Academics wrestle with increasing student numbers and administration loads, and decreasing budgets and support staff. This does not leave any time to foster relationships between the two groups of academics.

Ironically, this is perhaps going to be necessary with the introduction of the Teaching Excellence Framework.

Another way of tackling the disciplinary/SoTL divide is to take a radical approach to the way academics are trained. From a starting point of aspiring to Roxå et al's (2008, p. 208) Trajectory 2: that is a situation where everyone in a department has expertise in SoTL, the approach to SoTL should be equivalent to that of the discipline. It would also tackle the lack of development of engagement with SoTL which results in a lack of use of theory (Kneale et al, 2016). That means that rather than spending 10-15 years training in the discipline (Kelly, Nesbitt & Oliver, 2012), and starting engagement with SoTL in a one year part-time postgraduate certificate course, as is common in the UK, engagement with SoTL should be an embedded part of undergraduate and postgraduate education. If this were able to be implemented, then academics taking up their first position would already have a grounding in SoTL and over time Roxå et al's (2008, p. 280) Trajectory 2 would be realised. Webb's (2015) work points to the existence of Threshold Concepts in SoTL for mid-career academics engaged in a SoTL Leadership course. These Thresholds are similar to those uncovered in this study. In order to address this, the possibility of embedding SoTL into every aspect of undergraduate and postgraduate education needs to be given serious consideration.

## 8.7 The Future – impact of the Teaching Excellence Framework

I began this study before Jo Johnson's proposal of the introduction of the Teaching Excellence Framework (TEF) in England, in 2015. However, there are lessons to be learned for TEF from the current situation being experienced by academics since the introduction of REF, and its predecessors. At a macro level, any suggestion that TEF will not result in a huge cost or increase in bureaucratic load are disingenuous; in order to satisfy whatever TEF requires, it is inevitable that bureaucracy will increase, as institutions scrabble to prove that they are "Excellent". The reliance of NSS scores to determine what "Excellence" means is flawed in terms of the data collected (Agrawal et al., 2014; Williams, 2015) and the assertion that the data collected can be "gamed" (Scott, 2015). Other proposed metrics do not offer much confidence; graduate destinations and graduate salaries have very little to do with teaching excellence *per se* and more to do with the networks built at university, and the status of the institution attended. However flawed the NSS and other metrics proposed are, there are more serious consequences of TEF at the individual level. Just as the negative impact of REF on individuals is ignored (Jump, 2015b; Rhodes, 2015), it is likely that the effect of TEF on individuals will also be ignored. This study has exposed the working conditions of Teaching-Focused Academics which is fundamental to TEF at the individual level – Teaching-Focused Academics are currently shouldering the burden of their Research-Focused Academic colleagues in terms of teaching and administration. Should they then have to account for themselves via the demands of TEF, it is not clear where they have the capacity to do this. The situation is worse for Teaching-Focused Academics in post-1992 universities; in general, the response of research-intensive (Russell Group) universities has been a formal separation of Teaching-Focused Academics and Research-Focused Academics at the contract level. While this is still causing issues in terms of reward and recognition (Cashmore, 2009b), at least these Teaching-Focused Academics

have a relatively secure position, by the fact that their labour is separated from Research-Focused Academics. While TEF may scrutinise what they are doing, this separation may work in their favour, and they may start to receive the recognition they deserve. Teaching-Focused Academics in universities that have not separated Teaching-Focused Academics and Research-Focused Academics may find themselves in the situation that they do not have the extra capacity with which to respond to the additional demands of TEF, given that they are already at a disadvantage in REF. Therefore, it is likely that research-intensive universities will gain more from TEF than post-1992 universities, which is a sad paradox, as post-1992s could be said to have "opened up mass higher education" (Scott, 2012). This study showed that there was an advantage of being on a "teaching and scholarship" contract, rather than a "research and teaching" contract.

## 8.8 The paradox of SoTL revisited

Interestingly, there is little mention of scholarship in Johnson's White Paper (Department for Business, Innovation & Skills, 2016c). In fact, "scholarship" is mentioned once (p. 75) with no expansion on what is meant by the term, and, whereas the measures of "excellence" proposed by Johnson are somewhat out with the control of both Teaching-Focused Academics and institutions, "scholarship", and SoTL are within their control. While this study has shown that there are issues which need to be addressed in terms of sustained support for development of SoTL throughout a Teaching-Focused Academic's career, it has also highlighted the benefits of early and sustained engagement with SoTL, and offers some insight into how Teaching-Focused Academics could be further supported. If Johnson is genuine in his request for Higher Education to be "excellent", SoTL is a good starting point. There is, as already mentioned, a paradox of SoTL, in that, if it is viewed as REF-returnable research outputs, this, in essence, means that Teaching-Focused Academics

have to forego their own teaching in order to be able to produce pedagogic research of the required quality. There is, however, in the context of TEF, another paradox of SoTL. Despite being a mechanism which could be and is implemented to develop the "excellence" which Johnson claims to desire, SoTL and scholarship are conspicuous by their absence in the White Paper. However, there is evidence to suggest that development of SoTL is what is required to address the need for "excellence". Taken seriously, and properly supported, SoTL can be used to effect institutional change (Roxå et al., 2007), encourage collegiality (Roxå & Mårtensson, 2011) and address the issue of the lack of theory in practitioner research (Roxå et al., 2008). The publication of the White Paper in 2016 solidifies the position of the government in relation to their view of teaching "excellence". It is difficult to justify the use of the proposed metrics as being a direct measure of teaching excellence. The Times Higher Education Supplement carried out a "mock-TEF" (Havergal, 2016) in which they claimed a "new elite" had emerged, topped by Loughborough University. However, this is not TEF, and institutions still have time to address their deficiencies. Nowhere in the White Paper is there an attempt to value or accommodate SoTL or pedagogic research. Conversely, SoTL is possibly one of the most valuable indicators of teaching excellence, as it provides evidence of a commitment to the evidence-based improvement of, and inquiry into, teaching and learning in higher education. In addition to that, it also exemplifies the co-operative nature of teaching in higher education.

## 8.9 The cost of TEF

Just as the cost of REF has soared with each iteration, the cost of TEF is already being scrutinised. As an antidote to the overuse of metrics, it has been suggested that TEF panels be set up, including students, employers and academics (J. A. Smith, 2016). In the same way that REF costs spiralled out of control, it is expected that something similar will happen

with TEF. As with REF, the consequences of TEF to individuals may be as damaging to early career teachers as REF is to early career researchers. Despite the Times Higher Education's mock TEF (Havergal, 2016) claiming a "new hierarchy" it would appear certain that Russell Group and other research intensive universities will maximise their influence on the metrics being used for TEF, in order to boost their position. There are other, more sinister possible consequences of TEF. One of Jo Johnson's propositions is to make it easier for new (read "for-profit") providers to enter the market and provide degrees. At the moment, although there are alternative providers, they are limited in scope, and have a rigorous period of scrutiny before degree-awarding powers are conferred. However, with TEF in place, this may pave the way for the expansion of private providers. While this is speculation, consider the following scenario. Institutions must be able to show excellence in all areas of TEF to be able to charge higher fees. Those who do not face the possibility of stagnating fees, and reduced government funding. There is a possibility that the new Office for Students, acting in an OFSTED manner, may inspect institutions and find them unsatisfactory. They could, then, be put into "special measures". At this point, the private, for-profit provider steps in to "save" the institution. This situation is comparable to the academisation of schools currently occurring in England. Those institutions most at risk are small, local, post-1992 institutions. It is a possibility that for-profit providers could take over such institutions, forming "university chains". However, just as there have been problems with academy chains, with criticism from OFSTED that they are no better than local authorities in running schools ('Ofsted chief criticises academy chains', 2016), the handover has still taken place. This scenario is worrying for the future of higher education in the UK.

## 8.10 Further work

This area remains fruitful for further work. Given the introduction of TEF in England, and the consequences for institutions in the other home nations, it is imperative that the findings from this study are followed up. There are many suggestions for further studies: for example, an in-depth study of Life Science Teaching-Focused Academics in a more limited number of institutions. A case study approach would be ideal to investigate the differences between one institution employing teaching-only academics and another that did not differentiate at contract level. The scope of this study could be widened to include teaching-focused academics from other disciplines and cognate areas within the university; other sciences, Arts and Humanities, Engineering and the Professions (Medicine, Dentistry and Law). Based on the work of Roxå and Mårtensson (2011), microcultures of excellence could be identified and studied further as examples for other departments to use as a basis for development. This study is unique in that it looks at the experiences of Teaching-Focused Academics in full-time, permanent positions. Another area to expand research into would be the effect of REF and TEF on the increasing number of zero hours lecturers, and the direction of casualization of Higher Education in the UK.

This study gave a snapshot of the landscape of teaching-focused academics, in the year immediately preceding REF 2014. We now have a five year window before the next REF in 2020 in order to establish the role of Teaching-Focused Academics as being complementary, rather than part of REF. TEF also affords opportunities as well as threats. TEF may be an opportunity for institutions to harness the talents of their teaching-focused staff. However, it is difficult to see how they can do this given current workloads, and the competing priorities Teaching-Focused Academics face. Any changes which are to occur to the perception of teaching and learning, and therefore Teaching-Focused Academics,

requires a great cultural shift to compensate for the past thirty years' shift of focus on research.

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# 10 Appendices

## 10.1 Appendix 1: Interview Questions

**Interview participant xxx**

*Allow participant to read profile to check accuracy*

**Profile:**

Institution: Russell Group

Sex: Female

Age: 45-54

Job title: Senior University Teacher

Leadership role: No

Job: Teaching only

SoTL in contract: Yes

REF returnable: Yes

Teaching award? Yes, institutional and national

Former HEA Rep? Yes

Engage in SoTL? Yes. active

MBTI: INFP (Idealistic)

**Interview schedule** (as a conversation, so questions are not necessarily in a particular order)

**Participant History**

Ask participant to talk about how they came to their present position.

Probe for particular influences: people, places, time, location. Look for signs of being pushed or pulled towards teaching in HE.

Probe - Influence of:

- Institution
- Department
- Discipline
- Colleagues
- Community
- Other influences

**Teaching and Learning**

Ask participant to talk about how they see themselves as a teacher; their role.

Probe their role in relation to

- Working environment
- Colleagues
- Institutional/departmental culture
- Students
- Other influences

Ask participant about their personal development/professionalization as a teacher.

Probe opportunities for:

- Formal development
- Informal development
- Awards/Rewards
- Networking
- Any barriers

**Research**

Ask participant to talk about how they see their role in research.

Probe their role in relation to

- Research Excellence Framework
- Teaching and learning
- Awards/Rewards
- Support
- Barriers

**Leadership**

Ask participant about their Leadership role (or perception of academic leadership)

Probe in relation to

- Description of role
- Support
- Barriers
- Mentoring
- Role within Teaching and Learning

**Scholarship of Teaching and Learning**

Ask participant about their involvement in SoTL.

Begin with asking for their definition of SoTL, and probe for activities that participant regards as SoTL.

Ask participant what SoTL activities they participate in.

Why does participant do these activities?

Probe for:

- Influences
- Support
- Barriers

**Semantic differential**

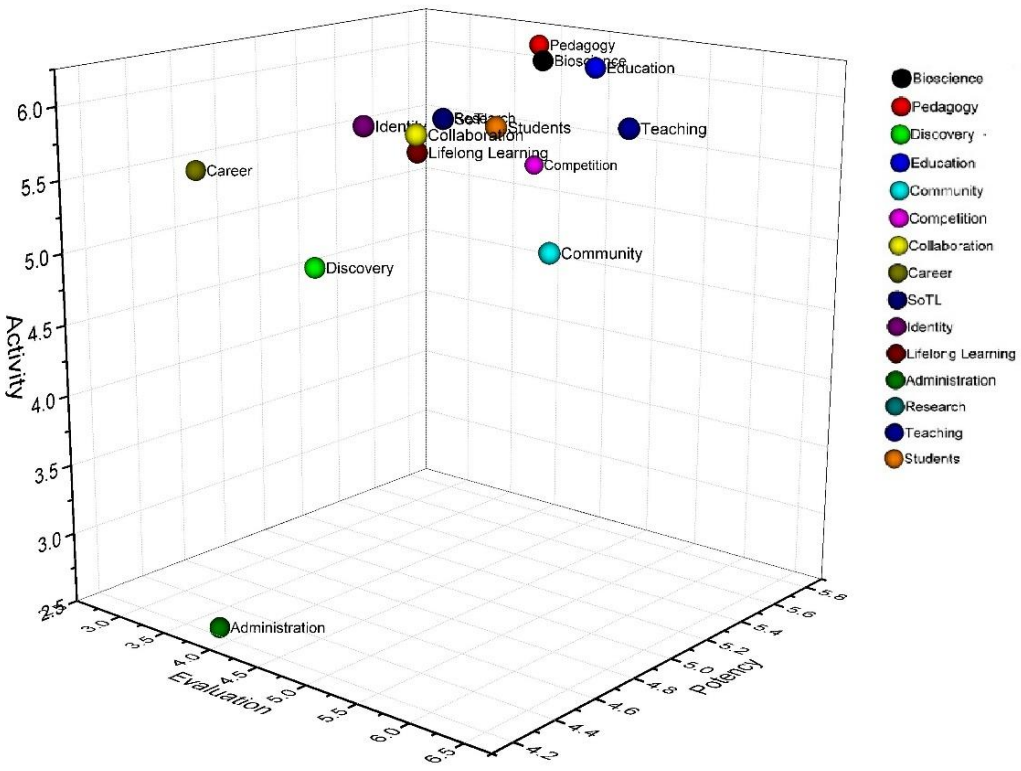
Show participant their SD model (attached). Ask them to talk about the concepts on the model:

- Concepts close together
- Concepts far apart

Are there any surprises? What do they mean? Can participant explain, or try to make sense of the model?

Semantic differential 3D image

005



## 10.2 Appendix 2: Ethics Approval Form

**Durham University**

**School of Education**

**Research Ethics and Data Protection Monitoring Form**

Research involving humans by all academic and related Staff and Students in the Department is subject to the standards set out in the Department Code of Practice on Research Ethics. The Sub-Committee will assess the research against the British Educational Research Association's ***Revised Ethical Guidelines for Educational Research*** (2004).

It is a requirement that prior to the commencement of all research that this form be completed and submitted to the Department's Research Ethics and Data Protection Sub-Committee. The Committee will be responsible for issuing certification that the research meets acceptable ethical standards and will, if necessary, require changes to the research methodology or reporting strategy.

A copy of the research proposal which details methods and reporting strategies must be attached and should be no longer than two typed A4 pages. In addition you should also attach any information and consent form (written in layperson's language) you plan to use. An example of a consent form is included at the end of the code of practice.

Please send the signed application form and proposal to the Secretary of the Ethics Advisory Committee (Sheena Smith, School of Education, tel. (0191) 334 8403, e-mail: Sheena.Smith@Durham.ac.uk). Returned applications must be either typed or word-processed and it would assist members if you could forward your form, once signed, to the Secretary as an e-mail attachment

Name: Anne Margaret Tierney Course:PhD

Contact e-mail address: a.m.tierney@durham.ac.uk

Supervisor: Prof. Ray Land, Dr. Jan Smith

Title of research project: Factors affecting Life Science Academics' Engagement with the Scholarship of Teaching and Learning

**Questionnaire**

| | | YES | NO | |
|---|---|---|---|---|
| 1. | Does your research involve living human subjects? | x | | IF NOT, GO TO DECLARATION AT END |
| 2. | Does your research involve only the analysis of large, secondary and anonymised datasets? | | x | IF YES, GO TO DECLARATION AT END |
| 3a | Will you give your informants a written summary of your research and its uses? | x | | If NO, please provide further details and go to 3b |
| 3b | Will you give your informants a verbal summary of your research and its uses? | x | | If NO, please provide further details |
| 3c | Will you ask your informants to sign a consent form? | x | | If NO, please provide further details |
| 4. | Does your research involve covert surveillance (for example, participant observation)? | | x | If YES, please provide further details. |
| 5a | Will your information *automatically* be anonymised in your research? | | x | If NO, please provide further details and go to 5b |
| 5b | IF NO<br>Will you explicitly give *all* your informants the right to remain anonymous? | x | | If NO, why not? |
| 6. | Will monitoring devices be used openly and only with the permission of informants? | x | | If NO, why not? |
| 7. | Will your informants be provided with a summary of your research findings? | x | | If NO, why not? |
| 8. | Will your research be available to informants and the general public without restrictions placed by sponsoring authorities? | x | | If NO, please provide further details |
| 9. | Have you considered the implications of your research intervention on your informants? | x | | Please provide full details |
| 10. | Are there any other ethical issues arising from your research? | | x | If YES, please provide further details. |

| |
|---|
| Further details<br><br>5a. Phase 1 of the project involves collection of survey data. In addition to the collection of this data, the survey will also be used to recruit prospective interview |

participants for Phase 2 of the project. As such, there is a need for volunteers, who consent to be interviewed, to give their contact details. Therefore it will be possible to identify some of the Phase 1 data as coming from individuals. This is necessary, as I intend to show interviewees their personal results for Phase 1 as a prompt during the interview process in Phase 2. However, data will be anonymised for the purposes of the thesis and any publications that result from the research. Survey data records are automatically numbered, and identifiers, such as email addresses, will be removed for the purposes of analysis. The purpose of the survey data is primarily to look for commonalities in groups of individuals, although there may be a case to look at individual survey results and compare them to the in-depth interview responses. Similarly, interview data will not be linked to any individual, and reference to department, institution, or position will be removed from published findings.

10. The aim of the project is to look at factors that affect engagement with the Scholarship of Teaching and Learning (SoTL) in Life Science academics. The sample group, therefore, is of adults who are able to give consent to participate in the study, and no vulnerable groups are included. Nevertheless, there are some ethical considerations:

(1) Part of the sample group is identified as academics who are contractually obliged to engage with SoTL, therefore their reward and recognition and promotion schemes take this into consideration. However, some academics in this position may feel that they are being "judged" as to the quality and quantity of their SoTL outputs in this project. This is not the intention of the project, and steps will be taken in the Plain Language Statement to clarify this.
(2) For any participant in the study, the relatively low status that is given to teaching (in contrast to research) may be a sensitive issue with regards to reward, recognition and promotion. A contrasting situation may arise to that described in (1) where an academic may feel that they are not being rewarded for the contribution they make to SoTL. As above, it is important to be aware and sensitive to these issues.

Continuation sheet YES/NO (delete as applicable)

***Declaration***

I have read the Department's Code of Practice on Research Ethics and believe that my research complies fully with its precepts. I will not deviate from the methodology or reporting strategy without further permission from the Department's Research Ethics Committee.

Signed …….. Date:……

Proposal discussed and agreed by supervisor (for students) or colleague (for staff):

Name ……. on ……(Date)

**SUBMISSIONS WITHOUT A COPY OF THE RESEARCH PROPOSAL WILL NOT BE CONSIDERED.**

## 10.3 Appendix 3: Plain Language Statement

- **Factors affecting Engagement with the Scholarship of Teaching and Learning by UK Life Sciences Academics**
- University of Durham
- School of Education
- Anne Margaret Tierney, a.m.tierney@durham.ac.uk 0141 330 8480
- Prof. Ray Land, Supervisor, ray.land@durham.ac.uk; Dr. Jan Smith, Supervisor, jan.smith@durham.ac.uk
- Ph. D., Education

*You are being invited to take part in a research study. Before you decide it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.*

*Thank you for reading this.*

The purpose of this study is to identify and examine and analyse the factors that affect engagement with the Scholarship of Teaching and Learning (SoTL) by Life Science academics who work in UK Higher Education Institutions.

*It is up to you to decide whether or not to take part. If you do decide to take part your consent will be assumed by your completion of the questionnaire. If you decide to take part you are still free to withdraw at any time until data has been analysed and incorporated, and without giving a reason. Your decision to take part or not take part will not jeopardise your relationship with me in any way.*

The study will involve completion of an online survey. Following completion of the survey, a sample of the respondents who have indicated that they also wish to contribute by interview will be identified and contacted. You may choose to complete the survey without agreeing to be interviewed. It is my intention to carry out as many interviews face to face. However, it may be necessary to carry out interviews using an electronic medium such as Skype.

**Online survey:** The survey is in three sections. Section 1 covers biographical data. Section 2 (Semantic differential) collects data about how individuals conceptualise and relate the different areas of their lives as academics. Section 3 collects Myers-Briggs Type Inventory data. Please complete all three sections of the survey, which should take no more than 20-25 minutes.

**Interview:** This interview will take approximately 45 – 60 minutes, arranged at a time which is convenient to both the interviewer and interviewee. In this interview I would like to talk about your personal experiences of SoTL. This may include positive and negative experiences that you may have, in addition to your current attitude towards it, and how it may have changed over time.

*All information which is collected about you during the course of the research will be kept strictly confidential. You will be identified by an ID number and any information about you will have your name and address removed so that you cannot be recognised from it.*

The results of the research will be written up as a PhD thesis. Prior to that, you will have access to the analysed data, and you may see the final thesis if you wish. You will not be identified in this work.

The project has been reviewed by the School of Education Ethics Committee.

Please contact Anne Tierney regarding this project, at a.m.tierney@durham.ac.uk.

If you have any concerns regarding the conduct of the research project please contact either Prof. Ray Land (ray.land@durham.ac.uk) or Dr. Jan Smith (jan.smith@durham.ac.uk) who are the supervisors for the project.

Thank you very much for your participation.

## 10.4 Appendix 4: Consent form

**Title of Project: Factors affecting Engagement with the Scholarship of Teaching and Learning by UK Life Sciences Academics**

**Name of Researcher: Anne Margaret Tierney**

1. I confirm that I have read and understand the Plain Language Statement for the above study and have had the opportunity to ask questions.

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason.

3. I give my consent to interviews being audio-taped, that a transcript of my interview will be returned to me for verification, I will be identified by pseudonym in any publications resulting from this study.

4. I agree / do not agree (delete as applicable) to take part in the above study.

| | | |
|---|---|---|
| Name of Participant | Date | Signature |
| Researcher | Date | Signature |

1 for participant; 1 for researcher

October, 2012

## 10.5 Appendix 5: Example of data in Excel spreadsheet

| participant | line | Comment | concept | category | TC |
|---|---|---|---|---|---|
| I06 | 193 | I think, what it was was a realisation when I was talking to colleagues over the years where, you know, you go into the lab and you'd read something the previous night, and you were enthused about it, you wanted to explain what you'd read, and you very often didn't have the paper to hand when you were talking to people about it. And what you had to try to do was abstract it, actually boil it down and explain it in your own words | collaboration | abstract development skills | ? |
| I08 | 153 | We don't collaborate as closely as I would like. We do joint collaborations, we do occasionally have joint grant applications, we do occasionally publish joint papers. | collaboration | collaboration publication | |
| I08 | 179 | One of the barriers there is always that this institution always tends to look askance at newer universities, so if I tried to collaborate with someone form [institution] or from [institution] which I have done in the past, it would not be viewed as well as if I was collaborating with someone from Oxford or Cambridge, for example. | collaboration | barrier collaboration hierarchy | |
| I09 | 262 | so we have kind of informal collaborations which occur, so, and they're very valuable, so and then kind of people who are at a similar kind of career stage, and then we've got others who are kind of, you know, just coming into it, and we kind of help, we have very informal mentoring | collaboration | collaboration mentor | |
| I11 | 210 | Funnily enough, since I did this, I have become a little bit more active in a collaborative project which is university-wide with other schools, non-bioscience teachers | collaboration | collaboration | |
| I14 | 116 | I very rarely do any kind of research or scholarship that doesn't involve collaboration. It's been important in my career | collaboration | research SoTL collaboration | |

## 10.6 Appendix 6: Project Timeline

| Timeline | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **January** | **February** | **March** | **April** | **May** | **June** | **July** | **August** | **September** | **October** | **November** | **December** |
| **2012** | | | | | | | | | | Ethics Approval University of Durham | | |
| **2013** | Survey pilot | Survey | Analysis of survey data | | | | | | | | | |
| | | | | Identify interviewees | Contact interviewees | | | | | | | |
| | | | | | | Conduct interviews (15) | | | | | | |
| | | | | | | Transcribe interviews (ongoing) | | | | | | |
| | | | | | | | Analysis of interview data (ongoing) | | | | | |
| **2014** | Write up (ongoing) | | | | | Conduct interviews (15) | | | Write up (ongoing) | | | |
| | Transcribe interviews (ongoing) | | | | | | | | | | | |
| | Analysis of interview data (ongoing) | | | | | | | | | | | |
| **2015** | Analysis of interview data (ongoing) | | | Write up (ongoing) | | | | | | | | |
| | Final write up | | | | | | | | | | | |
| **2016** | Submission and viva | | | | | | | | | | | |