Pedagogic Frailty and Resilience in the University

Ian M. Kinchin and
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To Neil

and to

The memory of
Ann & Miles Kinchin

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ROBERT R. HOFFMAN

FOREWORD

The chapters in this book explore a great variety of topics and issues that revolve around the basic question of what makes for a good academy. Chapters take multiple perspectives on the matter, embracing the teacher's view, the student's view, the disciplinary view, and the institutional view. As such, the book serves as a compendium of the issues, concepts and approaches for dealing with what is called 'pedagogic frailty.' This concept might be understood in contrast with adaptability and resilience. The adaptive and resilient system is one that is able to achieve its primary goals despite changing circumstances and challenges to its integrity.

There are many challenges to the adaptability and integrity of the academy. My own autoethnography is rife with frailty stories. Faculty members witness and benefit from administrators who are wise as Solomon, and yet they also suffer under administrators who seem heartless and unduly controlling. Faculty members bask in the light shone by the rare and genuinely outstanding student, and yet implode under the emotional weight of the many students who should arguably still be in secondary school. Academics flourish if permitted to engage in continuous learning and personal development, and yet are not provided nearly enough resources or afforded nearly enough time. They are fed some carrots and yet are threatened by too many sticks. Conundrums abound. The university teacher is expected to engage in good teaching, publish research, get grants, and serve the academy, and yet there is not nearly enough time to do any three of them, or any two of them really well. The new recruit to teaching is provided a lab and yet if she or he does not get funding, they've got no lab in year two. Academicians are held to lofty standards yet are actually judged on the basis of simplistic measures such as student evaluations and publication counts. There are tensions within disciplinary departments, to be sure. Every department has 'dead wood', as allowed by a system of tenure (in the US) that has become something it was not initially intended to be. Agendas, rivalries, egos, and historical baggage exist by the truckload and make department meetings less enjoyable than the chewing of radium.

Are there any genuinely high-functioning academies? Indeed, can there be such a thing? One approach to this question is empirical, that is, the exploration of how it is that people come to be good academicians, in the sense of being adaptive and resilient as opposed to frail. We know from numerous studies of a great variety of professional domains that people come to be experts largely through on-the-job-training and mentoring. While graduate students in some given major or department

might be afforded opportunities to teach courses to undergraduates, historically they have not been given much of any explicit instruction in how to teach. Most of what they acquire in terms of teaching strategies and methods is ancient, if not merely traditional: The professor vibrates the air and the students act as scribes. So if you, the student, take good notes, you transform them into lectures and Ta Da!, now you are a teacher. How do people who are really good teachers at the college and university level come to be really good? How can a culture of co-creation be nurtured to substitute for an ingrained pedagogy?

How is it that some academicians come to be good mentors to junior academics? Can faculty members who have the potential to become good mentors to junior colleagues be somehow identified and then specially groomed to become mentors? Many universities have programmes through which more experienced colleagues volunteer to mentor the junior faculty members. This is of course, no guarantee that they will be good as mentors. The primary activities tend to be advising the junior faculty member about the paradoxes of their academy, its political climate, and the rivalries and historical baggage of the department, rather than the matter of becoming a better teacher, or an individual engaged in personal growth and improvement.

So much for my own autoethnography. My research has focused on the question of how to measure resilience in sociotechnical work systems, that is, human-machine engineered systems. This is different from resilience in the academy, in that resilience is understood more in terms of work performance than in terms of affect (emotional response to stress). But the concept of resilience in engineering is at the same time similar to its meaning in pedagogy, as adaptation to a changing environment and uncertain circumstances. Given the emerging importance of resilience concepts, even in such fields as engineering, it is both reasonable and expected that the question will be raised about resilience in the academy. The question of how to create and sustain a high functioning academic environment, and the problem of how to avoid or mitigate the vicissitudes and toxicities that emerge in the academy are questions that have vexed teaching professionals for their entire careers.

If we are to realise the promise of higher education in all forms of academy, we will need the concepts, methods, and reflections contained in this book.

I should note, finally, that the Concept Mapping method has served quite well in the analysis and engineering of sociotechnical work systems, just as it has served in the understanding of complex concepts in many domains of human activity. I encourage readers of this book to consider applying the method in their own personal development and pedagogic meditations.

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1. MAPPING THE TERRAIN OF PEDAGOGIC FRAILTY

INTRODUCTION

Teaching at university is possibly one of the most exciting and fulfilling career paths there is. It gives the opportunity to engage with enquiring minds whilst simultaneously working with scholars in an international research community. But university teaching is not without its difficulties in an evolving social, political and economic environment. Once new entrants to the teaching profession have found their feet and are working to establish their research profile, there is a tacit assumption that what works in teaching now will continue to work well in the future. This offers a sense of comfort and certainty. However, after only a few years, teaching staff find that the only constant is change – creating instability that some colleagues regard as threatening. Schon (1971: 11) comments:

> Belief in the stable state serves to protect us from apprehension of the threat inherent in change. Belief in stability is a means of maintaining stability, or at any rate the illusion of it. The more radical the prospective change, the more vigorous the defence – the more urgent the commitment to the stable state.

Within the higher education environment, many colleagues rely on mentors or critical friends to support them in their professional activities and the development of personal networks may be one of the most important resources to help navigate a shifting academic landscape. Social network analysis has shown that academics actively seek support from trusted colleagues to develop their teaching capacity. These networks are often localised and discipline-specific, but may be augmented by colleagues they meet on professional development programmes, or colleagues/supervisors from their previous institutions (Rienties & Kinchin, 2014; Pataraia et al., 2014). Mårtensson and Roxå (2016: 185) argue that:

> it is the academic teachers' daily practices, and meaning-making interactions with their colleagues, that will have the strongest influence on how individual teachers think and act in relation to teaching and student learning.

However, it is not clear if academics seek support from colleagues who would challenge cherished beliefs or, as seems more likely, they prefer to seek out colleagues who share the same anxieties and concerns. It may then fall to the faculty development team within a university to walk the fine line between trusted ally and

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confidant on the one hand, and critical friend to challenge assumptions and beliefs on the other in order for the academic to find their own way towards a sustainable but flexible and personally satisfying approach to teaching development.

CHARTING TERRAIN

On old maps, areas that were uncharted were supposedly marked with the phrase, '*here be dragons*'. This lent mystique and intrigue to the uncharted parts of the world that in turn allowed legends and tall tales to develop to explain away the gaps in the cartographers' knowledge. A similar phenomenon has happened in education. There are gaps in our understanding of the teaching-learning environment that are often filled with classroom folklore and untested assumptions. When I have introduced concept mapping to teachers in an attempt to explore these uncharted territories, they have sometimes reacted with suspicion and concern that the tool may uncover something that they'd rather not know. Teachers appear to worry that the act of mapping something would actually be *creating* the potentially troublesome phenomenon under investigation. So, 'best leave it alone!'.

This 'head-in-the-sand' approach is understandable if we accept that 'whatever we uncover, we can't fix'. So some teaching colleagues feel it is safer not to engage in issues that may prove difficult to solve, and allows them to be vaguely critical of generalised problems in 'the system' in a way that maintains sufficient distance so that it does not require them be actively involved in developing the solution. As an analogy, if we decide to ignore the pathogenic role of bacteria and viruses in infectious diseases, life becomes somehow less complicated, so long as we accept that some members of society will die as a result of 'bad miasmas'. Ignoring microbes will not cause diseases to go away. In the same way, if we ignore some of the inconvenient problems in education, they will not go away they may just remain invisible – particularly if we don't draw attention to them unnecessarily. The outcomes will still exist, but we will just not understand the causes. Maintaining a distance from the teaching discourse seemed to provide academics with a method of self-preservation within a research-dominated environment. This results in a superficial engagement with teaching so that universities function very efficiently as 'centres of non-learning' (Kinchin, Lygo-Baker, & Hay, 2008).

I have engaged with a large number of participants on various university teacher-development programmes over the past decade. They have often indicated that whilst they feel that all is not well with teaching, they could not quite articulate what might be wrong or how to fix it. The concept of pedagogic frailty evolved from just such discussions by teasing out particular elements that were causing difficulty. From this a possible framework emerged through the application of concept mapping to help visualise the ideas involved and, crucially, the connections between these ideas. It is identification of the connections between the ideas that is likely to suggest mechanisms to address concerns (Kinchin, 2016b). These take time and effort to uncover, but once identified allow the individual to start to take

greater control of their own professional development. 'Mapping' is, therefore, not just an interesting metaphor, but an essential component of the analysis of pedagogic frailty.

CONCEPT MAPPING

Whilst concept mapping (Novak, 2010) has been used extensively to record what has been learnt previously (i.e. accepted knowledge), it is being used increasingly as a tool to chart a way towards new understanding (Kinchin, 2014). Rather than seeing concept mapping as a tool to record what is already known, I have employed the tool as a method in the exploration of pedagogic frailty to gain access to the yet-to-be-known (*sensu* Bernstein, 2000):

> Mapping existing terrain also allows otherwise unknown features to come to the surface. In this way, concept mapping may not only be a way of visualising existing theory to enable verification and dialogue, but it may also help new theoretical perspectives to emerge. This is often as a result of identifying links between ideas that had not been previously made, or by viewing known links from a different perspective. (Kinchin, 2016a: 88)

Therefore, concept maps should not be viewed as simple summary diagrams but as tools in the exploration of the relationship between ideas that are represented and as a stimulus for dialogue. They are dynamic constructs rather than static representations. Concept mapping has had a long and rigorous development as a tool to support learning (e.g. Novak & Cañas, 2006, 2007), but only in recent years has the focus of concept mapping studies been the values that underpin teaching rather than simply the organisation of content to be taught (e.g. Lygo-Baker, Kingston, & Hay, 2008; Greene et al., 2013; McNaughton et al., 2016). Maps provide an artefact to aid examination of beliefs and allow personal, private views to be externalised for analysis and/or discussion. As explained by Wilson et al. (2015: 4):

> Concept mapping is a medium through which people come to understand more about an event and about themselves. This change of self, re-shapes the meaning of the phenomenon that is being studied, and offers the participants an opportunity to "re-see" the significance the experience and the mapping process offer them. Through this process of "re-seeing," participants develop an artistic expression of self-discovery (the concept map) and their voice resonates on both an individual and a social level.

The application of concept mapping helps to develop reflective practice whilst constructing knowledge structures that support the evolution of adaptive expertise (Bohle Carbonell et al., 2014; Salmon & Kelly, 2015). The maps provide a vehicle for dialogue and/or personal reflection that can be used to frame an autoethnographic approach to academic development.

AUTOETHNOGRAPHY

When individual teachers are involved in periods of reflection on their own practice, the usual research criterion of generalizability is irrelevant. The purpose of the reflection is to enhance the practice of a particular teacher in a particular context. As such the person with the greatest interest in the outcome, and the greatest insight to the problems at hand is the teacher them self. This can be facilitated by dialogue with a trusted 'other' to help interrogate meaning and ensure that the difficult questions are not circumvented (Kinchin, 2017). However, colleagues may prefer a more private interrogation of their professional values. With this in mind, the autoethnographic research tradition (e.g. Chang, 2008) offers a way into the examination of pedagogic frailty that creates a space for honest self-reflection and inquiry.

Foregrounding the researcher's values, assumptions and emotional attachments through autoethnography does not come naturally to many academics, especially to those working in the physical sciences who traditionally spend so much energy bracketing themselves out of their research processes. However, bracketing yourself out of reflections on your own teaching is nonsensical. The autoethnographic process has been described as having the capacity of illuminating a personal pedagogic perspective and so enabling '*a more sensitive insight into those aspects of others' lives*' (Trahar, 2013: 371). Concept mapping helps frame this narrative, providing structure and boundaries for the development of the narrative to make it a more manageable process (Kinchin & Cabot, 2016). It also highlights dynamic links between elements that would not intuitively be considered together.

EMERGENCE OF THE PEDAGOGIC FRAILTY MODEL

The emergence of the pedagogic frailty model from an analogy with the concept of clinical frailty has been documented previously (Kinchin, 2015, 2016a; Kinchin et al., 2016). Within these introductions, I have made it explicit that frailty is not intended as a description of an individual academic's capacities, or the limits to them, and that frailty should not be confused with agency. However, I am fully aware that some colleagues are a little uneasy with the use of the term 'frailty' in the context of university teaching as it may be felt to reinforce a deficit model of professional development. I also acknowledge that it is crucially important to guard against a managerialist misappropriation of the term to create personally damaging staff characterisations. However, whilst not wanting to alienate colleagues by using a contentious term, it may be useful to generate a certain degree of 'discomfort' within our discussions (Figure 1). Boler (1999: 176) writes '*A pedagogy of discomfort begins by inviting educators to engage in critical enquiry regarding values and cherished beliefs, and to examine constructed self-images*'. Therefore, engagement with the concept of pedagogic frailty may require academics to engage with a period of discomfort to encourage the generation of new perspectives. As we question cherished beliefs about teaching, it is likely to trigger emotional responses. This will stimulate a lively dialogue about

the evolution of the dynamic between individuals, disciplines and institutions in an evolving higher education context (*sensu* Henkel, 2005) as we endeavour to enhance both the student learning experience and the staff teaching experience. Much has been written about the former in the past ten years, much less about the latter.

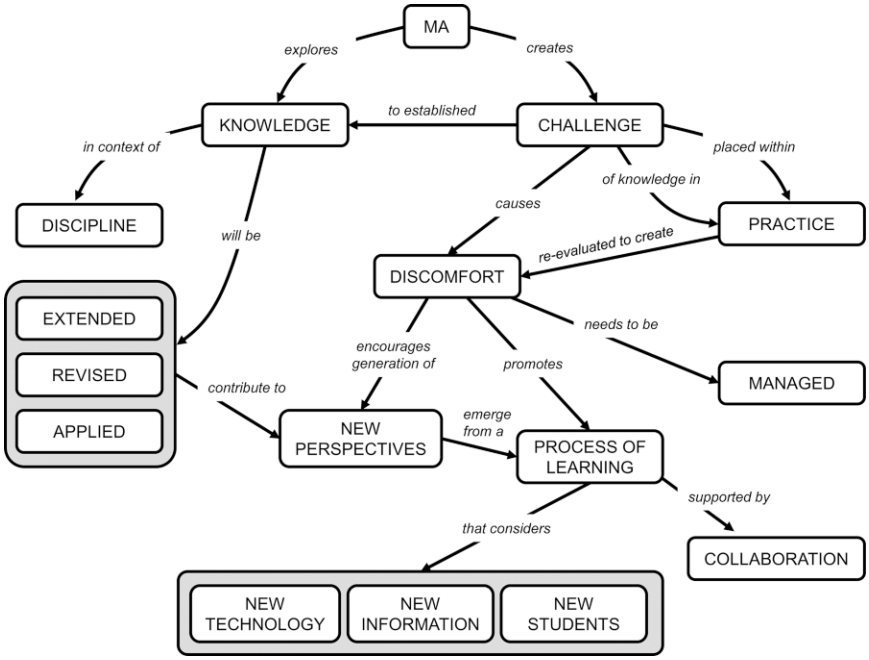

Figure 1. An academic developer's concept map of an MA in Higher Education to highlight his personal philosophy of 'managing learner discomfort' to generate new perspectives on university teaching (from Kinchin et al., 2017)

A topic can become 'sensitive' if emotional responses are raised, if there are competing explanations about events, if there are political differences about what should happen next or challenges about how issues could be resolved (Lowe & Jones, 2010: 2). This is certainly the case when academics are asked to reflect on their teaching and anyone who engages in the management of learner discomfort in the context of teacher development should be prepared to deal with the emotions that can come to the surface. Colleagues' emotional investment in teaching should not be underestimated, but should not be a reason to avoid exploration of teacher development.

THE ELEMENTS OF PEDAGOGIC FRAILTY

The overarching concept of pedagogic frailty is built up of elements that often arise from stress that accompanies change within the higher education environment. This

appears to be mediated by a complex array of factors whose precise composition varies from discipline to discipline and from academic to academic. What some colleagues view as a problem or a crisis, others see as a challenge or an opportunity. This depends on how the elements of the changing environment are interacting with each other and with the individual academic. The four dimensions that are proposed to contribute to pedagogic frailty are a lack of explicit and shared values that contribute to an effective regulative discourse; a disconnection between the practices of the discipline with the pedagogy that underpins the teaching in the discipline; the tensions that may be unresolved between the academic role as a teacher and the competing role as a researcher (research-teaching nexus), and the connection between the practicing academic and the decision-making bodies (locus of control) that regulate teaching. It is important to know not just which elements contribute to each of these dimensions, but also the way in which these elements are structured and relate to each other (Figure 2).

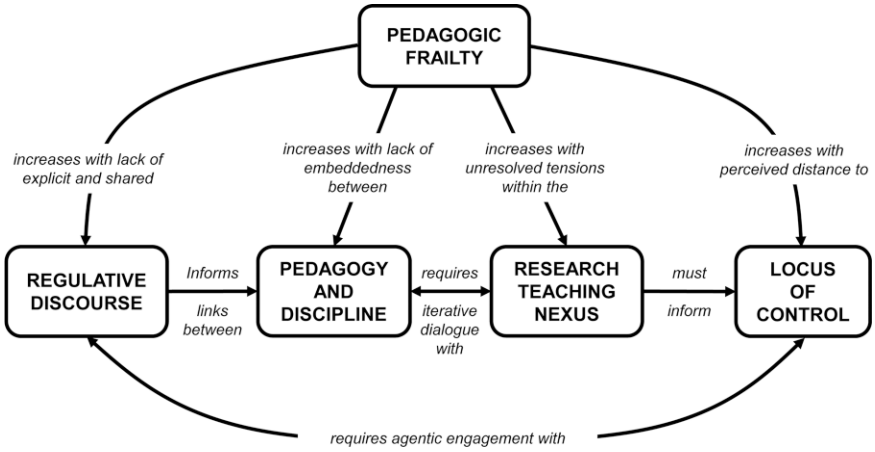

Figure 2. An overall model of pedagogic frailty showing the links between the dimensions (after Kinchin, 2015, 2016a)

Regulative vs. Instructional Discourse

Regulative discourse (as described by Bernstein, 2000) is concerned with the values that underpin teaching rather than the mechanics of the process, which form the instructional discourse. The regulative discourse often remains unspoken and forms part of the tacit knowledge of a teaching community. The values that underpin teaching at university are not often scrutinized as they tend to be obscured by a pragmatic, short-term focus on more tangible actions and outcomes. And yet

professional values direct the behaviours and attitudes towards teaching that will impact on the student learning experience over the long term.

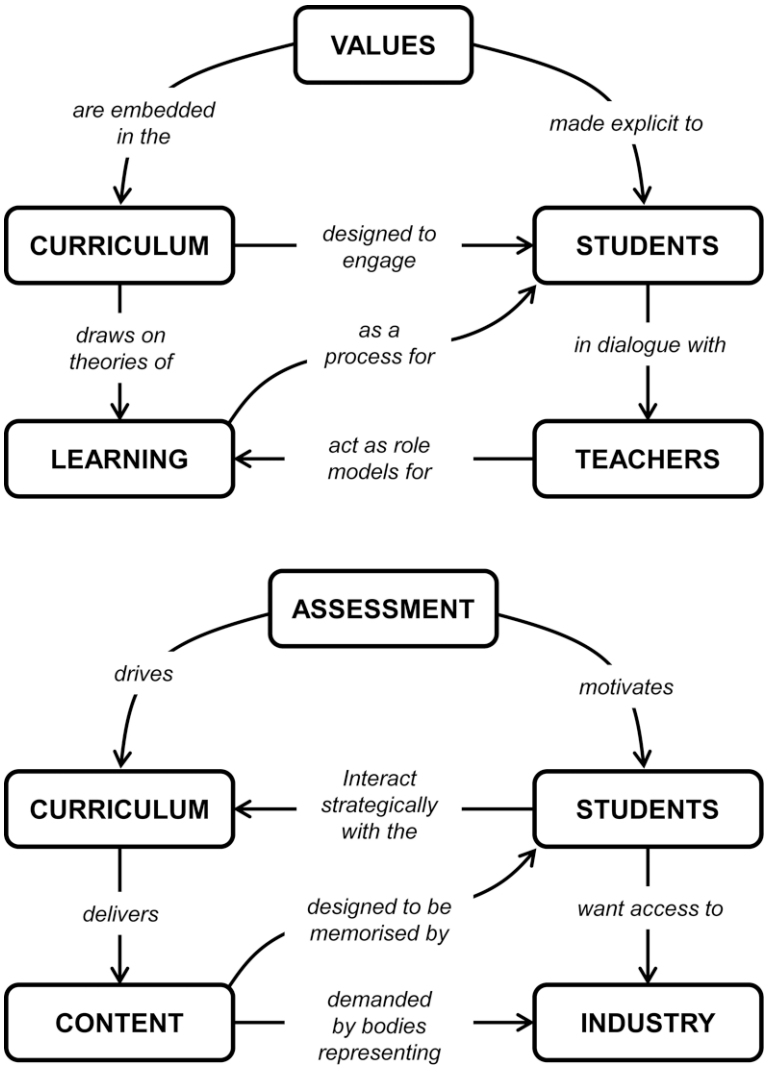

Figure 3. Concept map fragments that illustrate differences in teacher perceptions of the relationship between students and the curriculum

The sharing of a 'values literacy' has been discussed as a way of developing a more resilient academic community (Barnes, 2014), to offer a consistent student experience and mitigate the stresses and strains of the teaching role that can contribute

to individual burnout (Howard & Johnson, 2004). This sharing is not with the aim of achieving homogeneity (e.g. Robertson, 2007), but to gain a better appreciation of the diversity of views and how they might complement each other.

Variation in the structure and content of concept maps of instructional vs. regulative discourses reveal a wide range of views about teaching along with diversity in the assumptions and beliefs held about the roles and motivations of students. Whilst some concept maps illustrate views that are weighted towards one or other discourse (Figure 3) in practice most exhibit interaction between elements of regulative and instructional discourse. Differences in emphasis can be observed by the relative positions of key elements and the verbs that are used to describe the links between them. Neither of the structures shown in Figure 3 confer frailty on their own, and either of them could function effectively within a supportive environment. In isolation, neither map exhibits a greater tendency towards frailty than the other. Frailty arises if there are internal conflicts with other dimensions of the individuals' profiles, or when the structures feature incompatibility with the relative structures that are held by colleagues or that are promoted within institutional policy.

Pedagogy and Discipline

Within explorations of the 'pedagogy and discipline' dimension, academics stress the importance for them of the concept of authenticity (Kinchin et al., 2016). This is an idea that warrants further analysis as, in line with the observations made by Kreber (2010), it is not clear whether academics all ascribe the same meaning to the concept. The notion of 'authenticity' is widely discussed, particularly in the literature that relates to the teaching of applied and vocational subjects. In those contexts, learning is considered to be authentic when it impacts a student's ability to navigate the academic or professional environment, solve complex problems and make meaning of their efforts in the context of their personal lives (e.g. Pawlina & Drake, 2016). Conversations with academics show that the authenticity of many common teaching approaches and assessment regimes is often questioned:

> I am teaching students to be actors, so why would I want to get them to write an essay about it just so I can provide an assessment mark that fits with the university requirements? How does this make them industry-ready?

> Medical students are taught by doctors, alongside other doctors in a cohort made exclusively of doctors. How is this a preparation for working within a multi-disciplinary team that includes nurses, physiotherapists, occupational therapists, dieticians etc.?

The instigation and maintenance of these approaches is often blamed on regulation that is governed by a remote locus of control. Additionally, the emphasis on 'real-life'

situations is often tied to the 'competence vs. expertise' debate (Kinchin & Cabot, 2010), and to the consequences of this for students' access to powerful knowledge (Wheelahan, 2007). Here authenticity may include alignment with dominant and discriminatory practices in the world of work. As such, we are minded by Bialystock (2016) that the relationship between authenticity and teaching is not a simple one and that authenticity does not necessarily predict good teaching.

Research-Teaching Nexus

The discussion of research-teaching links has received considerable attention in the higher education literature (e.g. Jenkins, Breen, & Lindsay, 2003; Brew, 2006), and continues to do so (e.g. Light & Calkins, 2015; Zhang & Shin, 2015). Whilst Hattie and Marsh (1996) found no necessary relationship between high quality research and excellent teaching, Blackmore and Kandiko (2012) concluded that research *could* have a positive impact on teaching if the conditions were right for it to do so and, crucially, if it were made explicit to students. The inclusion of students in the discussion is something that has not happened uniformly with some students unaware of any link between teaching and research at their institution, whilst others are sceptical of its value to them as learners (Kandiko & Kinchin, 2013). Many scholars have explored the possible benefits of linking research and teaching, and the ways in which it can be achieved (e.g. Brew & Boud, 1995; Healey, 2005). Kaartinen-Koutaniemi and Lindblom-Ylänne (2008) stress the central importance of this issue, claiming: '*The development of academic thinking and research skills in students should be considered as a main goal of academic studies in research-intensive universities*.' Garde-Hansen and Calvert (2007) advocate placing research at the heart of the curriculum and of students' processes of learning:

> [research] needs to be promoted as the "flagship" activity of each discipline, not simply as a set of transferable skills. Students need to be made visible as research-active individuals and teams. They need to see that their research efforts are valued.

It has been argued that there would be no need to link teaching and research if they were not divided in the first place (Locke, 2004). Traditionally teaching has been considered in isolation from other aspects of academic practice (e.g. Åkerlind, 2011) with the result that much of the literature on research-teaching links starts with the presumption that the activities are in tension with each other (e.g. Healey, 2005; Kinchin & Hay, 2007; Verburgh, Elen, & Lindblom-Ylanne, 2007). It is also evident, that when teaching is considered as a separate entity, it can initiate a different set of unconscious assumptions about learning in comparison with research (Kinchin, Hatzipanagos, & Turner, 2009).

Initial explorations of pedagogic frailty confirm the findings of Robertson (2007) that individual academic's perceptions of the research-teaching nexus and its influence on practice vary tremendously. The lecturer in engineering (Figure 4)

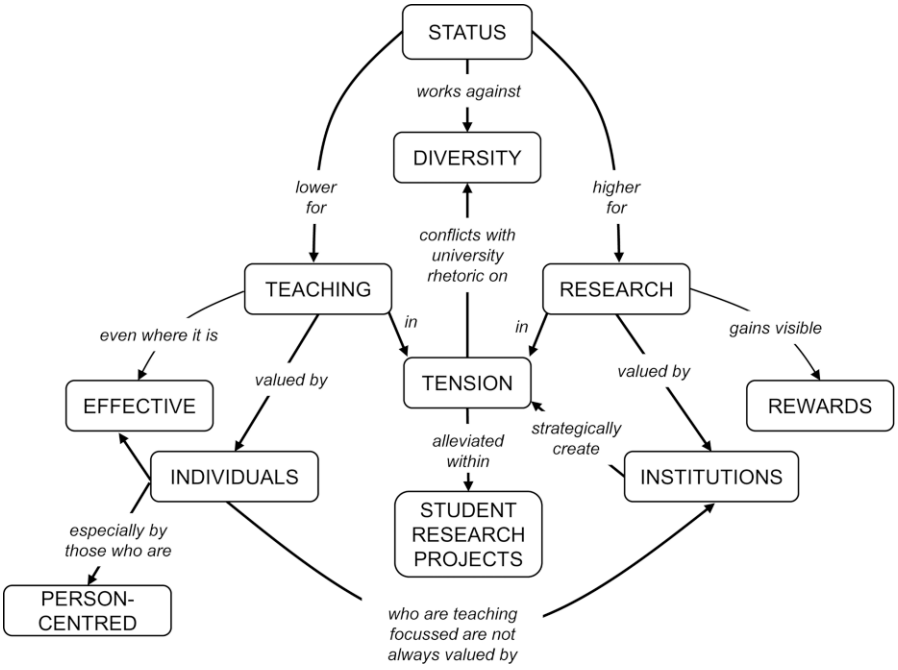

Figure 4. A lecturer's view of the research-teaching nexus in engineering (after Kinchin et al., 2016)

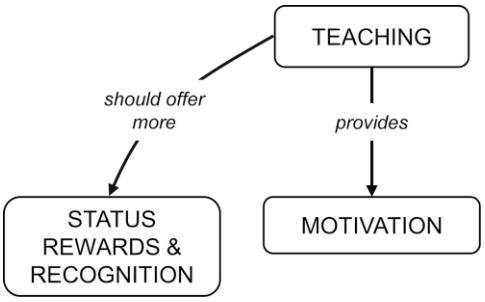

Figure 5. A teaching fellow's view of the research-teaching nexus in the performing arts (after Kinchin et al., 2016)

presents a classical view of the tensions and differential status that is often perceived between teaching and research by research-active teachers in STEM subjects. The teaching fellow from the performing arts (Figure 5) offers a different perspective in which research does not feature as an element in her concept map. For her, teaching was complemented by professional practice in the performing arts industry rather

than by academic research. The differences between these two perspectives serve to illustrate the diversity of views that may be held by colleagues working on the same campus and the dangers of assuming homogeneity among the teaching staff when applying regulatory frameworks to teaching. The absence of research in the map in Figure 5 may prove problematic if the teacher works in an institution where research is regarded as an essential part of the academic profile (see Chapter 10).

Locus of Control

Resonating with the concept of pedagogic frailty, Jones (2014: 130) has described a '*confluence of pressures*' that have resulted in universities moving towards management systems that have adopted more centralized administration; business quality assessment models and an audit approach to measuring effectiveness. In the context of the model in Figure 2, this would seem to be increasing the separation between the regulative discourse of the disciplines and the locus of control. A more distributed model of leadership (e.g. Bolden, 2011) would appear to be a way of redressing the balance and engaging with the diversity of expertise that would be found across a university. Bolden et al. (2015) consider two contrasting models of academic leadership. The 'sailing ship' model of academic leadership and the aptly-named 'sinking ship' model. Within the idealised sailing ship model leadership may be an emergent outcome of scholarly influence and esteem that are linked to academic values and identities. In contrast, the sinking ship model reflects the dissonance in academics' accounts of their lived experiences in which discourses of corporate leadership, institutional brand and financial performance generate a sense of disengagement and a move away from the values embedded within the regulative discourse. This is something that comes out of discussions with academics that are framed by the pedagogic frailty model. By considering the relationship between the locus of control (whether it is centralised, localised or distributed – see Chapter 12) and the regulative discourse, through the lens of pedagogic frailty, the development of more overtly values-based management systems may be a way of strengthening the links between these elements, with reference to the overarching desired outcome of improving the student learning experience.

One of the key elements that academics value in their working lives is professional autonomy (Figure 6). This has to be balanced with the need for regulation, and tensions between shifting individual and institutional goals may re-shape our understanding of autonomy depending upon the level of regulation and the room for negotiation of practice. As an example, an erosion of 'autonomy of practice' may be felt when the institution imposes online marking as an expected way of working. However, this may be offset by a greater 'autonomy of place' as it allows greater flexibility in where and when an activity can be undertaken (Kinchin & Francis, 2017). It is clear that staff perceptions of the relative value of the aspects of autonomy will not be uniform, depending how 'place' and 'practice' fit with the other elements of an academic's personal profile. Like authenticity (discussed

above), autonomy is a concept that academics need to de-construct for themselves in order for it to occupy a productive niche within their overall teaching ecology.

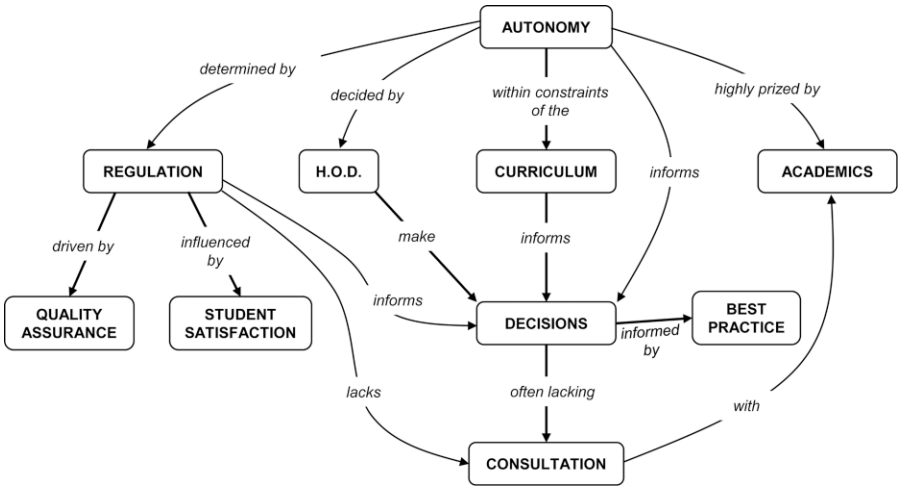

Figure 6. An academic's view of the locus of control in which the concept of autonomy is given prominence (after Kinchin & Francis, 2017)

IN CONCLUSION

It is suggested that pedagogic frailty results from the degraded quality and reduced extent of interactions within and between aspects of the professional environment (Kinchin et al., 2016). These links occur between the individual, the discipline and the institution (Henkel, 2005), creating different levels of resolution for analysis. In extreme cases frailty will lead to the maintenance of conservative methods of teaching (e.g. Bailey, 2014), even where these methods are felt to be less than ideal by the actors involved.

Optimising the organisation of elements within the four dimensions (as revealed by concept mapping), is a crucial factor in promoting adaptive expertise within an individual's overall profile. Where linear/chain knowledge structures are found to dominate within a pedagogic frailty profile, they will be inhibiting interactions and preventing the development of adaptive expertise (Salmon & Kelly, 2015). These structures need to be revisited and developed over time, supported by ongoing dialogue with disciplinary peers and/or faculty developers in order to maintain active engagement with professional development. The refinement of concept maps will not necessarily result in them getting bigger. Often expert and highly explanatory maps can be smaller when revised than initial iterations (e.g. Cañas et al., 2016).

Encouraged by an increasingly consumerist higher education agenda, many university academics display a tendency to become routinized experts when it comes

to teaching practice. Typically institutions value efficiency over innovation so that teachers are rewarded when they '*perform their teaching skills faster and more accurately, without enriching their conceptual knowledge*' (Crawford et al., 2005: 5). This routinization will reinforce the development of inflexible knowledge chains (Salmon & Kelly, 2015). These may be 'successful' within a stable environment, but just as Schon (1971) has indicated that stability is an illusion, the perception of success may also be an illusion, supported by an acceptance of non-learning as the norm (Kinchin, Lygo-Baker, & Hay, 2008). Routinized chains within the dimensions will inhibit interactions between dimensions. Where structure inhibits interaction, or where content between dimensions is incompatible then there will be a tendency towards frailty.

A simple list of key attributes of effective or sustainable pedagogies would fail to demonstrate, for example, the dynamic processes that contribute to teacher resilience (Mansfield et al., 2012). The framework of pedagogic frailty addresses the requirement suggested by Mårtensson and Roxå (2016: 185) of providing '*a networked web of meaning-making and enhancement processes*' against which pedagogies and faculty development may be compared in context. Moving forward, it is important to explore the potential of the pedagogic frailty concept from the perspectives of established research traditions in order for it to mesh with those outlooks and allow the model to evolve from its emergent state through critical, scholarly examination. In the chapters that follow, authors are invited to interrogate the idea of pedagogic frailty from the viewpoint of their own established research. It is hoped this will help the reader to access pedagogic frailty from a range of more familiar starting points so that it may be used to inform and enhance practice in a range of contexts. This approach will also bring in multiple perspectives and the contrasting voices from different bodies of supporting literature.

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2. FRAMED AUTOETHNOGRAPHY AND PEDAGOGIC FRAILTY

A Comparative Analysis of Mediated Concept Maps

INTRODUCTION

What are the benefits to the autoethnographic subject of analysing pedagogic frailty? How might he or she continue to make use of the concept maps once they have been formulated? What can different subjects learn from examining one another's maps? Might such an endeavour enable colleagues to gain an enhanced mutual understanding of their roles, values, and aspirations? More widely, how useful is framed autoethnography as a method for exploring pedagogic frailty? What are its advantages and its limitations? And what are the experiences of the autoethnographers themselves within such a process?

Working within the same arts department in a research-intensive UK university, the authors of this chapter seek to address these headline questions through comparative analysis of their sets of concept maps, originally formulated through mediated interviews conducted for two separate research projects investigating elements of pedagogic frailty (Kinchin & Wiley, 2017; Kinchin [Franklin,] et al., 2016). That both sets of maps were prepared in liaison with the same interviewer makes them ideally suited for additional scrutiny of this nature since, as Kinchin and Wiley (2017: n.p.) observe, *'the dialogue between the interviewer and interviewee helps to ensure that the structural grammar of the resulting maps is consistent so that later comparison may be possible'*. Our chapter extends this evaluative process to maps devised by different autoethnographic subjects, in the hope of establishing a format that may serve as an exemplar for others planning to undertake similar endeavours in the future.

It seems logical that we should again turn to the medium of autoethnography to conduct this study. Autoethnography involves the collection of data drawn from the subject's personal experience for the purposes of analysis, self-reflection, and of situating that experience within the wider context of the culture in which he or she operates, with the ultimate aim of *'gain[ing] a cultural understanding of self and others directly and indirectly connected to self'* (Chang, 2008: 49). Its potential as a research method has been widely recognised within the field of education, in which practice is inherently bound up both with other people and with a prevailing culture. As such, it has become a valuable framework for the exploration of professional

I. M. Kinchin & N. E. Winstone (Eds.), Pedagogic Frailty and Resilience in the University, 17–32.

development within the sector (e.g. Stefani, 1999; Dyson, 2007; Hernández et al., 2010; de Souza Vasconcelos, 2011; Trahar, 2013).

The approach adopted in this chapter has been conceived as a 'reciprocal autoethnography' in which the authors simultaneously function as interviewer and interviewee by way of pooling their knowledge, concepts, and resources. This is a natural extension of autoethnography's guiding principle of investigating the subject's relationship to others through contemplation of the self (e.g. Etherington, 2004; Austin & Hickey, 2007), extending the two-way dialogue since each author simultaneously assumes the role of 'self' and 'other'. It is conceptually analogous to the parallel autoethnographic approach taken by Learmonth and Humphreys (2011), as well as to the 'collaborative autoethnography' of Chang et al. (2013), who advocate authors collectively embarking on work in which team members are both researchers and participants, in order to probe common areas of experience in deeper and richer ways. Similarities may also be drawn with the 'analytic autoethnography' proposed by Anderson (2006), in which the subject is granted a full and visible standing within the project alongside the interviewer. Since reciprocity is at its core, our study is founded on the fundamental principle of mutuality and equality between the two parties, a point to which we will return in the conclusion. It also represents an advance on existing research in pedagogic frailty, in that autoethnographic subjects have for the first time operated independently of the original interviewer in examining one another's mediated concept maps.

BIOGRAPHICAL CONTEXTS

Although working in the same university arts department by 2016 and even occupying neighbouring offices, the authors reached this stage in their respective academic careers via strikingly different routes. Our outline biographies, as at the outset of this research, are as follows:

- *Christopher Wiley (CW):* Having undertaken a number of visiting positions in London and South-East England, I became a full-time Lecturer in Music at a London-based university in 2005, during the latter stages of my PhD. Following tenures as Programme Director of the MA (2005–2009) and BMus (2009–2013) programmes, I was appointed Director of Learning and Teaching in the School of Arts at a leading university in South-East England in 2013. This position enabled me to consolidate the development of my career during the preceding years in the directions of learning and teaching and academic management, as well as to assume a leadership role with a substantially wider remit, extending my impact and influence across a range of arts subjects beyond my home discipline. Professional recognition received for my activity in these areas includes being awarded a National Teaching Fellowship in 2013 and becoming a Senior Fellow of the Higher Education Academy in 2015. I have remained research-active

throughout my time in the profession, in the field of musicology and latterly also in education; I hold postgraduate degrees in both disciplines.

- *Jo Franklin (JF):* Following a successful career as a professional stage manager in UK theatre, I began teaching part-time in a small but well-established and internationally recognised conservatoire in South-East England in 2004. Over the course of five years, my responsibilities and hours of work gradually increased until I assumed leadership of the stage management aspects of a broad-based BA programme in technical theatre production. In 2010, the conservatoire merged with a much larger university, one of the leading higher education institutions in the UK, and became part of its School of Arts. This opened up the opportunity for me to complete a postgraduate qualification in learning and teaching in higher education. I have continued my studies by embarking on an MA in the same field, which has encouraged me to conduct research into how the areas of stage management and education inform each other. I am currently a Teaching Fellow in Stage Management while occasionally still being employed professionally as a stage manager.

Although primarily associated with two distinct subject areas, we have had much opportunity to work with one another across the past three years, since CW's School-wide role has brought him into contact with JF's programme on a semi-regular basis. The principal difference between us is that CW, as a research-active lecturer, has followed the more traditional route into academia of completing the PhD and maintaining publication activity in his discipline, whereas JF is an industry practitioner who has moved into a teaching-track academic position from a vocational field and has only latterly turned to (pedagogic) research. Key similarities include that we are both committed to, and enthusiastic about, learning and teaching in higher education. This is evidenced by our pursuit of full MA programmes in education (which is rare for members of academic staff within our institution) as a complement to existing qualifications in our own arts-based disciplines. Each of us is also actively undertaking pedagogic research, with projects using autoethnographic methods (e.g. Wiley, 2014; Franklin, In Prep.) conducted independently of our investigations of pedagogic frailty; hence neither of us is new to the approaches adopted for this study.

COMPARISON OF MEDIATED CONCEPT MAPS

Our autoethnographic process took the form of a series of face-to-face interviews during summer 2016, intended to explore the major points of divergence between our two sets of concept maps as well as the reasons underpinning these differences. It was supported by basic analyses of the maps presented as a series of tables that identified, for each corresponding pair, the number of terms that were unique to one autoethnographic subject or the other, and the number of synonymous or unambiguously near-synonymous terms shared between them (Tables 1–5); terms

are listed in alphabetical order within each column of the tables, except where this would preclude near-synonymous terms from being placed on the same line for ease of comparison). This enabled us expediently to determine the points at which the positions embodied by these maps were closest and furthest apart, and to question one another about the specific contexts for the themes they explored, the different relationships we had constructed between analogous concepts, and other aspects of

Table 1. Regulative vs. Instructional discourse (RD) concept maps

Unique terms (CW)	*Synonymous or near-synonymous terms*		*Unique terms (JF)*
	(CW)	*(JF)*	
Anonymous	Assessment	Assessment	Employment
Cultural backgrounds	Assumptions	Assumptions	Industry
Disciplinary identities	Course content	Course content	Institution
Diversity	Sequence	Sequencing	Performers
Generic knowledge	Student body	Students (customers)	(stars)
Groups			Progression
Non-linear			Values
Practice/theory/creation			
Prior knowledge			
Qualifications			
Specialist knowledge			

Table 2. Pedagogy and discipline (PD) concept maps

Unique terms (CW)	*Synonymous or near-synonymous terms*		*Unique terms (JF)*
	(CW)	*(JF)*	
Diversity of programmes	Authenticity	Authentic activities	Values
Interdisciplinarity	Professional activity	Professional practice	
Practice	Resources	University constraints	
Subdisciplines			
Variable			

Table 3. Research-teaching nexus (RTN) concept maps

Unique terms (CW)	*Synonymous or near-synonymous terms*		*Unique terms (JF)*
	(CW)	*(JF)*	
Academics	Motivation	Motivation	
Collective knowledge base	Rewards & Recognition	Status/Rewards & Recognition	
Individual activity	Teaching	Teaching	
Multiple conflicting perspectives			
Research			
Teams			

Table 4. Locus of control (LC) concept maps

Unique terms (CW)	*Synonymous or near-synonymous terms*		*Unique terms (JF)*
	(CW)	*(JF)*	
Administration	Best practice	Best practice	Lip service
Critical engagement	Decisions	Decisions	Resources
Discussion	Guidance	Guidance	
Diversity	Quality assurance	Quality assurance	
Interpretation	Regulation	Regulation	
Ownership	Self-sufficiency	Professional autonomy	

Table 5. Pedagogic frailty (PF) concept maps

Unique terms (CW)	*Synonymous or near-synonymous terms*		*Unique terms (JF)*
	(CW)	*(JF)*	
Ability	Adapt	Adapting	Acceptance
Admin.	Change	Change	Responsibilities
Institutional agenda	Complexity	Complex	Survive
Pedagogy	Environment	Environment	
Relevance	National priority	Priorities	
Resources	Stress	Stress	
Small subject areas	Sustainability	Sustainable approach	
Staff recruitment			
Student recruitment			

Table 6. Unique and (near-)synonymous terms in each concept map

	RD		*PD*		*RTN*		*LC*		*PF*		*Totals*
	CW	*JF*	*CW*	*JF*	*CW*	*JF*	*CW*	*JF*	*CW*	*JF*	
Unique terms	11	6	5	1	6	0	6	2	9	3	CW:37 JF:12
(Near-)synonymous terms	5		3		3		6		7		24
Total terms	16	11	8	4	9	3	12	8	16	10	CW:61 JF:36

interest. These conversations were followed by the writing of reflective accounts prompted by the interviews, intended to contemplate our individual experiences of framed autoethnography in relation to pedagogic frailty, the value of comparative analysis of our concept maps in elucidating each other's career trajectories, priorities, and objectives, as well as our conflicting outlooks on the same issues. Elements of these narratives have been edited into the below discussion at appropriate junctures.

Table 7. Number of links in each concept map

	RD		*PD*		*RTN*		*LC*		*PF*		*Totals*
	CW	*JF*	*CW*	*JF*	*CW*	*JF*	*CW*	*JF*	*CW*	*JF*	
No. of links	22	13	10	3	12	2	20	10	27	12	CW:91 JF:40
Total terms	16	11	8	4	9	3	12	8	16	10	CW:61 JF:36
Av. links/ term (2dp)	1.38	1.18	1.25	0.75	1.33	0.67	1.67	1.25	1.69	1.20	

CW's overall average links per term: 1.49 (2dp)
JF's overall average links per term: 1.11 (2dp)

While the autoethnographic process systematically considered our maps relating to each dimension of the pedagogy frailty model, the scope of this chapter does not permit us to present this voluminous material exhaustively. We have therefore elected to focus the discussion that follows on the scrutiny of two pairs in particular: the regulative discourse maps, which revealed the greatest diversity between the autoethnographic subjects; and the research-teaching nexus maps, which exhibited the highest level of shared ground even if the maps themselves are remarkably different.

Regulative vs. Instructional Discourse

The authors' regulative discourse maps (Figures 1 and 2) exhibited the greatest number of unique terms of any pair of corresponding concept maps, and illustrate well the differences between vocational and non-vocational degree portfolios. Within the UK drama conservatoire sector, the entire programme of study is conditioned by the requirements of an individual's preparation for a specific career, in accordance with the mandates of the accrediting professional body. The expectation is that teaching at such institutions will be delivered by professional practitioners based on their own training, experience, and knowledge of standards and practices in the entertainment industry, in a comparable manner to that described in Shreeve's (2009) study of the creative arts. In her subsequent reflection, JF was drawn to anecdotes from practitioners who had made the move from industry to academia of the type cited by Shreeve (2009, 2011), which typically revolved around the shock of entering a new profession with a markedly unfamiliar culture. JF saw resonances with the experiences of theatre practitioners who commence teaching in a conservatoire setting unacquainted with its systems, regulations, and administrative demands. Instead, they bring with them a set of industry-facing values that, as her concept map indicates, are not aligned with those of the institution, even if they are implicit in all aspects of the course design. JF's map therefore incorporates an emphasis on the students' progression (through the curriculum) in a particular sequence designed

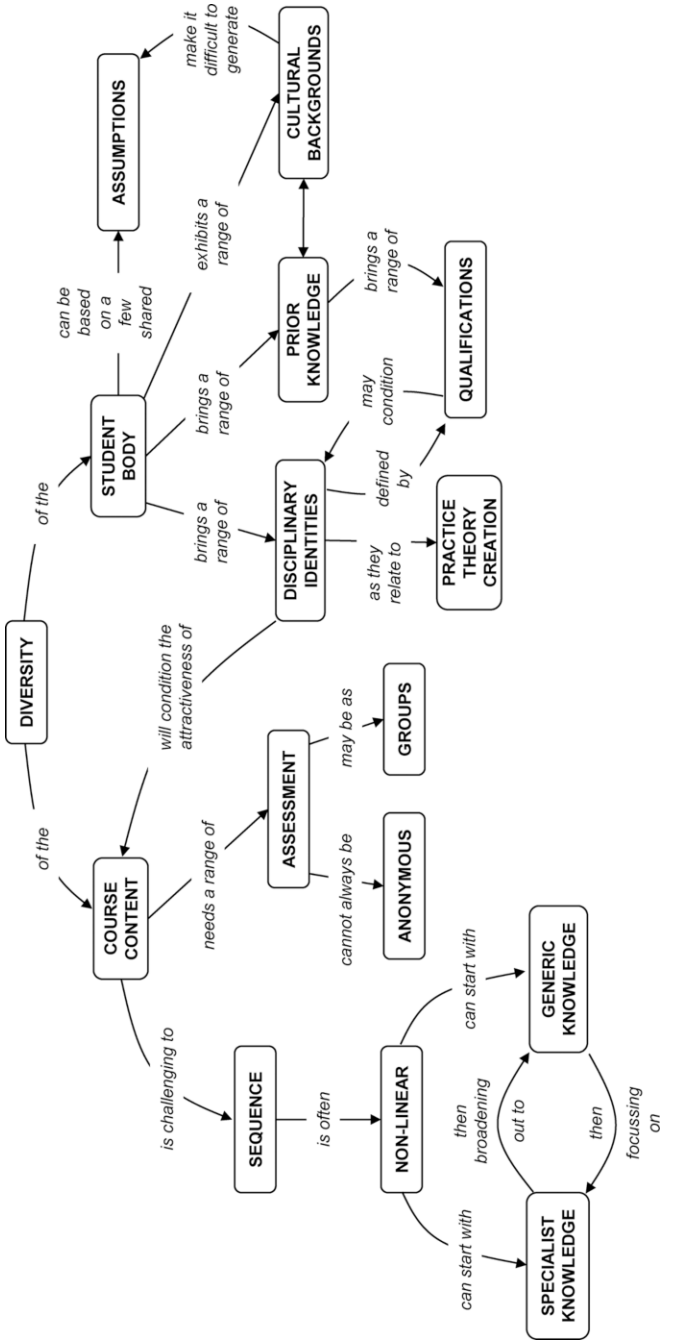

Figure 1. CW's concept map of regulative vs. instructional discourse (Kinchin & Wiley, 2017)

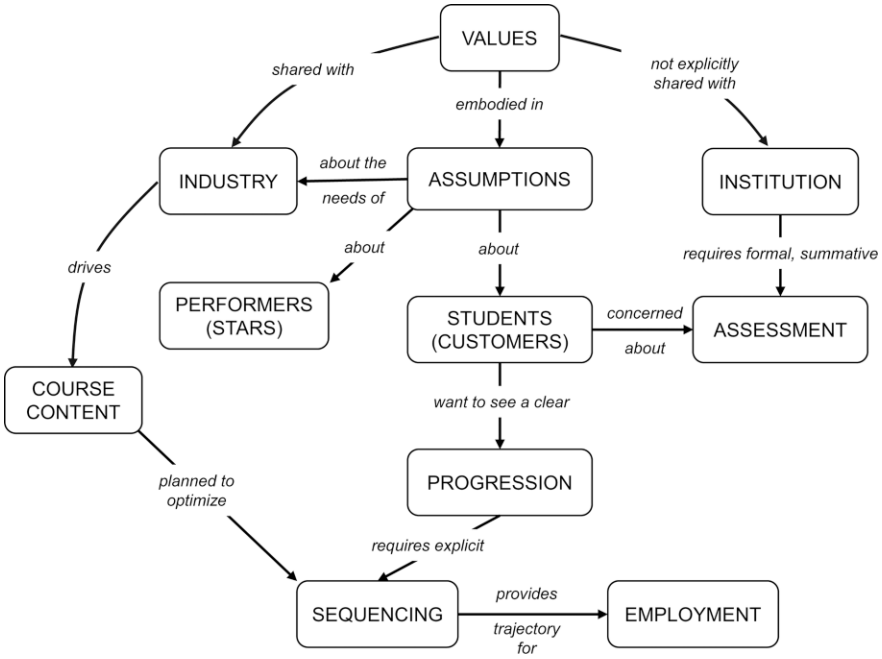

Figure 2. JF's concept map of regulative vs. instructional discourse (Kinchin et al., 2016)

to lead ultimately to employment, and with course content mirroring the values and assumptions of the industry. Her view is that by commencing a degree in technical theatre, her students have joined a 'community of practice', in the sense discussed by Wenger (1998). The appearance of the term 'Performers (stars)' on JF's map, even though her work is not directly related to teaching in performance, signals her perception that the needs of the performer are generally privileged over those of the backstage professional.

CW's concept map reflects an altogether different institutional context, that of the research-oriented arts and humanities disciplines, situated squarely within a university rather than a conservatoire and hence possessing a greater focus on academic as opposed to practical study. Interface with a defined industry, accrediting bodies, and unified communities of practice may be altogether absent from such a setting, thereby bringing separate sets of values and assumptions to bear on their associated courses instead. These courses may offer a wider palette of options to enable students to diversify or to specialise in a single area according to their needs and preferences, as well as to prepare them adequately for a range of potential career destinations, including graduate positions unrelated to the student's original discipline. CW's map is correspondingly framed around two areas of diversity:

first, the plurality of a body of students encompassing a range of backgrounds and preoccupations, all of whom might be attracted by a general-purpose degree not focussed on a single profession; and second, the breadth of the course content (in which the nurturing of transferable skills is embedded), which is seen as non-linear rather than rigidly sequential since students may be empowered to follow their own individual path through the programme in an order that might not be strictly prescribed (Kinchin & Wiley, 2017). Conversely, diversity is not explicitly considered in JF's map since she took it to be assumed: while technical theatre comprises a range of distinct activities (including stage management, design, sound, and lighting), the generally accepted best practice in preparing students for the industry is to ensure a good working knowledge in all of these constituent areas.

Consonant with each of the other pairs of concept maps, the regulative discourse maps also featured a significant number of common terms (Table 6), comprising nearly half of the total terms in JF's map. These synonymous terms may initially seem unremarkable, relating to mainstays of higher education such as 'students', 'course content', and 'assessment', in addition to the assumptions of various stakeholders. But, as discussion of the antithetical positions on the sequence of the curriculum has already shown, closer inspection uncovers important differences in the contexts in which common terms are located and their relationship to the map as a whole. For example, JF's map demonstrates her perception that clear sets of assumptions are held by students, industry, and implicitly also by academic staff, as well as being related to the values specific to the theatre profession and the institution itself. In contrast, CW's contemplates assumptions exclusively in relation to the student body and the educational and cultural diversity it incorporates (while the term 'values' does not itself appear in any of his concept maps). The greater prevalence of pre-existing assumptions under the vocational degree model contributes to the development of more rigid structures with little leeway for students to pursue activities that, although they may nonetheless accord with their interests, do not align with the standard trajectory for entering the industry. This clearly defined route of progression may alternatively be viewed as helpfully focussed, or as overly constraining for forcing students down certain vocational pathways. Like many aspects of academia, such structures may simultaneously comprise both positive and negative elements for the students, academic staff, and institution alike.

Research-Teaching Nexus

Analysis of the authors' research-teaching nexus concept maps – one of which is substantially smaller than the other – indicates that the differences in the way the research-teaching nexus is viewed by research-active and teaching-track academics may be particularly stark (Table 3). But despite their radically different appearance, these maps also reveal a striking level of underlying correspondence, given that the content of JF's map is almost entirely encapsulated within CW's. Exceptionally for a pair of concept maps, in this instance it has been possible to superimpose

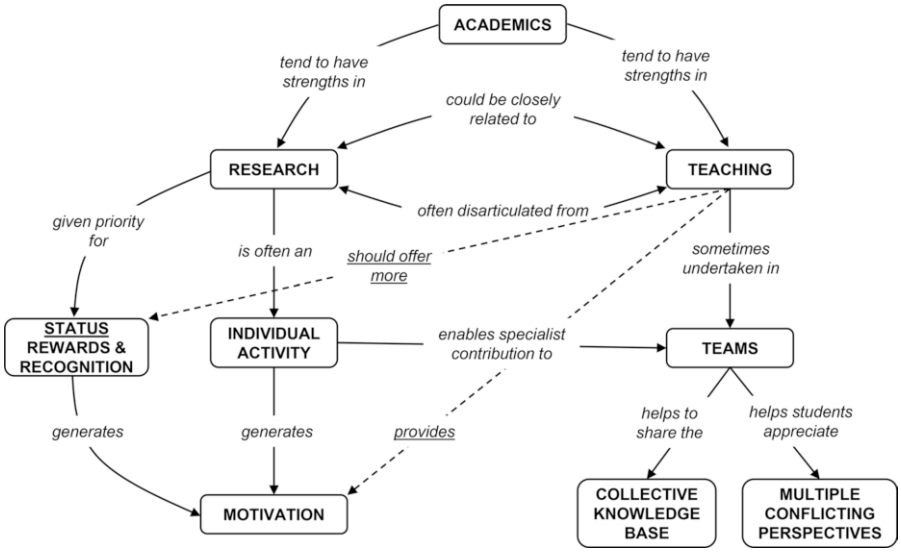

Figure 3. CW's concept map of the research-teaching nexus, with JF's corresponding map superimposed using underlined text and dotted arrows (after Kinchin & Wiley, 2017 and Kinchin et al., 2016)

the entirety of JF's map onto CW's by way of diagrammatically illustrating the extent of the overlap between them (Figure 3, with elements belonging to JF's map indicated by using underlined text and dotted arrows; for comparison, JF's original map is reproduced in Chapter 1, Figure 5). Hence it may be truer to suggest that the concerns of teaching-only staff are shared with their research-led colleagues, but that in the case of the latter, these elements represent only part of a larger set that encompasses the wider remit of their contracts.

Of the three types of teacher identities isolated by Skelton (2012) with respect to tertiary education, JF corresponds to that of the 'teaching specialists', who are associated with vocational disciplines and are, at best, merely nascent researchers. Conversely, CW belongs more to the category of 'researchers who teach', who are typically identified with non-vocational subjects and whose activity necessarily focuses on research, although they might nonetheless be committed to performing well as teachers within the limitations of institutional pressures to produce high-quality outputs. This accounts for the only real divergence between the positions explicitly advanced by the two concept maps: that motivation is shown as being generated by research on CW's, but by teaching on JF's. When questioned, CW stated that he did not see teaching as inherently demotivating, but that it was not the reason that he was attracted to academia (rather than, say, to secondary school teaching) and was unlikely to determine the success of his career. Both authors were

in agreement that teaching is perceived to hold the lower status of the two, since research is more highly regarded in the profession and accorded greater recognition and rewards (Kreber, 2010).

While the need for integration of research and teaching at university level has been repeatedly insisted upon in recent years, the body of literature on the relationship between them has been alarmingly inconclusive on the crucial matter of the real-world benefits to teaching quality and student learning of being taught by academics who are engaged in original research (Verburgh et al., 2007). The two activities continue to be (perhaps unhelpfully) dissociated across the UK university sector, and CW's concept map indicates that the extent to which research and teaching are integrated varies significantly according to context. JF was surprised to learn that there is no guarantee that allocated teaching will directly align with staff research specialisms necessarily, since she had assumed that learning from leading experts in their field would be a major selling-point for students.

Despite her emerging profile for pedagogic research, JF's concept maps did not even incorporate consideration of her work in this area within the research-teaching nexus. This is perhaps unexpected given the marginalised status that it presently occupies within the academy as misunderstood, supposedly lacking in intellectual rigour, and not valued as favourably as subject-specific research (Yorke, 2000; Boshier, 2009). CW was of the view that many teaching-track academics may undertake original research without realising or recognising that they are doing so, noting that teaching preparation can entail substantial disciplinary research in order to maintain the currency of the curriculum and to take account of recent advancements in the field (Wiley, In Prep.). JF acknowledged that this was certainly the case in stage management, for which there is a relative dearth of academic research, with little published on the subject since Maccoy's milestone text (2004). Building on this existing area of activity in the future may enable teaching-track staff to develop a profile for subject-specific research that circumvents many of the problems recently identified in relation to its pedagogic counterpart.

FURTHER REFLECTION

Revisiting a research process with hindsight enables the constructive questioning of assumptions that have previously gone unchecked, and some limitations therefore became apparent in the course of this study. The authors were struck by the difficulty of making general statements about an area as vast as the arts based on a single comparative case study, a point recognised by Kinchin and Wiley (2017) to be a potential shortcoming of autoethnographic research more generally. Another generic challenge of the methodology concerns the difficulty of smoothing the transitions between sections reviewing the salient literature, and those presenting anecdotal evidence or reflective discussion for which the principal source is the subject's own discourses. However, this may be avoided, even in the most evocative writing, by careful structuring of the prose and the provision of a linking narrative

(Anderson, 2006; Ellis & Bochner, 2006). The authors were also aware of a number of constraints associated with use of the pedagogic frailty model itself, including the emphasis on the professional ('what you do') over the personal ('who you are'), as well as the hierarchy implied by the prescribed order of its constituent dimensions in which, for instance, regulative discourse takes precedence over pedagogy and discipline. This is emblematic of the tendency for academics to work outwards from the rules and regulations (which in itself contributes to pedagogic frailty), rather than taking as the starting-point the identification of the curriculum content that would lead to the desired student learning gains, and only then determining how it might be accommodated within the institutional framework.

Since CW's original concept maps sought to explore pedagogic frailty widely across arts and humanities disciplines where JF focussed on one programme and its associated profession in relative isolation, this study required us to navigate the additional complexity of comparing two sets of concept maps which embodied vastly different levels of detail, even though both were mediated by the same interviewer. This will be immediately apparent to the reader from Tables 1–7, which reveal not just substantially more terms incorporated within CW's maps (Table 6), but also a richer level of interconnectedness between them given CW's higher average number of links per term (Table 7). The tabular analyses themselves provided a useful means of gaining a comparative overview of the content of different maps, some of which yielded a seemingly overwhelming level of visual detail at first glance, but they did not take account of the links made by the autoethnographic subjects between different terms, for which there was no substitute for referring back to the original maps (not all of which could be reproduced in this chapter owing to space).

Although both authors had formulated their concept maps just months before this research was undertaken, we are mindful that their content is already largely historical. The relationship between our respective departments and the institution itself changed considerably prior to completion of this chapter: the School of Arts has since been destructured, and the conservatoire to which JF belonged has become a separate School in its own right. We now occupy different roles within the university, and no longer work in the same School or even the same building; outside of this research project, our incidental contact has largely ceased. CW's tenure as the School's Director of Learning and Teaching has concluded, which has enabled him to devote more time to his musicological research; while JF was appointed Head of Department for Technical Theatre within the new conservatoire structure, with a large increase in areas of responsibility and, correspondingly, greater insight into institutional factors related to pedagogic frailty. Our priorities in terms of research, teaching, and academic administration have therefore dramatically shifted; the latter, for instance, was altogether absent from JF's original concept maps (whereas it appeared on two of CW's). Were we to produce fresh maps in light of these developments, then, the results would inevitably be very different. This is indicative of the potentially limited shelf life of the results of the mediated

interviews, and of the consequent need continually to refresh one's investigations of pedagogic frailty.

CONCLUSION

If autoethnography aids individuals in understanding their own grounded academic practice, as Belbase et al. (2008) contend, then it stands to reason that comparative ethnography will support two subjects in their endeavours to garner a more rounded appreciation of one another's practices. Analysis of the findings of explorations of pedagogic frailty, along the lines adopted in this chapter, provides an ideal means of nurturing this mutual reflection among colleagues. In contemplating the distinct positions occupied by a teaching-track academic operating in the context of a vocational performing arts degree, and a research-active lecturer who teaches on a general-purpose humanities-oriented degree, each author was able to identify points about the other that they had not themselves realised. The collaborative framing also had the felicitous side-effect of leading to an equalisation in status: despite our different routes to academia and standings within the institutional hierarchy, we are in agreement that we were able to approach this initiative on a par with the other, enabling deeper discoveries to be made in relation to pedagogic frailty via processes of comparison and reciprocal questioning. This suggests that such an activity might be appropriate as well as enlightening for paired colleagues to pursue irrespective of role, seniority, or career stage.

The examination of the mediated concept maps of five academics across a single institution by Kinchin et al. (2016: 16) notes that *'Although each of the four dimensions of pedagogic frailty exhibit a considerable degree of variation in form and content [between individuals], the way in which this is translated into the overarching concept exhibits a level of uniformity'*, the most prominently emerging themes being 'stress', 'change', and 'environment'. The extent of the material shared (at least, at face value) between the concept maps associated with the two authors of this study is alone revealed by the tables illustrating the frequency of synonymous or near-synonymous terms occurring between corresponding maps. The reciprocal autoethnography confirmed that despite our highly contrasting backgrounds, many of the overarching preoccupations emphasised in CW's and JF's concept maps are the same, even if the contexts to which they apply are not. In addition to identifying the extent of this shared middle ground, the process also uncovered that we were not always aware that our concerns were indeed common to both teaching-track and research-led staff, lending further weight to previous indications that the continued partitioning of one from the other may not always be helpful.

At the same time, the discussion above has highlighted that the links constructed between shared themes may be subtly (yet significantly) different from one individual to another. For instance, CW's research-teaching nexus map signals that research is given priority for purposes of rewarding academic staff, while JF's conversely suggests that teaching achievements ought to receive greater

recognition. A number of additional examples became apparent from the wider consideration of our concept maps, which scope has not afforded the opportunity to scrutinise; one case in point is that JF's pedagogy and discipline map views resources somewhat negatively, as 'constraints' presenting a barrier to delivering the learning experience she envisages, where CW's only goes so far as to recognise the need for resourcing to be sufficient. As seen above, we have necessarily adopted dissimilar stances in relation to issues such as the nature of the interface with the professions or the diversity of the student body, and it is these discrepancies – and the reasons underpinning them – that are worthwhile interrogating in order to understand each other more fully.

This exercise has illustrated the richness and diversity that may be located on a university campus, even among a pair of academics from cognate subject areas within the same School. It has shown how the use of framed autoethnography to investigate pedagogic frailty can lead to an enhanced appreciation of the detail of the different academic roles assumed by colleagues, their prior experience, current priorities, and (de) motivating factors, as well as a means of pinpointing where their preoccupations overlap and conflict. Undertaking this activity has reciprocally advanced our appreciation of pedagogic frailty itself: the gains that its exploration has the potential to yield, and how they may be used for the purposes of continuing professional development. In the hope that others may follow our lead, we have sought to demonstrate how the initial processes that led to the concept maps may be extended – and their outputs thereby maximised – by autoethnographic subjects working in collaboration, independently and following the completion of the originating interview.

The metaphor of the 'journey' has been repeatedly encountered in previous autoethnographies (e.g. Stefani, 1999; Dyson, 2007; Franklin, In Prep.). In particular, Dyson acknowledges that it may not always be feasible for subjects to anticipate their exact career trajectory and plan accordingly, a premise confirmed by this case study since external factors beyond the control of the individual have been seen to play a significant part. That notwithstanding, the consideration of pedagogic frailty offers a valuable means of increasing mutual understanding of different colleagues' intended journeys at a given point in time: the place from which they started, the career destination they wish to reach, and the changes of direction along the way. A heightened awareness of the ways in which colleagues might thereby complement each other would lead to improved collaboration through the cultivation of robust teams in which roles assigned to individuals more closely match their strengths, values, and aspirations. It would help to avoid situations in which constituent members merely emulate or duplicate one another's activity in tasks to which they are ill-suited and which therefore have a demotivating effect, as well as enabling the timely identification of specific training needs for staff, such as those entering higher education from industry. This, in turn, could help academics to develop greater resilience, minimise stress, and reduce pedagogic frailty in the first place.

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3. THE '3 RS' OF PEDAGOGIC FRAILTY

Risk, Reward and Resilience

INTRODUCTION

The University is increasingly being described as a high-stress environment, characterised by constant change (e.g. Murphy, 2011), accountability (e.g. Olssen, 2016), measurement and audit (e.g. Clarke, Knights, & Jarvis, 2012), and a growing consumer climate (e.g. Woodall, Hiller, & Resnick, 2014). Ongoing innovation and development are essential if organisations, including Universities, are to be able to adapt to changing practices and pressures (Hamel & Valikangas, 2003). Yet even the most thoroughly planned innovation incurs considerable risk, as outcomes are often unpredictable. If the perceived rewards of engaging in innovative practice are perceived to be low, then risk aversion is likely to result (see also Chapter 5). But neither does maintaining the status quo offer a suitable strategy for managing the pressures of a changing environment. Surviving and thriving, for both individuals and institutions, requires resilience to the difficulties created by the environment, to support an active approach to educational development.

Organisational change brings with it opportunities for stimulation, growth, and the excitement of new challenges (e.g. Liu & Perrewé, 2005). However, continuous change, without sufficient time to adapt and consolidate, can result in stress, helplessness, and resentment (e.g. Clarke, 2013). The constant change evident in Higher Education is described by Hargreaves (2008) as 'initiativitis'. The torrent of new initiatives brought into practice can lead academics to be working in what feels like a constant state of flux, with little continuity and 'breathing space'. This notion of 'initiativitis' also captures the feeling of many academics that new initiatives are implemented in the absence of need, reason, or evidence base (cf. 'distributed leadership'; see Chapter 12). Individuals might be exposed to different levels of change: department-level change (e.g. new members of staff); discipline level change (e.g. a new set of accreditation guidelines); institution-level change (e.g. a new administration structure or the implementation of new regulations); and sector-level change necessitating new ways of working (e.g. the development of the Teaching Excellence Framework in the UK). The ability to capitalise on new initiatives or structures as a source

I. M. Kinchin & N. E. Winstone (Eds.), Pedagogic Frailty and Resilience in the University, 33–48.

of creativity and development requires resilience; this may be on the level of the organisation, or of the individual. Conversely, pedagogic frailty can lead individuals and/or institutions to lack resilience to deal with change, resulting in risk aversive behaviour. However, risk commonly reaps rewards (e.g. Finucane, Alhakami, Slovic, & Johnson, 2000), and pedagogical innovation represents a solution to the changing pressures placed on universities (Walder, 2014). However, some argue that accountability and managerialism act as barriers to innovation (Findlow, 2008).

In this chapter I will introduce three key concepts which together form the basic tenets of pedagogic frailty: risk, reward, and resilience. It is not within the scope of this chapter to present a detailed review of the literature on these topics, so I discuss how each concept in turn might contribute to, or buffer against, frailty, by drawing on research from the educational and organisational literatures. The chapter will end with the presentation of an integrative framework which explicates the many multidimensional relationships between the three concepts, and the ways in which they interact to influence pedagogic frailty.

RISK

> Perceptions of a high level of risk, together with a reluctance to take risks, can be a major barrier to change. (Le Fevre, 2014: 56)

No professional works in an environment free of risk. The outcomes of our actions and choices are often unpredictable and uncertain, and we often have to balance competing priorities and demands, meaning that there is often no single 'best' decision. Not all individuals perceive risk in the same way, even when working under the same conditions (Howard, 2013). It is commonly argued that educational development cannot occur without risk, as a willingness to take risks is related to successful innovation, change, development, and improvement (Le Fevre, 2014). Within Higher Education, the implementation of a new assessment pattern, a revised curriculum, or a requirement for greater student involvement might all stand as examples of development that incur risk. One source of risk that may weigh heavy on the minds of educators is the uncertainty of how the changes will be perceived by students, and where student evaluations can carry considerable weight in appraisals and promotion applications, it can seem safer to play it safe (e.g. Spooren, Brockx, & Mortelmans, 2013). Yet through the lens of these specific examples it becomes clear that these activities have the potential to enhance learning outcomes, to develop pedagogy, and to give students more opportunity for active involvement in learning and teaching. Beyond student evaluations, however, accountability and the associated publication of metrics is also likely to lead to risk aversion both on the part of institutions and individuals. For example, in the medical profession prominent surgeons have argued that the practice of publishing surgeons' mortality rates is likely to lead to risk aversion in

terms of the complexity of patient case that they are prepared to take on (Westaby, 2014). Constant change compounds the problem of risk aversion as it is not always possible to predict the outcomes of teaching practices, and the environment in which those outcomes occur may well have changed again by the time those outcomes will be appraised. By looking to the psychology of decision-making, we can perhaps better understand how decisions are made under such conditions of uncertainty.

Theories of decision making are one of the core areas of Cognitive Psychology having clear scope to illuminate common issues in education (Jabbar, 2011), one of these being the processes underlying decision making under conditions of risk. In the Expected Utility Theory of decision making, decisions are reached via a simple calculation of the 'utility' of an outcome (how much 'good' results from a decision, which can be positive or negative) and the probability of reaching that outcome. The theory proposes that we try to maximise utility through the choices that we make (Bernoulli, 1954). However, many have argued that this simple approach does not neatly fit human behaviour (Manktelow, 2012). Instead, proponents of Prospect Theory (e.g. Kahneman & Tversky, 1979) would argue that the potential utility of a decision outcome is not always evaluated in the same way, and in order to truly understand human decision making behaviour, we need to consider potential outcomes relative to the individual's current position (e.g. the 'utility' of winning £1000 will feel very different to someone with high compared to low wealth, even though the actual monetary gain is the same). In particular, Prospect Theory predicts that gains and losses are not evaluated in the same way, even if they are equal in size.

Prospect theory predicts two fundamental patterns of thinking that drive decision-making: People are risk averse and loss averse. Whilst Expected Utility Theory would predict that equal-sized gains and losses would be evaluated in the same way, Prospect Theory would predict instead that losses are evaluated less favourably than an equal-sized gain would be rated favourably (Tversky & Kahneman, 1991), and this may well be driven by fear and negative emotion associated with loss (Camerer, 2005). Because of this natural aversion to loss, an educator might resist introducing a new innovation if they perceive that they will lose something they already have, such as strong student evaluation scores. Indeed, students have been shown to be resistant to change, therefore negative ratings may result from the implementation of an innovation (Anderson, 2002, 2007). Closely aligned with loss aversion is the concept of risk aversion which represents a general unwillingness to accept choices where the outcomes are uncertain. For example, an educator wishing to integrate technology into the classroom in a new way may not be willing to risk student learning outcomes if the impact of the innovation is uncertain (Howard, 2013; Le Fevre, 2014). One consequence of risk aversion is the *status quo bias* in decision making, which represents our preference for familiar, certain outcomes. If one of the options available to us involves keeping things as they already are, we are likely to favour this choice. Consider the educator who is planning the delivery of

their module for the coming academic year. S/he has recently been reading about the potential benefits of video feedback on student assignments, and considers whether to adopt this practice for the new year, or continue with standard written feedback. Whilst it is likely (on the basis of the research evidence that s/he reviewed) that the innovation will have positive outcomes, this is not certain, and when faced with an option which maintains the status quo, this removes the element of risk, and is often preferred. This brief review of the concepts of loss aversion, risk aversion, and the status quo bias shows that educational innovation is fighting against some deep-rooted cognitive biases.

It is not just at the level of the individual that we need to consider the concept of risk. Evidence suggests that talking together about risks makes people more positive in their attitudes about taking risks in an educational context, the so-called "risky shift" (Spitzer, 1975). This may occur because the risk feels more like a shared than individual endeavour, which is perceived to buffer the individual against the full force of any negative outcomes. Conversely, being exposed to biases in others' perceptions of risk can lead an individual to adopt a similar bias (e.g. Fox & Irwin, 1998). This can lead to contagion within a department or faculty, where certain innovations are devalued in discourse around teaching and learning.

This leads us to consider the importance of organisational climate in promoting or devaluing risk taking. Firstly, a culture and environment that promotes risk-taking is important. If the cultural norm is to embrace innovation, it will not be seen as being so risky (Howard, 2013; Le Fevre, 2014), and staff will be more willing to try new things (Lightfoot, 1986). On the other hand, if the organisational climate promotes adherence to the *status quo*, then *"teachers can be ostracized for risking and changing"* (Le Fevre, 2014: 63). As argued by Findlow (2008: 320):

> This is the way that institutional risk avoidance is seen as constraining academic freedom – by both rewarding safe practice and simultaneously promoting an *increased* perception of risk as danger. (italics in original)

Second, a secure working environment provides individuals with the confidence to take risks and innovate (Allen, 2003), without fear of negative repercussions. If the working environment is not perceived to be secure, then individuals may fear that an unsuccessful innovation will be an impediment to their career development. Risk perception is socially constructed (Howard, 2013), and hence the presence of 'champions' of innovation, with strong 'openness to change' (Howard, 2013), can be an important part of the organisational climate that promotes risk taking. The values held by an organisation are portrayed and demonstrated by the nature of the behaviour that it rewards. Issues arise where organisations desire creative thinking and risk taking in order to drive innovation and development, but often reward the application of 'tried and tested' approaches (Martins & Terblanche, 2003). It is essential that individuals are rewarded also for outcomes resulting from risk taking and innovation, and it is this issue that we consider next.

REWARD

> Incentives likely drive most of our professional decisions, and teaching is no exception. (Brownell & Tanner, 2012: 340)

Along with time pressure and insufficient training, lack of reward is one of the main barriers to implementing educational change (Henderson, Beach, & Finkelstein, 2011; Henderson, Finkelstein, & Beach, 2010). As argued by Brownell and Tanner (2012: 340), "There needs to be an incentive for faculty to modify their pedagogical approach; even though time is necessary, time alone is likely not sufficient for widespread change to occur". In Vroom's (1964) theory of rewards, individuals need to believe that what they do will result in reward, if they are to expend effort on that endeavour. Thus, to a certain extent, the organisation's 'reward climate' drives innovation (Baer, Oldham, & Cummings, 2003). Whilst evidence suggests that a reward system is positively linked to a culture that supports and promotes innovation (e.g. Chandler, Keller, & Lyon, 2000), it is important that this system rewards individuals' risk-taking behaviour and openness to change that are likely to lead to positive development and creativity (Montes, Moreno, & Fernández, 2004).

According to many reports, studies and theorists, the dominant feature of the reward climate in UK HEIs (but also in other systems such as those in the US and Australia), is the perceived imbalance of reward for teaching and research. In the UK, the Dearing Report concluded that teaching has lower status than research, and that promotion is related to disciplinary research, with minimal funding available for pedagogic research (Department for Education and Skills, 2003). Unresolved tension within the research-teaching nexus was one of the components of pedagogic frailty identified by Kinchin et al. (2016). This tension extends to perceived imbalance in the reward structures for teaching and research excellence. Let's say that someone can overcome risk aversion- is it worth their while? Will their developments and initiatives be recognised, let alone rewarded? Expending effort in the domain of teaching is often not perceived by staff to be rewarded (e.g. Young, 2006), perhaps because the weight ascribed to research metrics such as the UK's Research Excellence Framework (and its predecessor the Research Assessment Exercise) minimises rewards ascribed to teaching enhancement (Higher Education Academy, 2009). Evidence suggests that this can lead individuals to not even consider educational innovation and development. One participant in the study by Carnell (2007: 34) stated that:

> The research expectations inhibit *the development* of good teaching and learning practice because of all the time required. Because publishing has higher status than teaching, we don't dare *waste* our time thinking about how to improve our teaching. (italics in original)

The financial rewards for research performance are often perceived to be higher (e.g. Bak & Kim, 2015); whilst research success (e.g. gaining grants and publications) is often found to be related to salary, the same cannot be said for teaching excellence (Melguizo & Strober, 2007; see also Chapter 5). Some argue that, even if teaching

innovation and excellence were comparably rewarded, a cultural shift is needed to rebalance the predominance of research performance within the professional identity of academics:

> Giving incentives for teaching will likely only have positive effects if we, as a scientific community, somehow begin to value those incentives to the same degree as research-based initiatives. (Brownell & Tanner, 2012: 343)

Brownell and Tanner illustrate this point with the example of a winner of a National teaching award (such as the UK National Teaching Fellowship). They argue that such reward and recognition of excellence will not be considered on a par with achieving publication in a prestigious journal. In fact, in one study of National Teaching Fellowship awardees, the National recognition has been described as a '*poisoned chalice*' (Skelton, 2004: 454) because of the negative way in which they were viewed by their peers. Thus, whilst there are many examples of reward systems for teaching excellence (in fact, some participants in Skelton's study had been promoted to professorial level on the basis of this award), unless those rewards carry equal prestige to rewards for research performance, the incentive to innovate in teaching practice may well be minimised.

A further barrier to educational innovation comes not from lack of reward, but from the presence of disincentives such as perceived job insecurity. Job security and promotion are more strongly associated with research than teaching (Greenbank, 2006), and so safety in teaching practice may be reinforced by a desire to maintain job security. In Kleiman's (2008: 212) study, one participant *"perceived their creativity as constrained by the system in which they operate, and in which their lack of experience and the need to maintain their position rendered them relatively powerless to engage creatively as a teacher"*. Here it is not just the lack of reward that inhibits creativity and innovation, but fear of losing one's job.

Perhaps one of the difficulties in promoting a reward climate where teaching excellence and innovation are highly recognised is that it is very difficult to determine *how* to reward innovative teaching (e.g. Gretton & Raine, 2015), and in the literature there are very few examples of awards and recognition for innovation in teaching practice (Kember & McKay, 1996; Frayer, 1999; Krockover, Shepardson, Etchinger, Nakhleh, & Adams, 2002; Romano, Hoesing, O'Donovan, & Weinsheimer, 2004). In reality, rewards and incentives might range from simple verbal acknowledgement for excellence or innovation, through to more concrete rewards such as reduced teaching loads, pay rise, promotion, and teaching awards. To this end, within the literature there are some innovative examples of reward structures. For example, in a Swedish university (Andersson & Roxå, 2004), staff who show excellence in their practice and engagement with the Scholarship of Teaching and Learning are eligible to apply for admission into the 'pedagogical academy', which confers pay rise and additional funding.

Thus far, we have mainly considered extrinsic rewards for teaching innovation and excellence, such as pay, promotion, or awards. It is important to recognise that many

individuals are motivated to innovate not for want of financial or professional gain, but because they are intrinsically motivated to improve the satisfaction and learning gain of their students as well as furthering their own development as educators. In the generation of innovative ideas, the literature is clear in telling us that creativity is promoted by key features of intrinsic motivation such as being excited about one's work, a strong commitment to the idea being developed, and a belief that the work is important. Conversely, the generation of innovative ideas is inhibited where individuals are primarily motivated by extrinsic factors such as money and recognition (e.g. Amabile, 1985; Amabile, Hennessey, & Grossman, 1986; McGraw & McCullers, 1979). Of course, the generation of innovative ideas is just one part of the creative process, and the implementation of educational innovations is influenced by a complex set of environmental constraints and pressures. Nevertheless, it is likely that where individuals have a strong belief in the importance of a particular educational development, this strong intrinsic drive might outweigh the potential risk of challenging the status quo. These beliefs and values may form the basis of resilience to pedagogic frailty.

RESILIENCE

> Resilience is a fundamental quality of individuals, groups, organizations, and systems as a whole to respond productively to significant change. (Horne & Orr, 1998: 31)

Kinchin et al. (2016) concluded that resilience may well represent one of the most important factors in understanding how to minimise pedagogic frailty. The concept of resilience has its roots in developmental psychology, where it was necessary to understand the risk and protective factors that enable an individual to overcome (i.e., be resilient to) early adverse life experiences (Grotberg, 2003). This perspective is reflected in common definitions of resilience, for example: "sustained growth as a result of a healthy response to stressful situations" (Mansfield, Beltman, Broadley, & Wetherby-Fell, 2016: 79). In the context of pedagogic frailty, we might replace 'sustained growth' with 'ongoing teaching improvement', such that resilience enables teaching practitioners to overcome the fatigue and 'wear and tear' (Kinchin et al., 2016) that can result from exposure to continuous change and continue to develop their pedagogic practice. Adversity in the context of frailty may well be more than the mild adversity of general work stress (defined as mild by Fletcher & Sarkar, 2015), instead reflecting more significant adversity because of its prolonged nature. One crucial distinction to make when considering the potential impact of resilience is whether we are referring to the resilience of individuals, or the resilience of organisations. Furthermore, different conceptualisations of resilience, as a trait, process or outcome, leads to difficulties in synthesising knowledge in the area (Fletcher & Sarkar, 2015).

Not all individuals react to stressors in the same way (Fletcher & Sarkar, 2015). Resilience can be viewed as an individual trait that results in positive outcomes

following exposure to stress (Troy & Mauss, 2011: 453); the resilient individual will "find it easier to adapt to change". These people will have higher self-esteem, self-efficacy, and strong support systems in place (Richardson, 2002).

On this individual level, the personal resources that an individual holds (e.g. motivation, emotions, social competence) can determine whether or not they have the capacity to be resilient (Mansfield et al., 2016). As discussed above, when considering motivation, it is essential to distinguish between intrinsic and extrinsic motivation, with the former being especially important in supporting resilience (Kitching, Morgan, & O'Leary, 2009). Strong intrinsic motivation to develop practice can result in a 'sense of purpose', which is another factor that can promote resilience (Mackenzie, 2012). The importance of a sense of purpose and meaning in one's work reminds us to perhaps frame resilience in a more active way in the context of teaching. Some theorists prefer the term 'adaptive coping' or 'adaptive functioning' to resilience, as it better represents this sense of purpose that drives individuals forward in difficult circumstances:

> [resilience is] more than simple adjustment; it is the pursuit of human growth, mastery and differentiation allowing us to evolve in an ever-changing world. (Zeidner & Saklofske, 1996: 506)

In this sense, resilience enables educators to recognise the necessity and capacity for change, and to embrace this positively (Estaji & Rahimi, 2014).

Whereas intrapersonal resilience can be considered a dimensional trait which can account for inter-individual differences in the ability to survive and thrive in stressful conditions, it is argued that resilience is also a state which can be heavily influenced by the nature of the environmental conditions one is exposed to. McDonald (2006: 179) adopting an organisational perspective, speaks of resilience as *"the capacity to adapt and change in order to survive in a changing environment"*. Hence, resilience on an organisational level means not simply being reactive in response to challenging circumstances, but preparing for change and being in a position to easily adapt to new circumstances (Burnard & Bhamra, 2011). Organisational resilience comes from individuals, processes, infrastructure, systems et cetera (Burnard & Bhamra, 2011). What does a 'resilient' organisation look like, and how might this influence the aetiology of pedagogic frailty? First, we need to consider the organisation's management structures. The resilience of an organisation is heavily influenced by the opportunities afforded to all members to contribute to decision making (Cameron & Lovett, 2014; see also Chapter 12). Decentralised decision-making, alongside collaboration and permeable organisational boundaries, account for the flexibility of an organisation (Hatum & Pettigrew, 2006). It is argued that the ability to adopt a flexible response to a difficult event underlies the resilience that leads to 'positive adjustment' under difficult circumstances (Barnett & Pratt, 2000). This is in stark contrast to 'negative adjustment', where a rigid rather than flexible response promotes the maintenance of traditional procedures.

Second, we need to consider the extent to which relationships within the organisation are built on mutual trust. Mansfield et al. (2016) argue that trusting relationships within an organisation lead to 'relational resilience', and are a crucial component of the contextual resources underlying an organisation's resilience. Relational resilience is likely to result from reward and recognition for efforts and achievements (Cameron & Lovett, 2014), and through styles of leadership that give autonomy to all members of the organisation (Meister & Ahrens, 2011). Within Higher Education, this relational resilience is likely to be supported by a visible and supportive Senior Management Team, with transparent procedures and strong communication. In environments where relational trust is compromised, educational development is inhibited (Le Fevre, 2014).

Third, we need to consider the shared creative climate of an organisation. This is important as an organisation's creative climate will determine whether or not innovation will thrive (Amabile, 1997). According to Amabile (1997), there are five core features of a creative climate:

- Creativity and innovation are valued
- Orientation towards risk rather than maintaining status quo
- Pride in members and high beliefs of what they are capable of
- Offensive approach (future-oriented) rather than defensive maintenance of current position
- Reward and recognition for creativity

In considering how an individual or an organisation can adopt a future-oriented or risk-oriented approach to development, rather than maintenance of the status quo, we return to the very concept of resilience. In the natural sciences, the resilience of a metal represents its propensity to bend and return to its original shape, rather than breaking, under stress (e.g. Lazarus, 1993). This represents a conception of resilience as stability, with a return to equilibrium (Holling, 1973). But in a constantly changing HE landscape, where development and innovation are essential, would it be beneficial for an organisation to simply return to its original state following a disruption? Is it not the case that the very essence of a resilient response to change or disruption is to grasp the resultant opportunities for development (Gallopín, 2006)? In the earlier discussion of individual resilience, I argued that 'adaptive functioning' might be a better perspective on resilience, as it captures the active development that can occur as an individual adapts to new circumstances. In much the same way, we might therefore think about organisational resilience in terms of its 'adaptive capacity', defined as *"the ability of a system to evolve in order to accommodate environmental threats or changes and the ability to expand the range of variability"* (Bhamra, Dani, & Burnard, 2011: 5387). Following change or disruption, a new equilibrium is reached, rather than the original equilibrium being reinstated. If an organisation focuses on adaptive capacity, it will adopt a proactive rather than reactive approach to managing change (Bhamra et al., 2011). The resilient organisation can then promote individual resilience in its members. The emotional reactions of an individual to an

event such as localised or widespread change are determined by the individual's cognitive appraisal of that event (Troy & Mauss, 2011). The way in which that event is framed by the organisation has the potential to change the individual's appraisal of the event. Thus, a proactive strategy for dealing with change that is clearly focused on the potential for development can enable individuals to see change in a similarly positive light, potentially buffering against frailty.

THE RELATIONSHIPS BETWEEN THE '3 RS' AND PEDAGOGIC FRAILTY

In this brief consideration of how the concepts of risk, reward and resilience might relate to pedagogic frailty, it is evident that there are multiple relationships between the concepts themselves. I end this chapter by considering how risk, reward and resilience might interact to influence frailty (see Figure 1), and summarise the possible nature of these relationships within five premises. These suggestions require empirical testing, and these premises might serve as a guide for future research, and inform institutional and departmental approaches to educational development.

Premise 1: Resilience, both organisational and intrapersonal, has the potential to buffer against frailty by promoting an adaptive response to changing environmental pressures.
Institutions should put in place the facilitative conditions for resilience, and place emphasis on 'adaptive capacity' as a proactive approach to change, rather than resilience and 'rebounding' which is more reactive.

Premise 2: Reward and recognition promote resilience.
A positive and transparent reward climate within an institution is likely to promote relational and intrapersonal resilience. Simple acts of recognition such as a letter of congratulation from a Faculty Dean for excellent student feedback may buffer an individual against negative cognitive appraisal of change and development.

Premise 3: Resilience can promote risk-taking and innovation; frailty promotes safety and adherence to the status quo.
A resilient organisation with strong adaptive capacity will see change not as an obstacle to be overcome, but as an opportunity for development and growth. If this is clearly communicated by Senior Management Teams, individuals are likely to share this cognitive appraisal, and feel safe to innovate. A more reactive approach to change may well convey an opposing appraisal of the situation, one which values a return to the status quo, thus impeding educational development.

Premise 4: Risk-taking and the presence of challenging circumstances can reap pedagogic rewards.
Many of the most innovative educational ideas emerge because the creator has struggled with difficult circumstances, or have faced a particular problem that they

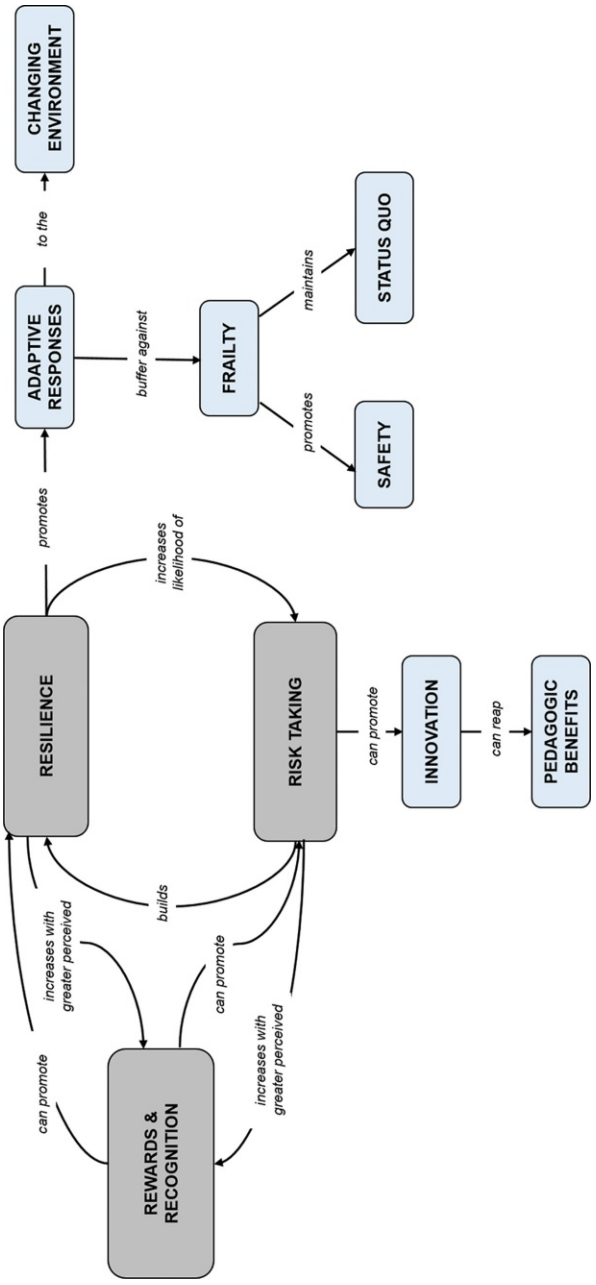

Figure 1. Potential interactions between the concepts of risk, reward and resilience in the context of pedagogic frailty

wished to solve. If we are never faced with challenging circumstances, or a changing working environment, there is less impetus for creativity. Reframing such challenges as opportunities may promote a future-oriented, creative mindset. Institutions need to establish a culture that promotes and rewards risk-taking and innovation, not adherence to the *status quo.*

Premise 5: Risk-taking and innovation increase with greater perceived rewards. Whilst creative ideas are more likely to thrive through intrinsic rather than extrinsic motivation, the enactment of those ideas within the context of a high workload and the competing pressures of teaching and research is likely to benefit from a clear reward structure for teaching excellence. It is perhaps an uncomfortable truth that if educational development is to take place, we need to ensure that the reward value of teaching excellence is on a par with that of research excellence. For as long as teaching remains the second class citizen in academia, we cannot expect innovation to flourish.

CONCLUSION

Pedagogic frailty is an emerging concept that has the potential to illuminate the challenges associated with educational development in twenty-first century Higher Education. As is the case in many different organisations, Universities operate within a fast-paced political, economic, and social environment which results in what is perceived as constant change and flux. Accountability and a strong metric culture add further pressure to educators, who can suffer from the 'terrors of performativity' (Ball, 2003). Under these challenging circumstances, it can seem preferable to adopt a safe and sustainable approach to teaching and learning, maintaining the *status quo*. However, adapting to an ever-changing environment requires innovation, which can incur risk by virtue of the fact that the impact of the innovation is unpredictable. For some individuals, innovation is driven by their own intrinsic motivation, but where teaching sits alongside the target-driven pressures of research performance, a stronger and more tangible reward for educational innovation is likely to be necessary. Reward structures are an important component of an organisation's climate, which, alongside other factors, make up the organisation's resilience, or adaptive capacity. Individuals and organisations with strong adaptive capacity are likely to be resilient to change and disruption, but also see potential for creativity and development under the same circumstances that those less resilient would frame in a wholly negative way.

Changing working conditions are a challenge, but one that also confers significant development potential. In discussing change and innovation in biology education, Brownell and Tanner (2012) reflect that:

> It is somewhat perplexing that we as scientists are resistant to such change. If we are experts at making evidence-based decisions in our experimental laboratories, then what forces are at play that impede us from adopting equally iterative and evidence-based approaches to teaching in our classrooms? (Brownell & Tanner, 2012: 339)

It is possible that the 'forces at play' may well include risk aversion, a reward climate perceived to be skewed towards research rather than teaching excellence, and a reactive, rather than proactive approach to organisational and intrapersonal resilience. Gaining a greater understanding of these forces, and how they influence pedagogic frailty, may unlock the potential for challenges to be reframed as opportunities.

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4. SEMANTIC WAVES AND PEDAGOGIC FRAILTY

INTRODUCTION

This chapter will begin with an exploration of the nature of pedagogic frailty with respect to regulative discourse (Bernstein, 2003), looking in particular at areas of resilience and risk for academics. There are several potential pitfalls in the discourse of pedagogic practice. For example, there is frequently a large gap between the language used in marketing materials for universities and the way in which the academic would articulate their function. Furthermore, there is often a gap between what is actually being assessed and the capabilities academics are hoping to flourish in students. In both cases, the academic who is highly skilled and knowledgeable in their own field may feel alienated and disempowered in any discussion on pedagogic practice. The system of overspecialization with no translational device can leave the academic in a space of wilful ignorance – that is fine for them but it does not apply to me. In this chapter, the reader will be introduced to Legitimation Code Theory (Maton, 2014). LCT comprises a series of codes which help to reveal what exactly comprises 'legitimate knowledge' in any given situation. Here the Semantic Code will be used both to illuminate the challenges faced, and to offer potential solutions to these challenges. The Semantic Code affords a powerful view of the complexity and abstraction of any knowledge area, and here applied to pedagogic practice may help shift the academic from a zone of risk into a zone of resilience.

FRAILTY AND REGULATIVE DISCOURSE

Kinchin et al. (2016) argue that the concept of 'pedagogic frailty' is a useful integrative term in the exploration of the perceived pathology currently invading higher education. It is essentially a multifaceted approach to exploring the experience of stress of academics. Pedagogic frailty in this context results in the adoption of an approach to teaching which is perceived to be safe and sustainable because any other choice is viewed as too taxing or risky in an environment fraught with pressure and change.

The terrain of pedagogic frailty is mapped in greater detail elsewhere in this book. The task here is to use a particular lens to view the pressures and the person of the academic in order to provide something of a translation device to increase the resilience of the academic swimming in these unfamiliar waters. The first question we must address is – why are these waters unfamiliar? What are the elements which are

I. M. Kinchin & N. E. Winstone (Eds.), Pedagogic Frailty and Resilience in the University, 49–61.

creating the experience of stress in the environment? This chapter will suggest two further questions which could usefully be explored in the light of the emergence of a discourse of pedagogic frailty. Is there a fundamental disjoint which will continue to exacerbate the emergence and extent of pedagogic frailty? Or is it possible to ameliorate the situation with greater understanding of the dynamics at play?

There is little doubt that across the English speaking world that there has been a strong shift to the marketization of higher education institutions (Levidow, 2002; Molesworth et al., 2010; Wedlin, 2008) The impact of this has been substantial. There has been significant research carried out on determining the effects of this trend on the quality of education. One of the more stark representations is made by Molesworth et al. (2009: 277):

> We draw from Fromm's humanist philosophy based on having to argue that the current higher education market discourse promotes a mode of existence, where students seek to 'have a degree' rather than 'be learners'.

The focus of the argument in this chapter is the shift which is noted in many other places over the nature of the educative project of higher education. Is it primarily about job training? Is it providing a smorgasbord of intellectual stimulation? Is it about shaping the person of the student? One of the more contentious stances is perhaps that held by Barnett most explicitly in *A Will to Learn* (Barnett, 2008). Here Barnett argues that the role of higher education is to shape the 'being' of the student. There are many authors making contributions in this arena and at times the conversation is rather heated. Nonetheless, there seems to be an underlying issue which is not always in the foreground. It is clear that with the marketization of higher education there is a major shift in the regulative discourse of the institution. This term 'regulative discourse' has its origins in Bernstein's work on pedagogic discourse (Bernstein, 2003). Bernstein distinguishes between regulative discourse and instructional discourse. The former refers to the way in which the dominant values of society are translated into a structure which shapes the manner in which knowledge is transmitted. Instructional discourse refers to what knowledge is transmitted. The two are connected in such a way that regulative discourse will always dominate instructional discourse (Morais, 2002).

Let us consider for a moment that economic viability may be the primary value in a marketized higher education institution. That is to say that economic viability is the strongest operational value in the regulative discourse. Following Bernstein's argument this value will permeate the whole system. This is likely to create significant tension, particularly for those who still operate out of a value system which favours the transformation of the student through learning. One only has to look at the literature of the 2000's to see reflection after reflection on this issue – the whole discourse surrounding the nature of the university (from Bowden & Martin's *The University of Learning* to Barnett's *A Will to Learn*) burgeoned in this time (Barnett, 2008; Bowden & Marton, 2004). Whether the individual academic is explicitly conscious of the value clash or not, this paradigm will add substantially to

the stress experienced and will foster pedagogic frailty. If one is looking for evidence of the existence of this tension – look at the performance evaluation criteria used to evaluate the academic (Anonymous, 2016; Young, 2006).

Furthermore, whether it is a direct correlation or simply a co-emergence, there are two further factors which have entered the conversation. The idea of 'research-led' teaching – quite what this is or is meant to be is not entirely clear. This exemplified beautifully in the paper entitled 'Research-led teaching: moving from a fractured engagement to a marriage of convenience', the first key word in this paper is given as 'myths in higher education' (Schapper & Mayson, 2010)! The second of these is the burgeoning of programs to help academics to facilitate learning. It is fascinating to note though that again performance evaluation criteria frequently fail to reward any strong efforts by the academic to facilitate learning (see also Chapter 3). This last point will be returned to later.

LEGITIMATION CODE THEORY

The net result of all of these factors appears to be an increasingly stressful and fractured environment. That is to say, an environment which fosters pedagogic frailty rather than one that fosters resilience and the capacity to take risks. Having set up the conditions under which pedagogic frailty is favoured, there must be tools which can be used to move to firmer ground. One such tool is Legitimation Code Theory. Whilst the theory cannot do the work for us, it can shed light on what steps might be made in order to reduce the burden of stress.

Legitimation Code Theory (LCT) can be used to unpack the complexity of the situation. LCT emerges from of the work of Bernstein, Bourdieu and critical realism and provides several different dimensions (Maton, 2014). These dimensions each offer a lens through which to view knowledge and can be used independently from one another to good effect. The ultimate purpose of LCT is to make knowledge more easily accessible to all who wish to learn by revealing what is valued. Maton argues that the opacity of the unwritten rules governing what counts as legitimate knowledge and who can be a legitimate knower can prove a major stumbling block to those encountering a knowledge field as beginners (Maton, 2014). This is not limited to the major global issue of opening higher education to those who come from blue collar families. All too often in these circumstances the opacity of the system makes success for these students significantly more difficult. Making the 'rules' which frame the discernment between legitimate knowledge and that which can be discounted is very powerful to those who do not have the cultural capital (Zembylas, 2007) to instinctively 'know'. This phenomenon is also observed when academics try to switch field. An obvious example is those who are based in the hard sciences who attempt to do education research. The rules governing what counts as good research are very different. And as a result most academics give up after a few attempts because the rules they instinctively apply do not work in the new sphere and they are unaware that what looks like random rejection is in fact simply a different lens.

For our purposes in the exploration of pedagogic frailty, there are two dimensions of LCT which are illuminating. These are the specialisation code and the semantic code (Maton, 2014). LCT functions on a two dimensional plane where two related factors are plotted much like the x and y axes on a Cartesian plane, and each code occupies its own separate quadrant as seen in Figure 1.

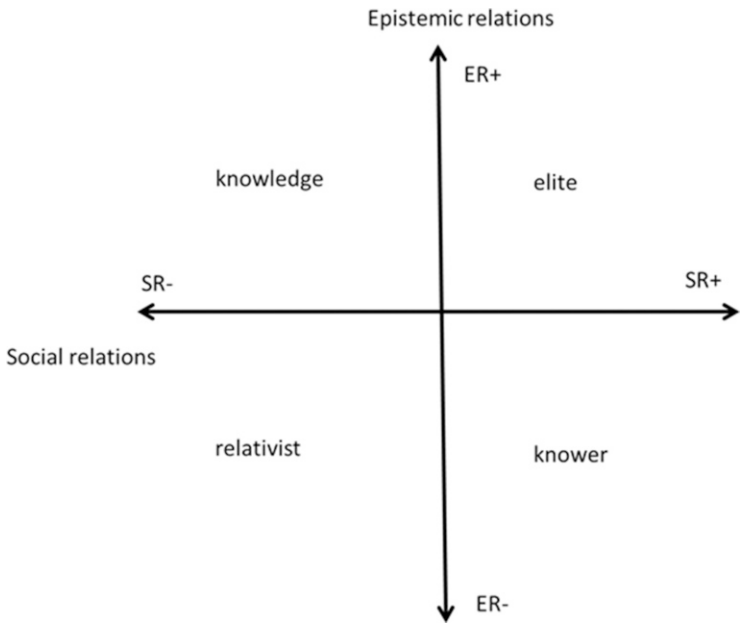

Figure 1. Specialisation code

In the specialization code the two dimensions which are plotted are the epistemic relations of the knowledge and the social relations of the knowledge (Maton, 2014). The relative strengths of each dimension can vary independently giving rise to four quadrants, but there is infinite possibility of variation within each spectrum. So epistemic relations (ER) can be stronger (ER+) or weaker (ER-). Likewise, social relations can be stronger (SR+) or weaker (SR-). There is infinite possibility of absolute position, but the four quadrants can be understood as modalities. Each modality has been given a label to assist the intuitive understanding of the distinctive flavour of each one.

Knowledge code (ER+, SR-) – here emphasis is placed on specialized knowledge of a specific body of information. The greater depth of knowledge is seen as the basis of achievement (the physical sciences are a useful example).

Knower code (ER-, SR+) – here emphasis is placed on the person. There are three possibilities, inherent (natural talent), cultivated (e.g. artistic gaze) or socially based. Status is given to being the right kind of knower (more common in the humanities and social sciences).

Elite Code (ER+, SR+) – here emphasis is given to both specialized knowledge and being the right kind of person (fields like poetry or music provide good examples).

Relativist Code (ER-, SR-) – here legitimacy is determined neither by a specific knowledge set, nor by being particular kind of person.

When we plot the dynamic which is in play in the marketing materials used by many universities it becomes painfully obvious where the disconnect arises. Take the example of just two disciplines: chemistry and theology. Chemistry in the specialisation code would have significantly stronger epistemic relations and weaker social relations. Legitimate knowledge can come from anywhere and anyone, provided it uses established methods and builds on the current best understanding. So in chemistry, the peer review process for publication is almost never blind in terms of the identity of the author. The quality of the work is judged on its own merits. In theology the epistemic relation is far weaker and the social relation far stronger. Legitimate knowledge is evidenced by situating an argument in the context of work accepted by the community as legitimate – that is, quoting the right people in a paper shows that the argument can be acceptable. Peer review is almost always blind, because, conversely to chemistry, being the right person at the right institution carries substantial weight in the field. And therefore is far more likely, in theory, to sway the reviewer than the substance of the argument.

When we shift our gaze back to the broader context of commodification of higher education the issue at stake becomes clearer. The university's marketing department is almost always trying to 'sell' a desirable 'product'. One of the ways that functions is to make it sound like it provides an entry to an elite club. So the quality of the teaching and the value of the educational experience is strongly pushed. However, such a strategy holds a regulative discourse which casts the student as consumer, and a good consumer experience is contingent on getting the degree, not on the potentially transformative effect of education. If the student complies with the regulations and passes the required courses, the degree will be awarded. Conversely interior personal growth cannot be guaranteed. The unconscious emphasis is the image of the successful student in the graduation gown rather than the much more subtle image of the critical citizen making an impact in society (Costandius et al., 2015).

The lens of the specialization code brings the real issue into focus. The useful example of the much lauded 'research-led teaching' makes the point. Who knows what 'research-led teaching' actually is? Does this mean teaching is shaped by cutting-edge education research, or indeed much more well established education research? Does this mean the academics use their disciplinary research to inform their teaching? And if so, what does that mean? It is not at all clear that either knowledge (ER+) or a cultivated gaze (SR+) is valued at all. The net result is that the jargon laden marketing pitch which was aiming to indicate the presence of an elite code in practice, because of the regulative discourse in operation, weakens both the epistemic and the social relations tipping into a relativist code. In this space neither theologian nor chemist are happy. Indeed, as the vast majority of the disciplines sit in

the other three codes, that is, knowledge, elite or knower codes, no one is happy. The operational regulative discourse of the institution is at odds with the value system of the field of the study (regardless of what it is!).

At the same time, the institution is itself in a bind. The marketing material would suggest an elite code – 'we will offer both rigour in epistemology and provide strong social links'. There is a slippage between the theoretical or espoused value and the real or operational value (Wiener, 1988). The theoretical regulative discourse is therefore elite, but the transformation of the student is not the primary consideration. The bottom line of the budget will trump the ideal of education every single time. So the operational regulative discourse is squarely in the relativist quadrant – where neither specific knowledge nor the cultivation of a specific gaze is valued. Only the capacity to pay the rather hefty enrolment fee is valued, and frankly whether the student passes or fails is of less importance than whether they pay their tuition fees or not!

DISCOMFORT AND STRESS

It comes then as no surprise that academics (and probably all staff members) begin to suffer discomfort and stress in this environment. This operational regulative discourse essentially favours the commodification of education (Molesworth et al., 2010). This means that which can measured is more likely to be seen as a reliable 'objective' tool of quality. Again the regulative discourse of the system is at odds with the value system of the individual. If you take a highly intrinsically motivated person and tie performance appraisal to externally measured criteria you will diminish their motivation. What is valued is the numerical score on the teaching evaluation which is highly subjective and not in any meaningful way correlated to learning.

There is no doubt that the perceived stress levels of academics is increasing across the world (Pignata & Winefield, 2015). Data gathered from Australia, the United States, Canada, South Africa, the Netherlands and the United Kingdom indicate the same trend. There are a number of reasons for this including an increase in pressure to publish; higher staff to student ratios; greater competition for funding etc. Regardless of the reasons for the increased stress there is likely to be a positive correlation between stress and frailty, meaning that academic staff are less and less likely to display resilience.

Alienation from the institution occurs by virtue of the growing gap between their understanding of their role and meaning making in the environment and the rhetoric offered by management of the institution through media and marketing. Performance appraisals skew the landscape further by imposing an extrinsic reward/punishment system on individuals who tend to be intrinsically motivated. Unfortunately, the net result is not nearly as effective as one might hope. It may be possible to get rid of the less productive individuals, or perhaps to shame them into the guise of greater productivity, but the loss of productivity from the middle band who were doing many small things simply for the love of the job and care for students turns out

to be a far more erosive power. Suddenly the only things valued are those that are counted, and if one's efforts aren't being counted then the person will be less than content and likely will be less motivated to try to make positive changes (Maier & Seligman, 1976).

It is into the rather strained environment that a conversation begins to emerge around the quality of teaching at the institution. Someone begins to notice that those graduating from the university don't necessary have either the quality of gaze or the substantial body of knowledge or both which the degree they are wielding should indicate (Barnett, 2008; Biggs, 1999; Ramsden, 1992). Obviously there is a problem with the learning, which means there must be a problem with the teaching. It is here we must introduce the second dimension of LCT.

THE SEMANTIC CODE

The semantic code reveals another layer of complexity in the situation. The semantic code is a tool to distinguish complexity and Maton (2011: 26) describes semantic gravity as '*the degree to which meaning relates to context'* and it can be stronger or weaker. Semantic gravity is measure of the degree of abstraction with stronger semantic gravity indicating a lower degree of abstraction. Note the anomalous reversal of the positive and negative on this axis – this is as a result of the physical association of the word gravity – something experiencing a weaker gravitational field will be further from the Earth's surface therefore 'higher'. Hence a SG- is at the top of the axis and SG+ at the bottom. Semantic density is 'the degree to which meaning is condensed within symbols (terms, concepts, phrases, expressions, gestures, etc.)' (Maton, 2011). Semantic density is related to the degree of complexity (Blackie, 2014).

The semantic code builds directly on Bernstein's idea of hierarchical and horizontal knowledge structures within the broader field of 'scholarly or professional knowledge' (Maton, 2014). A hierarchical knowledge structure is one in which has a 'coherent, explicit, and systematically principled structure, hierarchically organised' (Bernstein, 1999). This is typified by a discipline such as chemistry where '*a thorough understanding of any aspect of chemistry rests on a massive bulk of underpinning theory, all of which must be assimilated to some degree before any real understanding can be achieved*' (Blackie, 2014: 463). In a horizontal knowledge structure there are '*a series of specialized languages each with its own specialized modes of interrogation and specialized criteria*' (Bernstein, 2000: 161). This is typified in the humanities where a specialized knowledge in gender studies may not prove particularly useful as a foundation for doing research in higher education. The discourse is different and each has its own rules of engagement. Regardless of the knowledge structure, the mapping of the semantic code will have the same dimensions. In a hierarchical knowledge structure there may be a greater diversity in the actual range experienced in both dimensions. Although this may be most immediately apparent in semantic density.

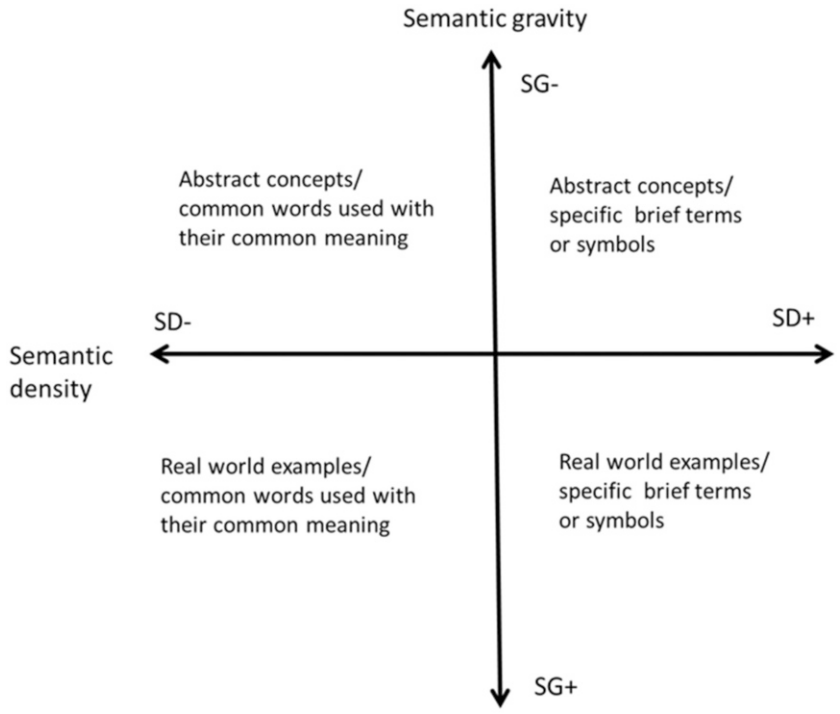

Figure 2. Semantic code

When the semantic code is explored in a little detail it proves profoundly useful. The expert in the field will be able to move deftly between all four quadrants. Within their own discipline or sub-discipline the most efficient and effective way to communicate information is likely to be situated in the top right hand corner. As a result, the capacity to use the vocabulary of that quadrant often serves as a proxy for status (Trowler & Cooper, 2002). In some cases, it is precisely this failure to illustrate their points with concrete examples that makes their argument opaque to their audience.

The student encountering a subject for the first time will be sitting in the bottom left quadrant. In terms of aiding student learning it is becoming evident that the goal of any teaching must be to help the student increase their range of both semantic density and semantic gravity as is appropriate to the level of the course. Maton (2009, 2014) and subsequently many others have found that use of 'semantic waves' makes a substantial difference. In this approach the teacher explicitly moves either from stronger to weaker and back to stronger or conversely from weaker to stronger and back to weaker. These waves can operate independently on both axes. It is crucial here that the student is inducted into the process of both unpacking and repacking the

knowledge (Maton, 2009). Too often educators favour only one of these approaches in their teaching.

There is a further element which is associated more clearly with semantic gravity. Cumulative learning requires the assimilation of abstract concepts (Maton, 2009). In the absence of cumulative learning no mastery of the subject matter can be attained. It is in this consideration that the power of the semantic code reveals itself. In many cases the attainment of sophistication in semantic density is presumed to be indicative of understanding. However, when one examines the range of semantic gravity employed in teaching or in assessment it is painfully evident that very little movement to the abstract is actually occurring (Blackie, 2014).

This is strongly demonstrated in the work of Mazur and co-workers (Crouch & Mazur, 2001; Fagen et al., 2002). Teaching physics at Harvard University, Mazur discovered that whilst students could solve problems involving complex mathematical manipulations, they failed to make connections which would indicate in this framework a weakening of semantic gravity. His resultant intervention was the combination of conceptual problems (those which are designed to test weakening semantic gravity) and peer instruction. The conversation between peers will almost certainly naturally make the semantic waves as they try to solve the problem between them. As a result, the overall performance of the class improves with respect to weakening semantic gravity (Blackie, 2014). It should be noted Mazur and co-workers do not make the explicit link to LCT.

I would therefore postulate that the greatest systemic issue with respect to learning in higher education is the poor manner in which cumulative learning is facilitated. As more work is carried out using LCT this will surely become more evident. All the useful advice given to incoming academic staff members in terms of giving timely feedback, alignment of assessments, is excellent. However, in the absence of conscious movement around the semantic gravity range it is may not have the desired impact on the overall educational process for the individual student. And in the absence of the distinction between complexity and abstraction provided by semantic density and semantic gravity respectively, all too often evidence of higher level semantic density is taken as evidence of weakening semantic gravity.

The argument developed around the semantic code so far has been very clearly linked to a very specific concept – that of the problem of aiding cumulative learning. As such we have been at a relatively strong level of semantic gravity. There has been movement in the use of semantic density in that specialised terms have been used, but they have also been explained. The exception has been in the use of any terms which are common in higher education, where semantic density has been consistently relatively strong because I have presumed that the reader of this chapter will have knowledge of these terms. However, it has been weakened at points to make sure that any terms required to follow the key argument are understood. How then does the semantic code relate to pedagogic frailty? And can we use the idea of semantic waves to help academics move from risk towards resilience?

SEMANTIC WAVES AND RESILIENCE

It is perhaps useful to recall the two cultures debate so clearly delineated by C. P. Snow (Snow, 2012). Bear in mind that in order to prove one's value within any particular knowledge paradigm, the use of weak semantic gravity and strong semantic density gives one an air of authority. In addition, in a setting where academic staff are being instructed on how to teach, there are frequently a good number of rather reluctant attendees. In such circumstances it is entirely understandable that those teaching would seek to improve their status in the one currency which usually works in academic circles; weakening semantic gravity and strengthening semantic density. The attending academic flooded with terms like pedagogy and student-centered learning which are laden with layers of meaning is likely to have one of two responses. Firstly, they fear admitting that they do not understand the terms as it will reveal that they are less expert. Secondly, if they have been exposed to too much institution speak where oftentimes meaningless or ambiguous smart sounding phrases, such as 'research-led teaching', are used, they may well mentally check out. But let us presume the best case scenario where the academic is willing to engage and do the work of learning a new vocabulary because they are excited about the possibilities for meaningful learning for their students. There are several hurdles to overcome in order to engage in the scholarship of teaching. Here the scholarship of teaching is taken to indicate using education research literature to inform practice. There is a great deal of assumed knowledge which the educational researcher simply holds which may be utterly opaque to the academic embarking on reading in this area. As a very simple example, any academic approaching this space from outside education may not realise that it is a series of at least three knowledge structures – psychological, sociological and philosophical. Each structure has its own logic, its own framework and its own vocabulary which may or may not be congruent with the others. Furthermore, each has its own ontological foundation and employs a host of different theoretical frameworks embedded in a specific epistemology.

To the seasoned educationist these distinctions are all obvious, and reliability of a study is not reduced to sample size and statistical significance. For the physical scientist or engineer embarking on this foray, it is quite likely that they have never taken a course in research methodology or epistemology, unless they have had a liberal arts style education. To them there is only one reliable method of experimentation on biological systems – and the use of a control group is indispensable. It is clear here, that making use of semantic waves to ensure that the academic becomes aware of firstly, the complexity – that is to understand, for example, that there is a significant density to use of the word 'pedagogy'; 'teaching' is not simply the use of a complex word when a simpler one will do. That pedagogy is not reducible to teaching, and yet is inextricably linked to it.

Secondly, and perhaps significantly more difficult, is to also modulate semantic gravity, so that it is clear what sorts of generalisation can be made appropriately from what kinds of information. This will have a substantial impact on the kinds of feedback which the academic will look for from a class in order to ascertain whether

cumulative learning is happening or not. There is an argument which would suggest that, in the absence of skilful modulation of semantic gravity, the course will have little lasting effect (Maton, 2009) precisely because it does not provide a scaffolding for cumulative learning.

Increasing or decreasing semantic density is relatively easy. Switching from more complex to simpler vocabulary or the reverse is a skill that many good teachers seem to employ fairly naturally. It is likely that most teachers favour one direction or the other. Encouraging a movement in both directions only really requires a level of self-awareness and a belief that modelling the movement in both directions is important (Maton, 2009). Increasing and decreasing semantic gravity is substantially more difficult. There is enough evidence from personality typing to recognize that different people really do favour either a movement from a concept to examples or from a group of examples to an abstract concept. It requires effort to move in the direction which is not one favoured by one's disposition. Nonetheless, the unpacking and repacking of concepts is necessary for cumulative learning. And this must be modelled to students if cumulative learning is to be possible (Maton, 2009). If a teaching and learning course for academics fails to model this unpacking and repacking (weak gravity – strong gravity – weak gravity) or packing and unpacking (strong gravity – weak gravity – strong gravity), such a course is unlikely to have as substantial a long term effect as the education specialists would hope.

The classic model of a research talk will be low gravity – strong gravity – low gravity. A summary is given, some examples are elaborated on and a summary of findings is given again. This has been caricatured badly too often into a summary of the sections of the talk – the sections elaborated one and then another summary of the sections. Oftentimes in a research talk the level of semantic density will not consciously be modulated at all. However, such a talk assumes that everyone in the audience enters as an expert. And the academic signals their belonging to this group by beginning in weak semantic gravity and strong semantic density. In any presentation to a group where there is mixed expertise the reverse is far more effective. One is far more likely to keep the audience invested in the presentation if one begins in strong semantic gravity and weak semantic density.

Returning to the work of Mazur and co-workers in giving physics courses to pre-med students at Harvard (Crouch & Mazur, 2001; Fagen et al., 2002), these students could solve any mathematical problem thrown at them, but had no real-world feel for the implication for the answer. In fact, their conceptual understanding of physical problems had shown no gain whatsoever. For Mazur, the answer was the combination of conceptual problems and peer instruction. But the method only works if the cumulative learning (which here is termed 'conceptual understanding') is actually addressed by the questions asked. It is far too easy to slip into asking standard textbook questions which fail to facilitate modulation in semantic gravity.

Mazur received very good course evaluations prior to probing conceptual understanding (anecdotal evidence given in a talk). No doubt that in the process of experimenting with and refining the combination of conceptual problems and peer

instruction there would have been a lowering of satisfaction. It takes time to refine such a radical shift in teaching method. In an era where performance appraisal is likely to be partially based on student evaluations of teaching there is no institutional incentive to make such changes. It is time consuming, it is personally costly, and one's performance appraisal will suffer (see also Chapter 3). It is yet another indicator that whatever the institutional rhetoric, it is often not actually backed up through the system.

CONCLUSION

The major issue then appears to be the disconnect in the value system between the academic and the institution. Bernstein would argue that unless the regulative discourse shifts, no change in the instructional discourse will have any lasting impact (Bernstein, 2003). Pedagogic frailty will continue to escalate in the face of all evidence indicating that cumulative learning and a transformative education is simply not happening.

If academics understand the disconnect which is currently driving the system and substantially contributing to stress, they will have a far greater possibility of making more strategic personal choices. Importantly, academics are not entirely silent players in the university environment. They sit in Senate, Faculty Boards and equivalent governance structures and can effect change. In the light of a strong well-constructed argument, performance appraisal systems can be modified. This requires the education of the academic community to the systemic issue at hand. It requires engagement with a real conversation around the purpose of the university and its regulative discourse. If we begin to see where the lines are really drawn, as opposed to where we think they should be drawn we automatically move into a slightly more resilient space. Once the real issues are revealed then better choices can be made about where to put our efforts. And the efforts made are more likely to effect positive change. The net result is the possible escape from a vicious cycle of frustrated effort. Of course, one should not be naïve about the impact of the regulative discourse of greater society on the institution. But it appears that the cracks in the current system are beginning to show!

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5. 'TEACHING EXCELLENCE' IN THE CONTEXT OF FRAILTY

INTRODUCTION

The global HE sector is being profoundly reshaped by global neoliberalism, driven by economic imperatives to develop 'global, entrepreneurial, corporate, commercialised universities' (Morley, 2011: 224). Within this neoliberal context policy discourses are increasingly being driven by world league tables, market competition, and the dominance of prestige culture with increasing pressure for universities to position themselves as 'world-class'. In the UK university leaders are facing ongoing demands to produce evidence that their institutions provide 'world-class' teaching, with notions of 'excellence', and competition for students framing institutional practices (Stevenson, Burke, & Whelan, 2014). Through these pressures, highly stratified systems are being crafted, with market mechanisms deployed to 'exert pressure on universities to comply with consumer demand' (Naidoo, 2003: 250). As Molesworth, Nixon and Scullion note:

> This drive to commodify the educational offering is both a top-down and bottom-up process. The Treasury, funding councils and vice-chancellors develop strategy that leads to a market focus, while many of the expanded student group arrive as fee-paying customers knowing how to 'play' markets to maximise self-interest. They are well versed in the pseudo-sovereignty status afforded them by broader consumer culture. (2009: 279)

The ways in which the pressure of the marketplace is being played out is perhaps uniquely encapsulated in how both the HE sector and individual institutions are seeking to operationalise the concept of 'excellence' in relation to both institutional practice and institutional positioning. Whilst discourses of excellence are not unique to the UK (as evidenced by the German Excellenz Initiative and the Norwegian Centres for Excellence Initiative amongst others) it is within the English HE sector that the pressures of the marketplace are perhaps most keenly, but disproportionally, being felt. Much of this pressure has coalesced around a drive to improve teaching 'excellence'.

TEACHING EXCELLENCE

Excellence is, of course, a multi-faceted concept, and it is not surprising that the term operates ambiguously, contradictorily and contentiously across the UK HE sector

I. M. Kinchin & N. E. Winstone (Eds.), Pedagogic Frailty and Resilience in the University, 63–77.

(Gunn & Fisk, 2013), whilst at the same time being frequently ill- or undefined. In 2015 the UK Higher Education Academy (the national body for enhancing learning and teaching in higher education) launched its 'Strategic Excellence Initiative for Vice-Chancellors or Principals' (Higher Education Academy, 2015) with the explicit aim of recognising and promoting 'the strategic leadership of excellence'. In its call for proposals ' to identify and share innovative practice; and to recognize and promote the strategic leadership of excellence more broadly' (2015: 1) the HEA defined excellence as vaguely as:

> the process of making improvements in teaching, learning and the student's experience within an existing domain/initiative; developing a new and different initiative (in another domain); or combining initiatives/domains to make a step change in quality.

The UK's new Teaching Excellence Framework (BIS, 2015) which 'aims to recognise and reward high quality teaching' (BIS, 2015: 12), also leaves the concept of excellence largely undefined arguing that:

> Excellence must incorporate and reflect the diversity of the sector, disciplines and missions – not all students will achieve their best within the same model of teaching; excellence is the sum of many factors – focussing on metrics gives an overview, but not the whole picture; perceptions of excellence vary between students, institutions and employers. (BIS, 2015: 21)

Whilst Gunn and Fisk (2013: 19) note the definitions remain, in part, provisional because:

> there is actually little consensus in the literature concerning whether the focus is on teaching excellence or teacher excellence and what is meant by excellent learning when considering teaching/er excellence.

it is ironic that the TEF, when it is implemented, will include a set of highly explicit measures designed to measure a concept that is so problematic to define. It is little wonder therefore that the concept has already been eschewed by many academics (Skelton, 2004, Stevenson, Burke, & Whelan, 2014). Despite this as Madriaga and Morley (2016: 166) argue:

> there remains a steady effort to make an intangible, ambiguous, multifaceted notion of teaching excellence incarnate.

Although, at the time of writing, the final decisions on how the TEF will be implemented are still subject to a technical consultation it is likely that, in the initial phase at least, the focus will be on three sets of metric linked to teaching quality – student satisfaction, retention and employment. Whilst assessment will be done at an institutional level these outcomes will link directly back to courses taught by individual academics. Thus individual performance will, in effect, be central to the assessment.

The individualisation of performance is not a new concept in UK higher education of course. The systematic assessment of research, as opposed to teaching, has a thirty year history. In the most recent research assessment exercise (the Research Excellence Framework 2014), the outputs from over 52,000 academic staff from 154 UK universities were submitted for assessment, comprising 191,150 journal papers, book chapters, books, reports or other artifacts, as well as 6,975 impact case studies, describing how their research has benefited 'the economy, society, culture, public policy or services, health, the environment or quality of life, beyond academia' (HEFCE, 2012: 48). Although assessment operates at an institutional level, and the positioning of research performance is done at an institutional level, it is the calibre of the individual academic's research outputs, and the impact of their research, which remains central to the assessment. This has resulted in significant pressure placed on individual staff to perform 'excellence' in particular ways or face the consequences. For example, as reported by the Times Higher Education Supplement (Jump, 2013), the University of Leicester sent a memo to all academic staff in 2013 indicating that:

> the position of all staff eligible for the REF but not submitted will be reviewed. Those who cannot demonstrate extenuating circumstances will have two options. Where a vacancy exists and they can demonstrate "teaching excellence", they will be able to transfer to a teaching-only contract. Alternatively, they may continue on a teaching and research contract subject to meeting "realistic" performance targets within a year. If they fail to do so, "the normal consequence would be dismissal on the ground of unsatisfactory performance." (Jump, 2013)

As the THES article evidences, all academics are now expected to perform in ways which can be measured as 'excellent' either in terms of their research, their teaching or, ideally, both. This is despite the fact that the concept of excellence is a slippery one: 'intangible, ambiguous, multifaceted (Madriaga & Morley, 2016: 166). Such pressures on academics - in this case to 'publish *or* be damned' (to bastardise the 1st Duke of Wellington) are not, however, exclusive to research. Although the TEF is not yet in place, the performance measurement of teaching has already become part of the DNA of universities including, insidiously, the introduction of performance measures to regulate academic behaviour in the guise of enhancing performance. Rosalind Gill, for example, (2014, cited in Burke, Stevenson, & Whelan, 2016) describes one particular HE institution in which any academic who is rated poorly by her or his students will be subjected to a series of formalised disciplinary procedures. Such responses are heightened if an individual module or course is rated poorly as part of the annual National Student Survey (NSS) sent out to all final year undergraduate students since 2005. The results of the NSS are made publicly available thus enabling students to compare results across different universities when making choices about where to study. The NSS therefore has, or at least is institutionally perceived as having, implications for recruitment (Temple, Callender, Grove, & Kersh, 2014). However, as Sabri has argued, the NSS has gained a level of

significance that 'outweighs its validity or intended use' (2013: n.p.). In her research Sabri evidences the ways in which academics fear the NSS. She describes how:

> In the immediate aftermath of the publication of results one manager saw his role, as nothing to do with 'the actual results' which 'comes later' but rather in dealing with the 'terrible weight' and emotion that comes with receiving the NSS results. (Sabri, 2013: n.p.)

What is significant here, of course, is that almost invariably those tasked with reviewing NSS results and managing 'poor performance' are senior managers who no longer teach. Consequently, as Sabri notes:

> As NSS results become integrated with other policy instruments – for example as performance targets for individual academics or league table positions for institutions – they acquire the power to confer or withhold professional esteem and bargaining power in the context of unequal power relations between managers and academics. (2013: n.p.)

This performative turn has also been criticised by Gourlay for implicitly locating the key locus of student learning in the face-to-face classroom and in full control of the lecturer which will result in an underscoring of traditional assumptions about how students interact with ideas, texts and knowledge (Gourlay, 2012; Gourlay & Oliver, 2013). In this framework, higher education is considered as 'amenable to performance measures' (Skelton, 2007: 18) and is 'symptomatic of an ever-present contemporary desire to measure higher education performance by means of systematic criteria and standardised practices' (Little et al., 2007: 3). Under such circumstances, teaching in higher education is reduced to the language of the market, including 'delivery', 'style' and 'distinctiveness' and to notions of consumer demand and satisfaction. Learning is 'delivered' through different educational packages provided by institutions that are positioned as competitors in the business of higher education (Williams, 2013). The commodification of teaching and learning is not just at the behest of institutional managers however. As Entwistle (1997: 4) noted as far back as 1997:

> much of our current teaching and assessment seems to induce a passive, reproductive form of learning which is contrary to the aims of the teachers themselves (cited in Molesworth et al., 2009: 282).

Regardless of the driver for such forms of teaching, however, as Fitzmaurice (2010) argues, following the rules, or administering a set of techniques, is not teaching. Rather:

> Teaching…is relational and involves recognising and dealing with problematic ethical issues as part of supporting student learning. (2010: 46)

Moreover, as Gunn and Fisk (2013: 47) argue, even if, or where, the concept of excellence is defined and framed, it would still be hard for institutional teams, individual academics, and students 'to get a sense of the qualitative and quantitative

differences between university teaching that is *satisfactory* and teaching that is *excellent*'. This does not stop institutions seeking to do so however. Indeed institutional or student-led teaching excellence awards are now near-ubiquitous across the UK sector, to the extent that the idea of academics being excellent in their teaching has already become a near 'regime of truth' (Foucault, 1991) simply because it can be rewarded as such. However, as Madriaga and Morley point out:

> It is one thing to say that teaching excellence exists within the institution. It is another matter to say that teaching excellence is crystallised by an annual ritual of a student-led teaching awards scheme that divides lecturers into 'sheep and goats.' (2016: 173)

There are of course those who caution against a root and branch rejection of the notion of teaching excellence since, as Skelton reminds us, it can offer an important opportunity to (re)examine the purpose of teaching in higher education and, perhaps more importantly 'represents a potent force to drive us forward in our efforts to understand and improve what we do' (2009: 107). Our concern, however, is not that we as academics should not seek to improve what we do, but that the pressure to do so is being laid so firmly on the shoulders of *individual* academics who are in danger of becoming the sacrificial goats of higher education. Moreover, it is likely that these pressures are experienced differently as a result of the ongoing stratification of the HE sector.

PEDAGOGIC STRATIFICATION

Within this increasingly stratified higher education marketplace, and among an expanding diversity of higher education providers, little attention has been paid to how processes of institutional stratification may intersect with approaches to teaching and learning. Our research uses the term 'pedagogic stratification' to explore this relationship, to analyse how institutional type may relate to different conceptions of 'teaching excellence' and 'the student experience' adopted across the sector. Through this focus on 'pedagogic stratification' we aimed to attend to the diversity of teaching and learning approaches across the sector, while simultaneously exploring how particular pedagogical approaches might be enabled or constrained by institutional 'type', as well as differentiation/ stratification in terms of subject/ disciplinary area. Our research project was funded by the Higher Education Academy as part of its open call that looked at 'The impact of the shifting UK HE landscape on learning and teaching'. In our broader analysis (reported in Stevenson, Burke, & Whelan, 2014), we echoed findings from other researchers, namely that discourses of teaching 'excellence' have become hegemonic and are couched largely in a performative framework (Stevenson, Burke, & Whelan, 2014). In doing so we critiqued performative modes of assessing teaching in this way for 'potentially preclud[ing] deeper consideration of pedagogical issues and detach[ing] pedagogy from issues of equity and inclusion (Stevenson, Burke, & Whelan, 2014: 5). In our

further analysis (Burke, Stevenson, & Whelan, 2016) we have called for a critical re/conceptualisation of 'teaching excellence' arguing that any consideration of teaching excellence should demand deep connections to be made with equity.

In this chapter we explore whether, and to what extent the pressures on institutions to be recognised as 'excellent' and offering teaching 'excellence' are being played out differently across different institutions. In particular we are interested in how the pressure to be 'excellent' is being felt by academics and how these pressures may, in turn be shaping their pedagogic practice. We focus here on the 'risks' facing teaching staff which might threaten their pedagogic practices and render them academically frail as well as the enabling and protective factors which strengthen academic resilience and enable teaching staff to resist the pressures outlined above. In particular we are interested in pedagogic frailty (Kinchin, 2016) that is when and if teaching academics:

> find the cumulative pressures of academia eventually inhibiting their capacity to change practice in response to an evolving teaching environment, leading them to adopt what they might consider a 'safe' and sustainable pedagogic approach. (Kinchin, Alpay, Curtis, Franklin, Rivers, & Winstone, 2016: 2)

Table 1. Institutional pseudonyms and characteristics

Pseudonym	*Characteristics*
Historic	Research intensive; very high ranking in league tables[1] and NSS; high ranking in Research Assessment Exercise (RAE); 25% privately educated[2;] less than 1% former free school meals; one of the highest completion rates; scores very high for 'good honours'; over 80% 'graduate prospects';[3] suburban campus; middle third for size.
North Western	Teaching-led, campus-based, new university; mixed NSS results; mid-league table ranking; low ranking in RAE; over 60% 'graduate prospects; almost 10% former free school meals; less than 2% privately educated; scores low for 'good honours'.
Coastal	Research intensive; very high ranking in league tables & NSS; high ranking in RAE; >25% privately educated; <1% former free school meals; scores very high for 'good honours'; >70% 'graduate prospects; in middle third for size; more than one campus.
Industrial City	Research-led; high ranking in league tables and NSS; high ranking in RAE; over 10% privately educated; 3% former free school meals; scores high for 'good honours'; under 70% 'graduate prospects; in middle third for size; city campus.
Cosmopolitan	Teaching-led ; very low ranking in league tables; low NSS results; mid-low ranking in RAE; <3% privately educated; >20% former free school meals; scores very low for 'good honours'; just over 50% 'graduate prospects; in top third for size; multiple campuses.

Table 1. (Continued)

Pseudonym	*Characteristics*
Specialist	Specialist teaching-led provider; mid-high NSS; high ranking in RAE; high-level completion rates; scores low-medium for 'good honours'; under 60% graduate prospects; in bottom third for size; single campus.
Modern	Very high results in NSS; Mid- high ranking in RAE; scores very low for 'good honours'; in top third for size
Southern City	Teaching-led; in top third ranking in league tables; mid-point in NSS; almost 30% privately educated; <3% former free school meals; scores medium-high for 'good honours'; under 70% graduate prospects; multiple campuses; in middle third for size.
Suburban	In bottom 20% ranking in league tables; low NSS results; mid-high ranking in RAE; less than 5% privately educated; almost 10%; former free school meals; scores low-medium for 'good honours'; <60% graduate prospects; suburban campus; in bottom third for size.
South Western	Teaching-led; very high results in NSS; low ranking in RAE; under 50% graduate prospects; scores low for 'good honours'; in bottom third for size; single campus.
Cathedral	Mid-high ranking in NSS: Mid-low ranking in RAE; mid-point in league tables; scores medium for 'good honours'; less than 4% privately educated; less than 3% former free school meals; under 60% graduate prospects; bottom third for size.

(Reproduced from Stevenson, Burke, & Whelan, 2014. 1 From the Guardian University rankings, 2 From The Sutton Trust, 3 From the Complete University Guide)

METHODOLOGY

This chapter presents an analysis of the responses to a qualitative survey sent out to teaching staff in each of the 11 institutions (see Table 1 for institutional pseudonyms and characteristics). The vice-chancellors of each institution gave permission for the research to be undertaken and ethical approval was given by both the Higher Education Academy and the host institution of the principal investigator. The institutions that took part were provided with an information sheet and consent form which provided ethical guidelines. The survey was purposefully qualitative with a series of open ended questions exploring how institutional positioning and conceptualisations of excellence were being played out at 'grassroots' level, as well as identifying any dis/continuities between institutional approaches and pedagogic practices. 358 staff responded providing over 175,000 words of data. The responses were read and re-read, initially analysed by institution, then the discourse strands and discourse fragments were analysed across institutions to draw out key findings. The full survey questions and overarching findings are outlined in Stevenson, Burke and Whelan (2014). Here we explore responses to two specific questions:

1. How would you describe ‘excellence in teaching’?
2. What if anything prevents or hinders you from developing ‘excellence’ in your teaching?

All data have been anonymised and pseudonyms have been used throughout.

DEFINITIONS OF EXCELLENCE

Across the data, excellence was dismissed, by some academics, as either too complex a concept to be defined (‘one size doesn’t fit all and teaching is often a collaborative venture - the word ‘excellence’ doesn’t really fit for me’), or it was rejected outright as a ‘meaningless term’. The rejection of the concept was significantly more notable across the higher-ranking, research-intensive universities where it was eschewed as an empty concept; ‘one of those meaningless expressions that is bandied about in staff meetings’, ‘a vacuous, generic and highly subjective (and therefore meaningless) political catchphrase’. In the mid-ranking or more teaching focussed universities, however, excellence was more likely to be rejected as a concept because of how it was being deployed to regulate staff performance or behaviour:

> This is a phrase from managerialist discourse which is used as a mechanism for controlling pedagogic practice through standardisation and commodification. It is also a hollow phrase which is used for branding and marketing purposes which signifies little or nothing about the actual quality of teaching (Cathedral, female, lecturer, Arts and Humanities, less than five years in HE).

Where excellence was defined it was, mostly, related to the micro-practices of teaching, in particular the building of strong, meaningful and (for some) caring relationships with students, enabling them, through critical pedagogies, to achieve their potential. Critically, enabling excellence in teaching was also viewed as a partnership between staff and students (‘a relationship’, ‘a two-way thing’, ‘it’s not a one-sided thing’, ‘students need to also take responsibility for their learning’, ‘[it’s about] enabling students to learn by themselves’). Amongst the more research intensive universities, however, teaching excellence also meant teaching being research informed:

> Research-led (where possible), informed of current debates and ideas in the field, engaging and responsive to student needs (Coastal, female, lecturer, Arts and Humanities, more than five years in HE).

> Teaching by experts in their field, with a high level of student engagement in their learning, leading to excellent outputs in the form of very competent and inspiring student work (Coastal, female, lecturer, Social Sciences, more than ten years in HE).

> The university is very much research-driven so teaching tends to be built around research at the university (Historic, male, senior lecturer, STEM subjects, more than ten years in HE).

This is not to say of course that only academics in the research-intensive universities referred to the importance of research, or research informed teaching, but it was much more evident in these academics' responses. In contrast, across the teaching-focussed institutions the language used to describe excellence or teaching excellence was different. Academics at North Western for example described it as: 'effective and critical transmission of information'; 'being able to transfer knowledge in an easy to understand and interesting way', 'setting appropriate and challenging learning objectives which can be met using a variety of learning styles by all pupils', and 'surpassing expectations against agreed targets/outcomes'. The regulation and measurement of teaching was clearly more evident across these academics' responses. Across all accounts, however, excellence was rarely related to discourses of institutional distinctiveness, league tables or market positioning - in contrast to how it was described by, for example, vice-chancellors or heads of teaching and learning units (Burke, Stevenson, &Whelan, 2015). Rather excellence was, primarily, described by teaching academics in ways that were inward-facing and focussed on the academics' own local, and localised, practices.

THREATS TO EXCELLENCE

The threats to achieving teaching excellence were described in similar ways across all of the lecturers' accounts. These related to lack of time, financial constraints, excessive administration and bureaucracy, and pedagogic pressures, as perhaps exemplified by this quote:

> (1) Overload. High teaching loads & administrative requirements leave little time to think & be creative. (2) 'Efficiency' savings. Large modules shared by multiple degree programmes and taught by several staff…students who are timetabled 9am–5pm without a break…is that really going to help them learn anything? That's not the fault of the timetabling team…It's a function of 'efficiencies' in curriculum organisation, and a concomitant shift of control over (organisation of) the curriculum from academic staff to administrators or administrative systems (South Western, female, senior lecturer, STEM subjects, more than ten years in HE).

Lack of time was a constant refrain across the academics' answers, amongst both newer staff and those who had taught for longer; however, it was significantly more notable across the accounts given by lecturers in the teaching-focussed universities – in particular at Cosmopolitan and North Western:

> Not enough time. For example, we were asked to revise an entire undergraduate programme for delivery in 2012–2013. A decision could only have been taken by senior managers with no real interest in the pressure on staff who are committed to an education of quality (Cosmopolitan, male, senior lecturer, Arts and Humanities, more than ten years in HE).

> Not having nearly enough time to properly prepare seminars and especially lectures. Having only one and a half hours to research and write a one hour lecture, and supplement it with PowerPoint and other [online] material, is ridiculous and the biggest cause of extreme stress and overwork I have ever experienced (Cosmopolitan, no demographic information given).

> Time!!! There is much I want to explore and develop to further develop excellence in my teaching. I would also argue that linked to this is cost – if funding were available that could be used to buy me time (North Western, no demographic information given).

Time constraints included a lack of time for planning including for teaching; lack of time to develop new resources; lack of time to work in collaboration. In addition academics across all the universities referred to a lack of time to undertake research:

> The double pressure of being required to achieve outstanding results in both teaching AND research…I feel unsupported in these things. I feel that the overall policies of the University encourage my students to treat me as a servant, not a respected & very experienced expert professional (Historic University, female, senior lecturer, Arts and Humanities, more than ten years in HE).

Across these accounts, calls for time were echoed by a desire for intellectual space: 'I need space to think', 'space for networking and engagement with new ideas'; 'to have workloads that allow reflection and discussion with peers'.

Financial constraints were also described by academics across all the different institutions. These related to shortages of equipment and staff – resulting in large class sizes – poorly maintained or inadequate buildings and equipment. Again, these complaints were more noticeable across the teaching-focussed institutions. Excessive and burdensome administration was a more shared complaint. Issues raised included excessive (and 'pointless') bureaucracy, constant restructuring, and high levels of low-level administration including 'an overload of silly paperwork'. Much of the blame for this was located firmly with 'managers' – a generic term used by those interviewed to describe, variously, line managers, heads of departments, academic developers and those involved in institutional quality assurance processes. This was a particularly strong refrain at Cathedral:

> The processes at universities are ridiculously slow and a century out of date. This is something that is imposed upon them, but a more confident institution would challenge them. As an example, the procedure to put a new masters in place only happens twice a year, involves a mountain of paperwork within which the actual course details are a small percentage and there are no other opportunities if the Quality Office etc. are busy (Cathedral, male, senior lecturer, Social Sciences, more than ten years in HE).

The final threat to the achievement of teaching excellence related to, variously: staff having to operate as 'generic' teachers, rapid marking turn around times, having

to provide what was regarded as extensive and burdensome feedback, and the standardisation of teaching practices:

> Pressure from the QAA[1] and the University hierarchy stops a 'common sense' approach to teaching/assessment in favour of one-size-fits-all rule based systems. University pressure to do research and departmental administration takes time away from teaching (Industrial City, male, lecturer, STEM subjects, over ten years in HE).

> I feel the pressure of having too many different subjects to teach. I would much rather stick to my areas of expertise when teaching, but due to reduced staff numbers I am very frequently required to teach subjects that I am not fully comfortable with (North Western, female, senior lecturer, Health and Social Care, 6–10 years in teaching).

As Rowland (2006) has noted, the pressures of higher education, including through the forces of marketisation have led to a fragmentation of the 'academic project' which, in turn, has profound implications for academic identity and works against the academic tradition of a 'love for the subject'. In response to such sustained pressures academics may elect to focus on their own specialisms and retreat from broader academic enquiry. Moreover as Rowland (2007: 120) also notes academic developers could, but often do not, play an important role in 'uphold[ing] academic values at a time when these are under threat, rather than merely enhancing 'processes' of student learning, regardless of their purposes'.

Whilst frustrations with 'managers' were common across all accounts, the combined pressures as outlined above were experienced differently, leading to four distinct, although overlapping and shifting, positions resulting in differing levels of pedagogic resilience and frailty.

RESILIENCE AND FRAILTY

Position one is taken by those academics, primarily in the research-intensive universities, for whom the concept of excellence is easily and readily integrated with their existent identity as 'world-class academics';

> Teaching excellence is…teaching by experts in their field, with a high level of student engagement in their learning, leading to excellent outputs in the form of very competent and inspiring student work (Coastal, male, lecturer, Arts and Humanities, less than a year in HE).

> At a very basic (and over-simplistic) level it is based on a teaching/research based symbiosis, where the teacher also undertakes scholarship in their teaching to make it responsive and consistently relevant to the needs of students (Industrial City, male, lecturer, STEM subjects, more than ten years in HE).

The second position, found across the sector, is adopted by those academics who eschew the concept of excellence in its entirety.

> There is no such thing as 'excellence'. Everything is excellent these days so the term is stripped of meaning. The ordinary has become excellent. Where one sees the term excellence, be aware of management inspired mediocrity (Coastal, gender unknown, senior lecturer, Arts and Humanities, over five years in HE).

> A vacuous, generic and highly subjective (and therefore meaningless) political catchphrase (Specialist, no demographic information given).

Both of these positions are taken by, what we have elected to term, pedagogically resilient academics, that is academics who are able to maintain stability in both their academic identities and their academic practices.

Position three, is more frequently but not exclusively taken by academics in the newer universities, and sees staff seeking to perform internally according to managerialist demands whilst simultaneously attempting to maintain a more authentic academic identity: these staff might be regarded as both academically resilient and pedagogically frail.

> It is the task of teaching staff to hold to and improve their work without being distracted by too many reactive projects (Southern City, male, senior lecturer, Social Sciences, more than ten years in HE).

> Excellence in teaching involves 'pedagogic tact'. The act of teaching and learning is a relationship between human beings…there is a great deal of pressure to meet 'standards' and 'satisfaction' that takes a great deal of energy away from thinking about the important issues of learning and engaging minds. While I contest standards, as such, there is energy wasted in trying to justify myself…Students are my priority, and I will pour my soul into working with them. At times (many times), my soul feels drained (Suburban, female, senior lecturer, Social Sciences, more than ten years in HE).

> If, instead of worrying so much about how to improve NSS results, we focused on creating an amazing course, the NSS results would naturally follow. I am forever hearing the question "how can we improve our NSS results", but never hear the question "how can we improve the quality of our provision" – this require two different approaches (Cosmopolitan, male, lecturer, Social Sciences, less than five years in HE).

A strong refrain across their accounts was, perhaps unsurprisingly therefore, for 'freedom': 'freedom to design sessions as appropriate'; 'freedom to design and experiment in learning and teaching'; 'academic freedom'; 'complete freedom in teaching according to how your own research evolves'. Additionally staff called for safe spaces within which such activities could take place: 'a safe, shared space for

the exchange of ideas'; 'safe spaces for the promotion of original thinking, and the development of independent learning strategies'.

The final position is largely taken by younger members of staff with heavy teaching loads, most often working in the newer universities, who have a substantially weaker sense of their identity as academics. These 'pedagogically frail' staff were, understandably, less able to resist managerialist demands and responded by adopting safer, more sustainable approaches to pedagogy. They spoke of being 'badgered', 'hectored', 'pressed', 'pressured', and 'pressurised' as well as being constrained in their desires to teach in more innovative ways:

> [The problem is] not being able to use innovative (and sometimes experimental) techniques because of constraints of systems… There is both a 'systems' block, where it's so much hassle to organise the facilities you need, that it becomes easier to just 'do what we've always done'. There is also an attitudinal problem; people are scared to doing something new, as it will involve more preparation and effort (Cosmopolitan, male, lecturer, Social Sciences, less than five years in HE).

> I often have no idea what I am teaching until the week before the start of term - this leads to no time to update reading lists or anything else…the only sensible strategy for me as an employee is to react to the signals sent by my employer and they tell me to teach to an adequate level but no better than that (North Western, no demographic information given).

> Recent changes involving too much focus on 'student's experience' is changing teaching and learning from a comprehensive set of techniques and approaches directed to generate great professionals to a set of techniques and approaches directed to generate 'happy clients' (Cosmopolitan, female, lecturer, Health and Social Care, less than five years in HE).

It is important for us to note that in presenting these different positions we are not intending to present deficit accounts of younger academics or of the newer or more teaching-focussed universities; rather our intention is to highlight here that the ability to adopt certain identity positions intersects with institutional privileges. These privileges in turn relate to the institutional stratification of the higher education sector in England. Our concern is that such managerialist approaches as well as the broader pressures experienced by these academics, can render teaching technicist and performative rather than critical and transformative. This has implications for students' pedagogic experiences since different sorts of students are, largely, seen in different sorts of English universities, further compounding the pedagogic stratification of English higher education.

FINAL THOUGHTS

Since undertaking the research presented in this chapter, the pressure on the sector to evidence excellence in teaching has become more pronounced. Although the

TEF was looming on the horizon at the point the data were collected the metrics to be used to measure excellence had not yet been defined. As we write now the announcement has been made that, following assessment, institutions will be badged as having achieved a bronze, silver or gold standard. Those who perform well will be able to charge higher fees, whilst those who perform poorly run the risk, at best of being perceived as of poorer quality than their higher-fee charging competitors or, at worst, of being squeezed out of the market. The pressures on academics to perform in ways which will enable their institutions to be ranked as 'excellence' can only, we suggest, get worse.

NOTE

[1] Quality Assurance Agency (UK).

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6. THE ROLE OF VALUES IN HIGHER EDUCATION

The Fluctuations of Pedagogic Frailty

INTRODUCTION

The values that an individual brings into a university that can help to explain pedagogic approaches begin being formed and adapted from the moment we are born. Each individual has a set of personal values that are informed and then further influenced by a series of unique experiences that are not replicable. As careers develop the personal values an individual has will be influenced, and in some instances significantly altered by the discipline that each has either studied or worked within. This may lead to significant challenge to the personal values that have previously guided an individual's actions. This can lead to moments, or perhaps longer periods of frailty as an individual either adapts or finds appropriate compromises. The context is clearly therefore important. In the UK for example, the narrowing down towards a single disciplinary lens begins when students in schools make selections about subjects to study, and by the time they reach University most are involved in a single discipline. This becomes even more focussed during a PhD. Other educational models however exist and exert a broader disciplinary influence for longer, for example in the USA where students take a broader range of subjects initially at university. The strength of the disciplinary lens therefore is potentially variable. There is subsequently a complex interplay between the personal values an individual has developed since birth and the influence of particular experiences, such as the discipline of study. This chapter examines the importance of values for understanding our approach to learning and teaching and how frailty influences how these adapt drawing on experiences working with academic staff in the UK and a range of veterinary medicine teachers in the USA.

PERSONAL AND SOCIAL VALUES

According to Inlow (1972) these values are highly significant because they form the basis for explaining and understanding the actions that we take as we fulfil our duties, in this case within higher education institutions. It was Breakwell (1986) who posited that the establishment of these values are influenced by our engagement with a variety of groups that each person finds herself or himself

I. M. Kinchin & N. E. Winstone (Eds.), Pedagogic Frailty and Resilience in the University, 79–91.

interacting with. For those in academia, many of whom come through a significant period of study within a particular field, either in practice or through study (such as a doctorate), there is a process of socialisation through which a set of values are likely to have been imparted (Smith, 2010). It is therefore within this process of socialisation that identities are likely to be framed and that the personal values that have already been formed are likely to shift and be adapted. As suggested previously (Kinchin, 2016), it is likely that within this process of socialisation that more predominant discourses emanate from a complex range of areas and social groups. The result may be a challenge to how an individual acts and the potential reshaping of the values that an individual has brought into a discipline. These challenges would seem to be most likely to exist at the outset of a career, where the social values brought by groups or institutions are less known and often encountered for the first time.

The discourses around the values held by particular groups are however complex and how an individual responds to them is far from uniform. They are influenced by the context within which the socialisation occurs. While they may come from the discipline, this may also be influenced by a shifting balance between say teaching, research and administration. The discourses may differ therefore at each institution where these balances alter between those institutions that have a greater research focus than those with more of a teaching focus. In fact even within each faculty or department there can be variation with particular groups focussing on research and others on teaching and many of these are often subtle and part of a 'hidden curriculum' (Snyder, 1971). The responses of each individual may adapt as a consequence and a uniform approach or discernible pattern is extremely unlikely (Lygo-Baker, 2006). The unique personal values that an individual arrives with will come into contact with the values that are both explicit and implicit within the new environment. The values that reside within the institution may challenge the personal values held, leading to potential conflict (Breakwell, 1986) and a potential frailty (Kinchin, 2016). The response may be that an individual adapts her or his own approach, incorporating the more dominant social values of the group they find themselves working within. For some this may however provide a significant challenge and Harre (1998) suggests that this may indeed lead to different selves being exhibited. Although the individual may have a core set of values that inform the overall actions they take, it may be that in certain circumstances these are supressed and an individual acts in ways that enable them to navigate a way through the challenges presented when otherwise their personal values may be exposed and questioned. As such, they take on an adapted self; becoming or exhibiting a set of actions in one role that would not be representative of the values they may display in a different role, in a different setting. So in other words, within an institution the values that inform and direct the 'teacher' self may differ from those that do so for the 'departmental' self or the self that is a 'volleyball coach' outside the institution.

INITIAL ASSUMPTIONS

It may appear logical that for a relatively inexperienced academic faced by the prospect of establishing herself in a new role she is likely to try to find ways to overcome any perceived vulnerability; to seek means that enable her to get over aspects she feels inhibit her capacity to act. Anyone working on an academic development programme will be aware of the understandable request for "tips" to make the initial experience of teaching feel less daunting. Recognising that knowledge about the role that the person has taken on is somewhat limited, it is quite reasonable to expect that an individual will seek answers: ways of knowing about a role from those who appear to have greater experience. For many new academic staff this will be the first experience of having responsibility for the learning of others as a teacher. Faced by significant uncertainty, it is likely that people respond by seeking tips and techniques that provide solutions to perceived areas of weakness. Whilst apparently logical when uncertainty is faced, the suggestion has been made that this may actually result in a cycle of non-learning (Kinchin, Lygo-Baker, & Hay, 2008) and indeed may call into question the role of those supporting the enhancement of understanding about the role of academic development. Subsequently, although the tips and techniques may appear to alleviate initial anxieties, if these disrupt the personal values significantly this may ultimately lead to rejection. It will undoubtedly lead to significant discomfort and what appear to be solutions may actually develop routines that are ultimately less valuable to the development of thinking about how the role can be enacted.

It may therefore appear a reasonable assumption that frailty is something most likely to be encountered at the outset of a career. The increasingly volatile habitat an academic encounters is likely to pose a series of problems and the new academic is likely to have less experience to utilise in order to respond (Brew, 2010). Whilst working with veterinary teaching staff in the USA it became apparent that such assumptions may actually mask some important variations. Discussing the notion of frailty with both residents (qualified veterinarians who are specialising but new to teaching) and more experienced colleagues all initially recognised the term. However, for them initially this related to their work as clinicians, not as teachers. Mostly this was in the context of owners bringing animals to them who were in need of treatment and therefore often 'frail'. The majority of these were older animals; the frailty corresponding to a lack of appropriate functioning of part or parts of the body. The veterinarians noted that however frailty can also be recognised in younger animals, who also often require attention, particular at or just after birth. Initially the link to academic frailty was not obvious. However, through conversation this evolved to suggest alternative interpretations which may prove to be insightful. The conversation considered how this elliptical view of frailty within the life of an animal that they work with may also be applied within the pedagogical frame.

Frailty at the outset of a career appears to respond to the likely uncertainties of being in areas where not all the answers are clear, as suggested above. Experience cannot be called upon to solve all the situations that are faced as a consequence. This is to be expected and may help to explain how the values that have helped to shape an individual, whilst evolving through periods of academic study, become influenced and adapted more sharply at the beginning of an academic career. Whilst values will exist they are also likely to be more pliable as an individual seeks to find a position within a university and more importantly within an actual department or faculty that causes them less problems and that they are comfortable with. Experience working with newer academics has demonstrated that they are often uncertain because of the complexity of their new position (Jones et al., 2015). There are no clear generalizable rules over this but evidence suggests that individuals are attempting to engage with a variety of discourses (Lygo-Baker et al., 2015). These relate to the administrative elements of the role, becoming more familiar with the quality assurance and expectations of an institution, the discipline and for many a range of professional bodies. The newer academic may also be coming to terms with a realisation that whilst they bring with them a depth of knowledge of a particular component of a discipline, often through a recent doctoral study, they are surrounded by others with a depth of knowledge that is likely to be far greater than theirs. As they enter, excited at the prospect of furthering the knowledge of the discipline, extending the boundaries by asking and forming new questions; they encounter according to Rowland (2002) greater fragmentation of the disciplines than ever before.

This fragmentation can undermine further the personal values that have provided a basis for actions to date and that have helped an individual experience success. In addition, in the majority of positions the new academic is expected to teach and is confronted with an entirely new set of discourses, usually formed around prior and accepted knowledge within the teaching of a discipline. These aspects combined can cause an instability and a range of new ‘social’ values (Breakwell, 1986) that may disrupt the personal unique values that each new academic comes to their role with. This was found to be the case with trainees in human and veterinary medicine (Lygo-Baker et al., 2015) where the new academic staff noted that whilst the broad narratives were familiar, the actual articulation of these was framed in a set of discourses influenced by contextual factors based on actions that were not always familiar or in line with the expectations and experiences of the staff. This can create a ‘culture shock’ (Ward et al., 2001), presenting challenges and leaving people feeling uncertain, vulnerable and therefore frail.

Reflecting further on this previous work undertaken with veterinary residents in the United States I am further struck by some overlap between what was originally witnessed and the notions being discussed with more experienced practitioners discussing frailty. After spending time observing these newly qualified staff, many of whom were taking responsibility for clinical decisions and at the same time for the teaching of students, we had identified a series of dynamics that appeared to be useful in explaining how values were being challenged or adapted. Thinking back

the initial expectation was that the trainees were seen to be, at the outset of their new role, frail in terms of both the clinical knowledge and even more in terms of their teaching roles. Through the research undertaken (Lygo-Baker et al., 2015) we had identified four dynamics that helped to explain the journey that the residents were outlining as they aspired to become successful clinical teachers. These are represented within Figure 1. First these new faculty identified themselves as being novices who wanted to move towards being identified as experts. They felt very much that they were individuals who had to demonstrate their worth. They believed that the experienced clinical teachers were able to collaborate across the various roles and functions (for example, oncology to dermatology) which they felt less able to do. As a consequence, they experienced uncertainty. They believed that with time they would continue to gain confidence. However, they focussed initially almost exclusively on their own role and found it difficult to draw across from different clinical ideas and areas.

In further discussions with these staff they described how they sought to develop from the starting positions that they identified towards an alternative position they believed their more experienced colleagues occupied. However, it became apparent that the journey between the extremes identified was not uniform. Whilst there was a general tendency of movement towards one end of the binary, the movement was not continuous in one direction; there were fluctuations. The initial assumption had been that the movement was away from positions that would be defined as exhibiting greater frailty towards those at the opposite (the top circles in Figure 1) where people were anticipated to profess greater resilience. This journey, we deduced from the research, was influenced by a process of socialisation (Smith, 2010). This related to the values that were drawn from the institution and the faculty itself and combined with the identity of the discipline or role people were involved within. These created a series of social values that potentially enabled people to become more adaptable and more able to sustain their actions. As the individuals spent longer in the role the expectation was that any frailties experienced at the outset would be reduced.

As the academic becomes more experienced the friction felt between personal and social values would be expected to reduce. Through a process of socialisation into the faculty there is likely to be a reduction in the differences as individuals make decisions about where they are uncomfortable and how willing they are to compromise their own personal values and allow the social values to take precedence. It may appear logical to expect therefore that the initial frailty experienced within the first parts of an academic career would slowly become resolved. However, having spent time within academia and observed how people act and where they experience discomfort there may be an alternative interpretation. A sense of frailty may indeed return as the academic becomes more experienced and this began to emerge in discussions with the experienced veterinary teachers. The more experienced clinicians described how changes brought about by political changes nationally and locally disrupted their sense of resilience. In addition, the shift in behaviours of learners, who they

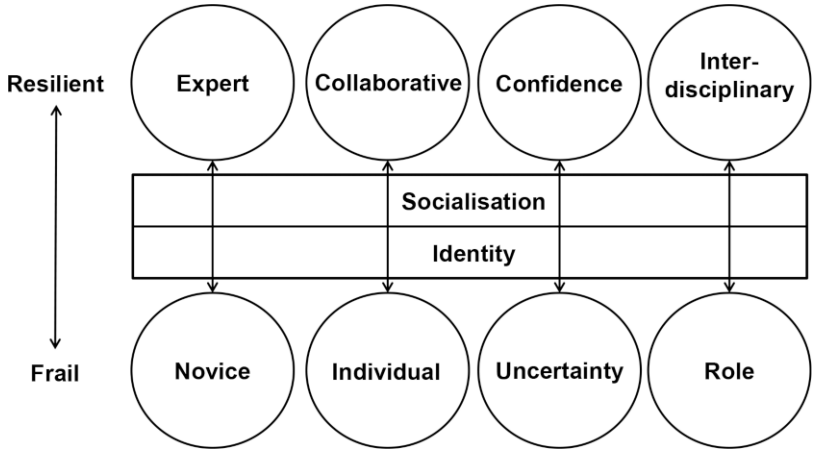

Figure 1. Fluctuating frailty (adapted from Lygo-Baker et al., 2015)

believed held greater expectations caused challenges to their values and caused greater potential frailty.

THE RENEWAL OF FRAILTY

Where does this renewed frailty emerge from? The answer is probably extremely complex. However, we may be able to start to shed some light upon this by considering the following two distinct examples. The first is through the promotion system. An individual may have been successful in a certain role and developed a series of values within this that they are comfortable with. However, a change in position can disrupt this, developing new challenges and providing an individual with a different set of social values. How many of us have worked with individuals who appear to have shifted their values as a response to particular debates as they have been drawn through to new roles that have involved taking on greater responsibility? Perhaps it is easier to express particular values in certain roles and that people have to compromise when promoted? It may therefore be that holding or expressing certain values appears to have little consequence in some roles as the social values that are encountered are less likely to challenge the personal values expressed. However, at particular points in a career as one progresses the pressure to 'conform' to particular social values may increase. Here the social values that become apparent put greater pressure upon the individual to meet a set of expectations that may not be in line with the personal values that an individual holds. Each individual has a choice, mediated by career aspirations or family situations that influence how much compromise is undertaken as a consequence. This may therefore challenge the personal values, making them increasingly frail. Clearly this suggested gap between being frail and resilient will, by definition, vary between each individual because the personal values are, as

previously stated, unique. It is therefore possible that for some the gap is negligible and that the discomfort is limited. However, for others this may be far greater.

The second example comes from considering the end of the dynamic in Figure 1, where people would appear to be resilient. This position was identified as being occupied by those staff who held greater experience. Here we consider how this may actually act as a potential inhibitor to learning. As Mazur (1997) has suggested in his work on peer instruction, the experienced academic may not always be the most appropriate person to support learning. He argues that experience rather than acting as an aid, may in fact prohibit the ability to relate to the knowledge and experience of the learners. This leads Mazur to suggest that the most effective teacher may be an individual who has just gained insight into the issue being taught. Whilst this can be used to encourage learners to take greater responsibility for their learning, it may also hint at a frailty related to experience that has not been discussed previously. As experience provides more and more evidence upon which an individual can base her or his decision making, it may in reality mask aspects that are no longer articulated by the experienced practitioner because they have become invisible to them. The experienced practitioner no longer asks questions about certain aspects of practice because she or he has progressed beyond such a state.

ADAPTATION OF VALUES

The result of these experiences is a renewal of frailty. As the first example demonstrates this can occur as a consequence of the decision to adapt the values held, or as Harre (1998) implies, create a new self that has a predominance of certain values, to alleviate the challenges faced. Such a process may however make the individual frail, either as a consequence of not being comfortable with the new self and the values that accompany this, or because the individual has been promoted to a situation where the discourses that surround the new position are unfamiliar or require an adaptation to previously held view points, requiring a further adaptation of the values, leading to even greater frailty. The second example suggests that in addition, rather than experience providing a greater distance from the initial frailty described by those newly arriving into roles in higher education (or for that matter any occupational role), it may create a distance that is difficult to bridge when working with and especially teaching those who inhabit more limited experience. This, was apparent in conversation with the more experienced veterinarians. It was suggested that this could be seen to create a potential for a return to frailty as they come to the end of their careers, recognising it is more and more difficult to remain in touch with techniques, knowledge and the experience of colleagues and especially students.

LEARNING AND FRAILTY

An aspect that we have touched upon but not fully considered to date is the broader context within which the personal and social values interact. This evolving landscape,

as discussed in the previous chapter (Stevenson, Whelan, & Burke), suggests the shifts being experienced today are likely to unsettle the personal values held further, leading potentially to greater frailty being felt. The university is involved with learning and at the very centre of this process is frailty. As a notion, being successful in our learning suggests that we move from a state of not being able to understand to being able to recognise, and then as our understanding grows can start to both utilise this knowledge, integrate it with other aspects we are aware of and potentially use it to develop new questions (Firestein, 2013). This requires a learner to frequent spaces where they are uncertain (Jarvis, 1995). This suggests a value in being placed within areas of discomfort, or as Jarvis argues 'disjuncture', where what we understand cannot provide us with an answer and we need to find additional information or alternative approaches. This can be uncomfortable, not having a capacity to respond initially, to use an artefact or to recognise its purpose. Those who successfully learn can move on but those who cannot remain in a place of struggle, presented with the option of seeking out alternatives, to try and find support, attempt new approaches by adapting or, as many will do, potentially giving up. This suggests a frailty that can lead to rejection. This presents a challenge for the teacher who may find themselves at different stages of frailty in respect of the knowledge with which they are presented. In addition, the approaches that learners are familiar with are additionally shifting, presenting further challenges for teachers trying to respond to the expectations that learners have, based on their previous experience (Amir et al., 2011).

For the new academic this can challenge the values that are initially held. For many there is a realisation that the expectations they may hold, emerging from their values about learning, are suddenly questioned by students. This can come through different challenges, such as a request for different resources or a particular format for their learning. Learners are increasingly confident in using their authority to put pressure on their teaching staff (Freeman, 2016). In the UK for example they do this through the National Student Survey. This can add to the frailty that occurs as the new academic begins to negotiate how the academic self becomes established. So for some, frailty may initially grow as they discover the challenges faced and how their own values may or may not assist or become challenged as they navigate their initial experiences. For more experienced staff the gap in knowledge about the experience of the learners may grow annually. Not only are the 'traditional' students who arrive at university having a very different learning experience prior to coming, the demographic is also growing in terms of number and diversity (Giannakis & Bullivant, 2016). Whilst this provides greater richness to the learning environment, for many this adds a complexity to teaching and can disrupt those who have, through the experiences they have gained, developed routines which have in the past appeared to suffice. As the career develops, if these routines are not adapted, there is the likelihood that they may not be as appropriate for learners who bring very different experience to the lecture theatre and laboratory. This can lead to a return to frailty.

As outlined in Chapter 5, the broader context within which academic staff work is increasingly causing challenges to personal values. New discourses around

managerialism (Jarvis, 2014) have emerged, within which the student experience (Temple et al., 2014), the student voice (Freeman, 2016) and the student as consumer (Sonnenberg et al., 2015) all appear to have increasing influence on how higher education is described and then enacted. These impact on those within the sector and the narratives within which they are found often challenge the personal values whilst becoming further consolidated within policies that subsequently direct the activity of academic staff. The latest in the UK being the Teaching Excellence Framework.

So whilst an academic may anticipate that at the initial stages of a career the values that she aspires towards may indeed be adapted as roles and responsibilities become clearer, many may expect that the general trajectory of frailty may be downward through a career (Figure 2). As has been suggested in this chapter, perhaps this is not actually the case. Whilst values may appear to coalesce between personal values and the social values encountered, it may be too simplistic to suggest that this will lead to a general reduction in discomfort of the associated frailty. Yet surely if we exist within the environment of higher education we should become more familiar with the discourses and gain a greater ability to respond and find areas of comfort? Whilst this may be the case for many, in the work above we have perhaps started to explain why a uniform downward trend should be reconsidered.

Figure 2. Hypothesised frailty shifts over a career

A review of the literature may help us begin to understand this alternative perspective further. First, each individual academic has to respond to the changing expectations of the political landscape, influencing how an academic is expected to behave and respond. The undermining of professional autonomy has been argued by some to question the role that an academic plays as a teacher (Piper, 1994).

A similar experience can be seen to exist across a range of professional roles such as lawyers, medical professionals, religious leaders and school teachers. These professional roles, once revered and rarely questioned are now regularly challenged by those outside the actual role in lay positions. Piper also suggested that for many academics identity is foremost attached to the discipline and not to the teaching of the discipline. He argued that this latter element decays whilst the primary link, say to being a 'historian' or a 'physicist' remains. This additional challenge brings a new set of potential social values into play that may influence the personal values and the actions an individual academic takes. The new Teaching Excellence Framework in the UK is an excellent example of such change and also highlights an additional challenge. While previously an academic could work within an academic identity framed by the discipline almost exclusively, this has changed. The teaching element of the role is now under far greater scrutiny and in particular those who previously have not had to give this particular consideration are likely to find themselves with additional challenges to face.

AN ECOLOGICAL SHIFT

The result is an ecological shift, by which I mean the development and evolution of new voices within the frames that people work. These new voices establish new discourses, where professional groups are challenged. This appears within a new modernity discussed by a range of authors (Beck, 1992; Giddens, 1998). A consequence is that the structures that have previously existed and provided a stability around which to recognise fairly secure social values that influence socialisation into a role such as that of an academic, have altered. Now these structures themselves are involved with almost constant change. This leads to the potential requirement for the academic to respond to the changes that are out of her/his influence with new voices. The fluidity of change (Bauman, 2000) requires the almost constant re-propositioning of values such that adaptability is a necessary element to enable frailty to be responded to. As staff recognise new voices that are representative of potentially different social values, the complexity of both the number of these, what they mean and how to respond increases. The overall impact is that professional groups are increasingly challenged to re-evaluate the values they hold (Lygo-Baker, 2006).

In higher education McInnis (1993) has argued that there are three sources where collective or social values can exist. The first, which has been a constant challenge for each new academic, is within the discipline. Here the individual experiences challenges as their values interact with the academic disciplinary 'tribe' (Becher & Trowler, 2001) through a process of socialisation (Smith, 2010). McInnis suggests that the second source is the physical department within which an individual works. Here the individual has to negotiate how both the disciplinary and institutional interpretations are presented and respond to these. Again this is most likely to impact on the new academic, although we can begin to see how certain changes may cause instability for more experienced staff as well. The final source is at an institutional level. Here,

where significant change has occurred recently, through for example student fees and the introduction of league tables, there is a potential reframing of values. These may have greater impact on the stability of more experienced staff who find their values threatened by more significant shifts than are likely to be experienced by their newer colleagues. These processes encourage a personal re-evaluation of values through which there is the possibility of an overall identity becoming subject to reinterpretation (Lygo-Baker et al., 2008), as a response to greater frailty being recognised.

The veterinary teachers I have worked with stimulated much of this repositioning of frailty as a fluctuating experience. Whilst reflecting on the work of trainees the more experienced staff acknowledged the frailty that they recognised in their colleagues. They saw an uncertainty within the hospital and in the laboratory working both with clients and with students. However, the experienced staff also reflected that they too faced uncertainty over the role they were playing and often sought the support of others in order to be able to resolve aspects not previously encountered. The only difference at times was that more experienced staff had a greater appreciation of who might be able to assist them in finding an appropriate response. One academic likened her approach to the natural survival instinct of the animals she had cared for with her own instinct that made her follow a similar approach to teaching that she had encountered during her own period as a learner within the discipline. She explained that when she first entered the teaching hospital she had at least some familiarity with how things had appeared to be provided to her from her own learning and so she had mirrored this. As time progressed and she gained a greater familiarity with the learning environment, she explained that she had adapted and to some extent brought out, as she described it, her own personality as a teacher. She was uncertain as to whether this was adapting toward new values or returning to those previously held. She felt that what did occur was that this led to feelings of vulnerability.

After thinking about the animals that she cared for she said she recognised that as she neared the end of her own work within veterinary medicine she was actually sensing a return to a more frail self. She described this as in part an inability to relate to some of the discourses that now existed despite attempts to do so. She gave the example of the shift in expectations of the learners that she believed to be prevalent. She noted that there was a growing belief amongst learners that they could only be examined on what had been taught in a classroom. She explained that in addition she felt that the ways she had developed and that she felt comfortable utilising were not always responded to by the learners and that as such she was increasingly uncomfortable. She stated she felt that she was returning to frailer state. It was increasingly difficult for her to relate her own often sophisticated understanding to the experience of those entering the classroom for the first time.

CONCLUSION

Within a career fluctuations occur to our levels of frailty. These may result from taking on new roles, the change in institution and so on. In addition, the constant change

experienced adds new discourses and requires individual responses from academic staff. In the UK there has been a rise in the number of students entering universities, the fee structure has altered, the diversity of the student body has increased, technology has and continues to evolve and there are greater interventions by government on behalf of the public. Whilst many may welcome some of these changes the implications for the academic are potentially serious. These changes bring increased social values into the environment that may challenge the personal values held, leading to the potential for greater conflict and disruption. So while it may be anticipated that those newly arrived in a university setting may experience frailty heightened by new discoveries about colleagues, learners, the institution and so on, this may not be exclusive to new entrants. Frailty appears to be in flux throughout a career. As a consequence frailty is a potentially constant companion and one that needs to be recognised and responded to in order to limit the disturbance that it can bring.

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7. INTEGRATIVE DISCIPLINARY CONCEPTS

The Case of Psychological Literacy

> Formal education systems tend to emphasize the acquisition of knowledge to the detriment of other types of learning, but it is vital now to conceive education in a more encompassing fashion.
>
> (*Learning: The Treasure Within*, UNESCO, 1996)

In 1996, a UNESCO report entitled *Learning: The Treasure Within* (Delors et al., 1996) identified four 'pillars' of learning that should inform curriculum development in the 21st Century: *Learning to know* (learning how to learn); *Learning to do* (learning vocational and professional skills, and how to apply knowledge beyond the classroom); *Learning to be* (learning to deploy independence, judgment, and personal responsibility); and *Learning to live together* (learning to understand diversity and respect in ways that can resolve challenges and conflicts). Importantly, the four pillars inform an approach to curriculum design that unites content and pedagogy through the use of integrative values, such as 'democratic participation in society', and 'learning throughout life'. Such integration between discipline and pedagogy, where "the subject matter is selected, organised and formulated for the purpose of teaching and learning" (Deng, 2007: 504) can maximise outcomes for learners, but can also be of significant benefit to educators.

In this chapter, we will introduce theoretical perspectives that integrate discipline and pedagogy, before presenting a specific integrative disciplinary concept (IDC), that of *Psychological Literacy.* In recent years, at least in the UK, US, and Australia, there have been moves to structure the psychology curriculum around this unifying concept (Halpern, 2010; Trapp et al., 2011). Psychological literacy represents a focus not only on immersing students in the subject matter of psychology, but also equipping them with the skills to apply psychology to all domains of life. As a result, pedagogy is intrinsically bound to the notion of discipline, as teaching and assessment decisions are made with a consideration of what graduates will *do* with what they learn from their psychology degree. We will then consider how an IDC such as psychological literacy might offer one way to minimise educators' vulnerability to the effects of pedagogic frailty. We will close by offering some tentative recommendations for promoting the use of IDCs across the disciplines.

I. M. Kinchin & N. E. Winstone (Eds.), Pedagogic Frailty and Resilience in the University, 93–107.

SYNTHESISING DISCIPLINE AND PEDAGOGY

> In any teaching – learning environment, content is intertwined with teaching and learning. (Zepke, 2013: 7)

There are many drivers of curricular and pedagogical choices. One of the simplest is precedent, where decisions are based on the fact that "it's always been taught like this" (Fraser, 2016: 151). At the other end of the spectrum, perhaps, is where what is taught, and how it is taught, are constructively aligned (Biggs, 1996). Many disciplines may have implicit concepts that drive the integration of discipline and pedagogy; a focus on the application of knowledge, rather than accumulation of knowledge, as the aim of teaching is evident in many disciplines (e.g. Fraser, 2016). An example of this is professional clinical learning, where 'situated learning' is utilised to support students in applying knowledge in supervised or simulated practice (e.g. Ellaway, 2007). A more explicit example is the concept of 'geographic literacy', which involves teaching beyond geographical content knowledge towards cultural and moral sensitivity, in ways that support the individual's development as a 'global citizen' (Bascom, 2011).

Synthesising discipline and pedagogy requires educators to possess 'Pedagogical Content Knowledge' (PCK; Shulman, 1986, 1987), which represents "teachers' cognitive understanding of subject matter content and the relationships between such understanding and the instruction teachers provide for students" (Shulman, 1986: 25). An educator with strong PCK has a sound knowledge of instructional strategies appropriate to their discipline, and clear awareness of the common misconceptions held by students in that area (Shulman, 1986). Synthesising content and pedagogy in this way may be beneficial for learners, but what can it offer to educators? It has recently been argued that the concept of PCK *"might assist lecturers to interrogate their practice through a lens that also exposes them to the value of pedagogical study"* (Fraser, 2016: 143). The model of Pedagogic Frailty (Kinchin et al., 2016) proposes that frailty increases with lack of synergy between discipline and pedagogy. The remainder of this chapter interrogates this idea through the lens of a specific IDC from the discipline of psychology, "psychological literacy".

PSYCHOLOGICAL LITERACY AS AN INTEGRATIVE DISCIPLINARY CONCEPT

> …promoting psychological literacy entails re-orienting what and how we teach students in a way that emphasises psychology's relevance. (Dunn, Cautin, & Gurung, 2011: 15)

Psychological literacy is an emerging concept within the discipline of psychology, referring to the skills, knowledge and attributes that can be acquired through the study of psychology, and the ways in which psychology can be applied. At its heart, psychology involves the empirical study of people, of their thoughts, emotions and

behaviours, and psychologists recognise that this gives the subject meaning and value in students' everyday lives and employment. Graduates who are able to apply psychology to personal wellbeing, development and employability, and to facilitating social interactions at work, in the community and in a global context are equipped with a psychological toolkit which complements the generic graduate attributes acquired through university education. This psychological toolkit combines with those generic attributes in the form of psychological literacy.

The most widely accepted definition of psychological literacy to date reflects this mix of generic and discipline-specific skills and knowledge (McGovern et al., 2011: 11), that show much resonance with the pillars of learning presented in the UNESCO report:

- "having a well-defined vocabulary and basic knowledge of the critical subject matter of psychology;
- valuing the intellectual challenges required to use scientific thinking and the disciplined analysis of information to evaluate alternative courses of action;
- taking a creative and amiable skeptical approach to problem solving;
- applying psychological principles to personal, social, and organizational issues in work, relationships, and the broader community;
- acting ethically;
- being competent in using and evaluating information and technology;
- communicating effectively in different modes and with many different audiences;
- recognizing, understanding, and fostering respect for diversity;
- being insightful and reflective about one's own and others' behavior and mental processes."

This definition is not without its critics; Newstead (2015: 3) described it as *"at best aspirational"*, and even its proponents would not argue that every psychology graduate acquires all of these skills and attributes to a high level. However, we would suggest that every psychology student should have the opportunity to develop psychological literacy in all of these foundational areas. As such, psychological literacy is now firmly embedded in the undergraduate qualification accreditation criteria of many professional bodies in psychology, including the American Psychological Association (APA), the Australian Psychology Accreditation Council (APAC), and the British Psychological Society (BPS).

The historical roots of psychological literacy can be traced to former APA President, George Miller. In 1969, in his presidential address, he suggested that the application of psychological knowledge has the potential to improve human health and welfare, through influence upon behaviour. However, for this to happen, Miller (1969) made the case that we would have to *"give psychology away"*. By this, he intended that psychology would no longer remain the exclusive preserve of experts, psychological practitioners and academics, but instead the public would be given free access to psychological knowledge, to use for the benefit of all.

This emphasis on the application of psychology to solve problems and to make the world a better place is highly appealing, and has led to the development of a related concept to psychological literacy, that of psychologically literate citizenship. McGovern et al. (2010: 10) define psychologically literate citizens as: *"critical scientific thinkers and ethical and socially responsible participants in their communities"*.

In many regards, psychologically literate citizenship is closely related to global citizenship (Cranney & Dunn, 2011). Many modern universities claim that their graduates are global citizens, by which they mean that they are able to contribute to a global community, recognising and valuing diversity, and taking social responsibility for overcoming shared challenges (Bourke, Bamber, & Lyons, 2012). Psychological literacy, as discussed here, contributes to the global citizenship of psychology graduates, as summarised by Halpern (2010):

> Today's students must prepare themselves for a world in which knowledge is accumulating at a rapidly accelerating rate and in which old problems such as poverty, racism, and pollution join new problems such as global terrorism, a health crisis created by alarming increases in obesity, and the growing gap between the poor and the very rich. All of these problems require psychological skills, knowledge and values for their solution. (Halpern, 2010: 162)

Within psychology education, psychological literacy and psychologically literate citizenship have provided a framework which can be used to facilitate students' engagement with psychology subject knowledge by emphasising its relevance to everyday life (Grabinger & Dunlap, 1995). They are useful concepts to facilitate the development of students' problem-solving and employability skills, which can be embedded within the curriculum rather than separated from it (Hulme, 2014; Hulme et al., 2015; Reddy, Lantz, & Hulme, 2013).

However, embedding psychological literacy into the psychology curriculum is not without challenges. Current thinking surrounding psychological literacy has only become accepted within the discipline community since Halpern's (2010) seminal book was published, and it has taken time for it to become mainstream. The majority of psychology academics are not applied practitioners, and have not been required previously to consider everyday applications of psychology; they are having to develop their own psychological literacy, and to refresh their teaching to incorporate new perspectives. A constructively aligned curriculum (Biggs, 1996) is an integral part to this evolution of psychology teaching to incorporate psychological literacy, incorporating learning outcomes that emphasise the application of psychological skills and knowledge; learning activities that engage students with practical applications, and authentic assessments (Ashford-Rowe, Herrington, & Brown, 2014; Gulikers, Bastiaens, & Kirschner, 2004) that genuinely assess students' abilities to apply psychology to problem-solving. As such, innovation is needed, practice is still developing and pedagogical research into the impact of teaching through the lens of psychological literacy is still sparse.

A key challenge facing psychology educators is to model psychological literacy for students. Psychology has a lot to offer with regard to understanding diversity and practicing inclusively, creating social environments that enhance learning, and recognising how best to activate and reinforce the cognitive processes involved in learning (e.g. Jarvis, 2005). If we expect our students to engage with the concept of psychological literacy, we must first ensure that we practice what we teach, and demonstrate these principles in our professional lives (Bernstein, 2011; Cranney & Dunn, 2011; McGovern, 2011). In many ways, psychological literacy emphasises the importance of applying evidence from psychological science to inform teaching practice.

PEDAGOGIC FRAILTY AND PSYCHOLOGICAL LITERACY

Given that exploration of the concept of pedagogic frailty is in its infancy, we do not yet have an evidence base on which to draw to scrutinise the proposal that psychological literacy as an IDC holds the potential to minimise frailty and promote resilience. Therefore, what follows is a theoretical, rather than empirical, test of how an IDC like psychological literacy might provide the conditions under which vulnerability to frailty might be reduced. In the model of pedagogic frailty presented in Kinchin et al. (2016), the area of pedagogy and discipline is shown to be related to three other components of the model:

1. Pedagogic frailty increases with lack of embeddedness between pedagogy and discipline
2. Regulative discourse informs links between pedagogy and discipline
3. Integration of pedagogy and discipline requires iterative dialogue with the research-teaching nexus (RTN).

In the section that follows, we consider whether these links are present in the case of psychological literacy, as an IDC, representing synergy between discipline and pedagogy. We begin by exploring the links between pedagogy, discipline and other dimensions of frailty, before looking at the relationship between pedagogy, discipline and frailty itself.

Regulative Discourse Informs Links between Pedagogy and Discipline

Our first consideration is whether psychological literacy as a concept is driven by regulative, rather than instructional, discourse. The regulative discourse represents values, philosophy and pedagogy that underlie a curriculum, whereas the instructional discourse brings issues of curriculum content, assessment and sequencing to the fore (Kinchin et al., 2016).

By its very nature, psychological literacy pushes instructional discourse into the background, as content knowledge is secondary to its application. We argue that psychological literacy directly brings values to the forefront of discourse

surrounding learning and teaching in psychology. Perhaps the most prominent value evident within accounts of psychological literacy is *"bringing psychology to life"* (Hulme et al., 2015: 13). This value represents the importance of experiential and applied learning, but also represents the importance of psychologically literate citizens taking and enacting their knowledge in the communities to which they belong, and Miller's idea of the need to *"give psychology away"* to offer solutions to real-world problems. Other values that underpin the concept of psychological literacy are ethics, inclusion, and diversity (Hulme et al., 2015). These values, in turn, prescribe a pedagogy that has at its core opportunities for communication, problem-solving, application of knowledge, and reflection. On this basis, many educators are using innovative teaching techniques that ascribe to these values. For example, Kent and Skipper (2015) present their development of a final-year module for psychology students that directly aims to develop students' psychological literacy through in-class practical exercises that require students to apply their psychological knowledge to design solutions to real-world challenges such as how a manager might manage organisational change and redundancy. Winstone and Millward (2012) used active learning tasks within large groups to develop students' abilities to reflect and apply their psychological knowledge to their own self-understanding.

It is not only learning and teaching activities that are driven by psychological literacy. Hulme et al. (2015) argue that students should be assessed in ways that enable them to develop and evidence their psychological literacy, through authentic assessment. As one example, Avery and Winstone (2014) described a case-study assessment in a final-year Organisational Psychology module that required students to 'diagnose' an issue that they had experienced in the workplace during their Professional Training Year using their psychological knowledge, and to write a report from the perspective of an Occupational Psychologist to suggest an intervention to be used in that workplace. Such teaching and assessment practices are evaluated very positively by students and also show positive effects on measures such as academic attainment and preparedness for work, with the result that *"embedding psychological literacy in the curriculum may enhance our students' intrinsic motivation to learn, by bringing psychology to life-but also by bringing life to psychology"* (Hulme, 2014: 935). Such outcomes are likely to promote resilience in educators, by virtue of their reward value alone (see Chapter 3).

It seems, therefore, that the concept of psychological literacy drives regulative discourse to have prominence over instructional discourse, through its emphasis on experiential activities and authentic assessment. Introducing such activities and assessments into the curriculum, however, requires significant investment in terms of planning and time, and there is a potential danger that such novel pedagogy may provoke anxiety in students (Bevitt, 2015; Kent & Skipper, 2015). The frailty syndrome may lead an educator to be risk averse, and to continue with 'safe' (tried and tested) pedagogic approaches, rather than risk innovating with what may be seen institutionally as 'atypical' practices. Why do some educators choose to risk

innovation, to develop curricula that are underpinned by the concept of psychological literacy? It is to this issue that we turn next.

Pedagogy and Discipline Requires Iterative Dialogue with the Research-Teaching Nexus

As has been discussed extensively elsewhere (e.g. Alpay & Verschoor, 2014; Cretchley et al., 2014; Winstone, this volume; Young, 2006), rewards for excellence in research activities are perceived to be greater than those for comparable achievements in the teaching domain. This extends to publication, where papers arising from an individual's engagement in the Scholarship of Teaching and Learning (SoTL) are typically seen as less valuable than outputs from disciplinary research. Unresolved tensions within the RTN are represented as one of the dimensions of frailty (Kinchin et al., 2016) and the literature describes the pressure to deliver on research targets as a barrier to innovation in teaching and learning (e.g. Geschwind & Broström, 2015). However, for some academics, the tension within the RTN has been addressed by bridging the divide between their research and teaching activities, and engaging in SoTL.

We see two potential indicators of the iterative dialogue between psychological literacy, as an IDC, and the RTN. First, an IDC can directly stimulate and promote SoTL which can offer a potential solution to the tension within the RTN:

> A focus on the [Research-Teaching Nexus] and/or SoTL provides some academics with a research pathway that enables them to balance the competing demands of teaching and research. (Fraser, 2016: 146)

It is argued by Healey (2000) that SoTL needs to be developed within disciplinary cultures. Within psychology, psychological literacy has been a catalyst for SoTL, leading to the emergence of what Cranney (2013: 3) terms "'champions' of evidence-based learning and teaching" who have explored and evaluated ways of using psychological literacy to inform curriculum and assessment design. How does this provide evidence of minimising vulnerability to frailty?

Cranney (2013) draws on Bernstein (2011) to describe four different approaches to educational practice (see Table 1). Individuals who are actively engaged in SoTL would fall into the category of either the scholarly practitioner or the scientist-educator. Such individuals are likely to see the reward value of innovation, and hence may be more resilient to the symptoms of frailty. However, it is clear that the characteristics of the indifferent and anecdotal practitioners show many parallels with the concept of frailty; here, individuals are adopting what we might term 'safe and sustainable' practices, and are thus much more vulnerable to frailty in response to the need to adapt to change. Therefore, we see one potential way in which an IDC like psychological literacy, if it inspires SoTL, can overcome tension in the RTN and buffer against frailty.

When considering psychological literacy as an IDC, it could be argued that, as *"the knowledge and research methods of psychology are critical to the creation and*

Table 1. Different approaches to educational practice (based on Cranney, 2013)

Approach	*Characteristics*
The indifferent practitioner	Educational activities are 'undesirable but unavoidable'; minimal effort expended.
The anecdotal practitioner	Educational activities are derived from historical experiences from their own days as a student, or from a desire to maintain the status quo in their discipline.
The scholarly practitioner	Educational activities are driven by reflection, evaluation, and engagement with the literature
The scientist-educator	Educational activities are informed by their own research into 'what works'; they seek to generate and disseminate new knowledge through their practice

application of evidence-based practice in educational settings" (Cranney, 2013: 3), psychology as a discipline has a distinct advantage in engaging in SoTL. However, even within the discipline of psychology, as well as other science disciplines, strong pedagogic knowledge is not always evident (Fraser, 2016). One participant in Fraser's study (an academic developer) spoke of lecturers in a way that exemplifies the 'anecdotal practitioner':

> Certainly their strength is in their knowledge of the content. They don't feel competent or strong or well versed in the pedagogy at all. They tend to operate in the way they were taught. (Fraser, 2016: 153)

Because an IDC grounds discussion of pedagogy within the familiar context of an individual's discipline, regardless of the subject nature and expertise of the discipline, an IDC may support educators in gaining the necessary knowledge of pedagogy to engage in SoTL. The nature of the discipline should not be a barrier to being a scholarly or scientist practitioner; an IDC can provide a fertile ground to develop this approach. It is also important to recognise that not all psychological educators are involved in SoTL; in fact, it is perhaps those who are more psychologically literate themselves who will be integrating teaching and research in this way, because they recognise the opportunity to apply psychology to develop evidence-based approaches to learning and teaching.

The second example of the iterative dialogue between psychological literacy, as an IDC, and the RTN, is the potential for the RTN to directly shape teaching, and inform the kinds of concepts that integrate discipline and pedagogy. Indeed, it is argued by Rice (1995: vi) that *"improvement of teaching needs to be rooted in the intellectual substance of the field"*. How can the RTN be harnessed to inform integrative approaches to learning and teaching? If a common aim of an IDC is to develop the application of knowledge, rather than the mere transmission of knowledge, then learning environments can be designed in a way where, through

directly engaging with research, students acquire professional skills, attitudes and attributes (Healey, 2005). Pedagogy can be directly informed by components of the RTN, in a way that particularly emphasises research processes and problems over content (Healey, 2005). Such pedagogy will require an individual to harness their PCK, but combining this knowledge with these three components of the RTN can facilitate the *"organisation of learning opportunities that enable students to understand the nature of scientists, think like scientists, and 'do science'"* (Fraser, 2016: 155).

In order for an IDC, like psychological literacy, to buffer against the frailty engendered by the RTN, educators need to commit to the development of their own PCK. However, we need to be mindful of the barriers that might prevent such commitment, which may include (Fraser, 2016):

1. Value and Reward: Engaging with PCK may seem to hold little value if it is perceived that the SoTL is not rewarded in the same way as disciplinary research;
2. Time and Opportunity: SoTL and PCK require time to engage with the literature and practice, and to discuss with others;
3. Risk Aversion: innovating in learning and teaching engenders uncertainty, and time and support are lacking.

In summary, psychological literacy has promoted and informed SoTL, which is able, for some, to offer a solution to tensions within the RTN. In addition, the RTN itself offers *"a compelling conceptual framework"* for curriculum design (Fraser, 2016: 146). However, it is clear that cultural shifts to overcome barriers, themselves symptoms of institutional frailty (value/reward, risk aversion, time to innovate), are needed before an IDC can fully resolve tension in the RTN through the stimulation of SoTL.

Pedagogic Frailty Increases with Lack of Embeddedness between Pedagogy and Discipline

The final theoretical test for our present purposes involves a consideration of whether an IDC like psychological literacy can 'buffer' against the development of frailty and provide the resilience that enables educational innovation. In order to achieve this aim, we will examine the impact of a specific case study from the discipline of Psychology (see Box 1), where the synergy between discipline and pedagogy, through the concept of psychological literacy, are particularly apparent.

Dr Short's narrative suggests that psychological literacy is a driving value for her curriculum design; she wants her students to be able to apply, not merely know, psychological theory. This value appears to take prominence over the costs in terms of time and resource involved in planning and running the field trips. There are other values evident in the narrative; the importance of opportunities to confront and deal with discomfort, and the desire to overcome students' desensitisation to distressing events. The prominence of these values illustrates how the IDC of psychological

Box 1. Case study

The unity of discipline and pedagogy in Social Psychology
(Dr Fay Short, School of Psychology, Bangor University)

Social psychology explores some of the darker areas of psychology, such as the effects of blind obedience and conformity in terms of crimes of war. My social psychology class presents psychological theories to explain some horrific regimes, such as Nazi and Khmer Rouge control. However, simply informing students about these regimes can fail to impact on students who have heard about the horrors of the Second World War repeatedly over many years. Desensitisation through constant media exposure to the horrors of the world can lead our students to feel distanced from psychological theories explaining such horrors. This means that they may acquire the psychological literacy required to explain real world events when able to view them from a distance, but retain an inability to apply psychological theory when the events are personally relevant or invoke an emotive response. For this reason, we have attempted to link theory to the real world through field trips. We organise an annual trip to a psychology-relevant location (e.g. Auschwitz in Krakow, Sachsenhausen in Berlin, and the Red Square in Moscow) and student responses to these trips have been overwhelmingly positive, with students frequently describing them as 'life-changing'.

The primary benefit of the field trip as a method of teaching psychological theory is that the student can gain first-hand experience of how the theory relates to the real world. They are able to understand the clear link between concept and action in real world situations. Furthermore, this experience impacts on them as an individual: they are no longer able to consider the theory and situation from an abstract academic viewpoint, but must instead confront the reality and understand how real lives can be explained through psychology.

All field trips carry risks, as the student is taken to a novel environment with potential hazards. Our risk assessment seeks to address these potential risks. However, these field trips carry additional emotional risks as we often focus on dark, disturbing, and distressing content: for example, visiting the concentration camp at Auschwitz. We manage these situations very carefully through a combination of pre-trip briefing meeting, continual monitoring with opt out available at any time, and a post-trip debrief meeting. The briefing meeting provides an opportunity to give out important information and begin considering expectations and concerns. The debrief provides an opportunity to link the experiences back to theory and reflect on the personal impact of the trip. While we do attempt to prepare for all eventualities, there will inevitably be some issues that cannot be anticipated. For example, one of our students had an undisclosed phobia of an everyday object that triggered an anxiety attack while we were on a trip.

Our field trips are designed around the importance of psychological literacy. It is essential that students are able to apply psychological theory to their everyday lives, and these field trips give them a unique opportunity to immerse fully in that experience. Throughout the trip, the academics constantly refer back to research and theory, and we encourage the students to flag real-world examples of theory that they identify as we travel. This enhances their own psychological literacy and provides a unique learning experience.

literacy brings regulative discourse to the forefront over instructional discourse, which is likely to provide the resilience that can minimise vulnerability to frailty.

The case study illustrates clear synergy between disciplinary content and pedagogic methods. The importance of psychological literacy is evident in the choice of subject content (e.g. theories of conformity explored in the context of war crimes), but the methods of teaching, incorporating direct application and reflection, also target key elements of psychological literacy, and drive the innovation.

Recall that one of the key 'symptoms' of the frailty syndrome is an aversion to what might be perceived as risky learning and teaching practices. The case study certainly does not exemplify a 'safe' approach; the seriousness of the situation involving a student's experience of an anxiety attack is readily apparent, and such an event could leave an educator vulnerable to complaints, and thus justify a risk-aversive approach. What might be promoting Dr Short's resilience to the risk-aversive approach that is characteristic of frailty? According to Le Fevre (2014: 57), *"people take risks because of the possibility of a favourable outcome"*. We suggest that an IDC offers the potential to give clarity to the nature of that favourable outcome; it specifies the desired outcome of the potentially risky approach, in such a way that ends are seen to justify the means. Through her narrative, we see that for Dr Short, the risks are directly supported by the educational gains in terms of how students, both personally and academically, can be transformed by this experience. We believe that it is this strong belief in the benefits of the field trips for developing students' psychological literacy that gives Dr Short the resilience to embrace the potential risks. It is also important to recognise that the risks inherent to the field trips are themselves used for an educational purpose, to further develop psychological literacy in students. Dr Short's account of the debrief procedure is driven by psychological literacy, and through the detailed briefing and opt-out procedures, staff are directly modelling key ethical issues in practice, further developing students' psychological literacy.

Finally, we can imply that part of the resilience, rather than frailty, comes from the reward value of the approach; Dr Short speaks of how the trips can further develop the psychological literacy of staff. Dr Short is an example of a 'scientist practitioner'; her innovation is evaluated and disseminated (e.g. Short, 2016), which may offer a further source of resilience by buffering against tension in the RTN. This case study serves to illustrate how an IDC might drive innovation and buffer against some of the 'symptoms' of frailty, such as risk aversion.

CONCLUSION AND RECOMMENDATIONS

Through examining the use of psychological literacy as an IDC, we have discussed how such an approach can illuminate the '3 Rs' of pedagogic frailty (see Chapter 3). An IDC like psychological literacy can buffer against risk aversion, by giving clarity to the desired outcomes of an innovative practice; it can promote resilience, by giving cohesion to an individual's educational activities; and it can provide reward, through transformative outcomes and minimising the detrimental effects of areas of

tension in academic work. However, we have also identified some potential barriers to the adoption of approaches involving the development and application of PCK, which arguably is a precondition for implementing an IDC; time, resource, risk aversion, and low reward value are those which are most apparent. What we have presented is a discussion of how an IDC *might* relate to frailty and resilience. These are not empirically tested claims; we would call on educators to develop and employ their PCK to engage in SoTL to test how IDCs operate in the context of frailty and resilience. In order to guide such empirical efforts, Table 2 summarises key symptoms of frailty and how an IDC could potentially offer resilience against these symptoms. These suggestions are also intended to offer guidelines through which educators in other disciplines can implement IDCs.

Table 2. Integrative disciplinary concepts and resilience against frailty

'Symptom' of frailty	*How an integrative disciplinary concept offers resilience*
Difficulty adapting to change	The IDC provides a guiding framework; changes are enacted in a way that aligns with the values of the IDC
Risk aversion and adoption of 'safe' practices	An IDC can promote 'cultural normalisation' of innovation, and clarifies the value of risk-taking and creativity.
Stagnated professional development	The IDC promotes dialogue and dissemination within professional networks.
Tension in the research-teaching nexus	The IDC shapes practice in a way that requires application of PCK and can inspire SoTL.

Psychological literacy has been a valuable lens through which to explore the impact of an IDC. However, psychology is perhaps unique in the extent to which this integrative concept is explicated and utilised, with broad discourse across international HE systems (Cranney & Dunn, 2011), a scale to measure psychological literacy (Roberts, Heritage, & Gasson, 2015), and the use of psychological literacy to inform transition initiatives (e.g. Burton, Chester, Xenos, & Elgar, 2013).

Nevertheless, whilst the concept of psychological literacy itself is well-specified, we need more research on the specific features of pedagogy that support its development. That is, we know *why* pedagogy and discipline should be integrated, but not so much about *how* such integration should be embedded in classroom practice. As argued by Newstead (2015: 10):

> How can we make sure that our students do acquire psychological literacy, in other words how do we embed it into our degrees? This will require developments both in the way the curriculum is taught and in the way it is assessed.

Thus, the challenge is considerable, but the potential benefits are numerous. Achieving this aim is also likely to include a focus on how psychology educators themselves develop as psychologically literate teachers (McGovern, 2011). We have used psychological literacy as a lens through which to explore frailty; we end by suggesting that psychological literacy is directly relevant to *overcoming* frailty, through its focus on approaches to dealing with complex, changing environments (O'Hara, 2007). Perhaps some of the psychologically literate citizens emerging from current undergraduate programmes will, in the future, be able to apply their psychological literacy to the issues of change, performativity, and stress in Higher Education, and support institutions and individuals to overcome pedagogic frailty and develop resilience.

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8. RE-FRAMING ACADEMIC STAFF DEVELOPMENT

INTRODUCTION: PEDAGOGIC FRAILTY IN A SHIFTING HIGHER EDUCATION CONTEXT

Globally higher education is situated in a supercomplex world (Barnett, 2000) that is constantly in a state of flux and subject to multiple pressures. This situation has been exacerbated in South African higher education that has been characterised by student protests in the last two years (2015–2016). One of the major causes for the recents protests, particularly in our institutional context, has been students' anger that despite the official demise of apartheid and the end of colonial rule, some universities in South Africa are still attempting to be copies of Oxford and Harvard. We are now in a context where

> … educators are called upon to play a central role in constructing the conditions for a different kind of encounter, an encounter that both opposes ongoing colonization and that seeks to heal the social, cultural, and spiritual ravages of colonial history. (Gaztambide-Fernández, 2012: 42)

This call on academics has caused seismic shifts in the academic landscape and has, we would argue, resulted in some academics experiencing an acute sense of pedagogic frailty. Understanding what decolonisation means is difficult and the multiple meanings and motives for advancing it are varied, contested, and at times, contradictory (De Oliveira Andreotti et al*.,* 2014: 22). There is thus a great deal of uncertainty about what it means to 'decolonise' institutions and curricula (including pedagogy). Academics are feeling that many of their long-held and hard-earned disciplinary foundations and pedagogic strategies are being questioned or may no longer be appropriate or adequate to meet the needs of the evolving higher education context.

As academic staff developers our role is to work with academics to assist them to navigate this 'decolonial turn' which for most is unchartered terrain; to assist them to better understand the unknown territory and to challenge them to face the dragons they may encounter (Chapter 1).

The institution in which we work is a historically white and advantaged research-intensive university. As academic developers we work with academic staff in formal programmes and informally to prepare them for their teaching role. For close to two decades we have both been centrally involved in designing and offering a postgraduate diploma in higher education (PGDip (HE)) for academics both in our

I. M. Kinchin & N. E. Winstone (Eds.), Pedagogic Frailty and Resilience in the University, 109–121.

institution and from across South Africa. Throughout this time we have researched our own practices so that we could explain to our participants why our curricula and our pedagogy were structured in specific ways, but also to find ways to improve our practice (Vorster & Quinn, 2012; Vorster & Quinn, 2012a). Now, with the changes in the South African higher education landscape we, along with the academics with whom we work, are ourselves experiencing a sense of pedagogic frailty.

We used Kinchin's four dimensions of frailty as a heuristic to help us to better understand how we can work with academics to mitigate the frailty they are experiencing in the face of the calls to decolonise their curricula and pedagogy. It is important for us to note, however, that even though the framework is a very useful one for examining contexts which result in academics experiencing challenges in executing their pedagogic roles, the notion of "frailty" is a potentially problematic concept to use in a context such as South Africa. This is because the term frailty carries connotations of weakness. The historical inequalities that have existed in the country for the last two to three centuries have had pernicious implications for access to education and opportunities for the majority of the black population and has resulted in continued racially skewed patterns of success and failure in favour of whites. As such, labelling the challenges that academics experience in the current higher education context as a condition of frailty is potentially problematic. A focus on developing resilience and robust solutions to the multiple challenges faced by academics and institutions at the current conjuncture is more appropriate. Examining how our practices as academic staff development practitioners have shifted as a result of the significant national and institutional changes using Kinchin's heuristic has been a beneficial exercise for us.

We followed a similar methodology as that suggested by Kinchin. We undertook an auto-ethnographic concept mapping exercise as a stimulus for dialogue about our practices. Reflecting on our practice through this mapping exercise has brought to light the ways in which our ideas and practices have shifted since the student protests, to consider the implications of working in a context where there is a need to interrogate what decolonising curricula and pedagogy means. In mapping the terrain we have also remained open to unknown features of the terrain that may emerge. As such we have identified new links between our ideas and are able to better understand existing links between the ideas that shape our practice. *"The maps provide a vehicle for dialogue and/or personal reflection that can be used to frame an autoethnographic approach to academic development"* (Kinchin, this volume: 3). Engaging in this exercise has contributed towards us, as academic developers, feeling less frail and more able to support the academics with whom we work.

ACADEMIC STAFF DEVELOPMENT

Regulative and Instructional Discourse

In this section we examine why and how the recent calls for the decolonisation of higher education institutions, curricula and pedagogies have resulted in our own

sense of pedagogic frailty as academic developers. In part this is because these calls are influencing the relative certainties that have underpinned institutional and academic development practices.

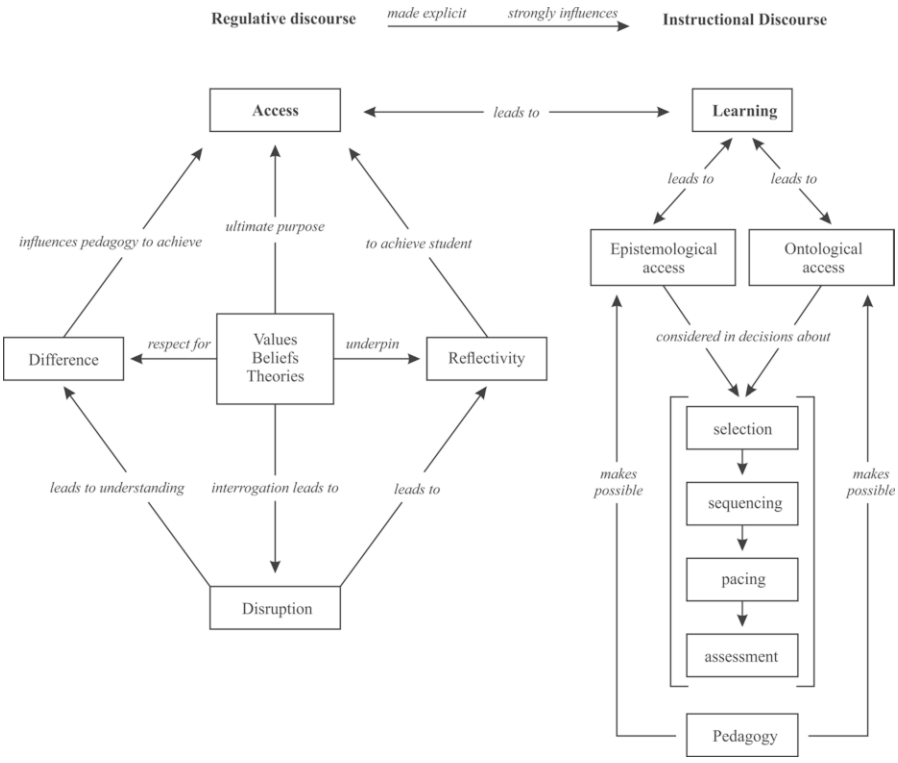

Figure 1. Regulative and Instructional discourse

As a way of excavating and explaining the conditions leading to our own pedagogic frailty and that of the academics we work with in our formal course on teaching, we discuss the regulative discourse (RD) that informs our work and examine how we have had to expand the meanings of the ideas that make up our RD. Our instructional discourse (ID) is strongly influenced by our very explicit RD.

Our RD comprises four major principles that strongly frame the way we construct the course and how we as course facilitators relate to course participants. The four principles are: access, critically reflective practice, difference and disruption (see Figure 1). Below we elaborate on why we subscribe to these axiological principles as well as how and why we have begun to expand what we understand by each

of the principles as well as how our expanded understanding is influencing our instructional discourse.

(i) Access

For us teaching is about enabling *epistemological access* for the majority of students (Morrow, 1994). Enabling students to access knowledge and knowledge practices is important in the South African context where participation as well as success and throughput rates remain low and racially skewed in favour of white students. In order to ensure that more historically disadvantaged black students achieve academic success, it is important that university teachers understand how to facilitate pedagogy for epistemological access. Our formal course is thus an important vehicle for academics to develop the capacity to design curricula and pedagogic and assessment processes to enable more students to achieve academic success.

Although we have always been aware that cognition is influenced by a range of ontological factors, as well as by students' abilities to engage with the world at a practical level, we have come to recognise that we have not paid adequate attention to how black students experience learning at a historically white university. It is therefore imperative that the conditions are created for students to also gain *ontological access* to the university and to disciplinary knowledge. Black students have reported experiencing intense alienation in the university environment, including from the language of teaching and learning.

One of the outcomes of student estrangement is the struggle to 'connect' to disciplinary knowledge and to the ways in which many academics engage with them as learners. In an institution where the majority of students is now black and the majority of academics is white, this situation is likely to lead to what Grosfoguel (2007: 214) calls "a hierarchy of superior and inferior knowledge and, thus, of superior and inferior people", thus affecting at a deep level students' sense of themselves as people and inevitably also as learners. Gaining epistemological access to the goods of the university requires that attention is paid in the teaching and learning context to how ontology influences learning. We would therefore argue that an essential step towards epistemological access is ontological access.

Some ways of enabling ontological access include constructing pedagogic spaces where students' experiences of the academic context are recognised. Furthermore this entails paying more explicit attention to building students' understanding of the kinds of practices that are necessary to become successful learners in the university context. Barnett and Coate (2005) and others have argued that student ontologies necessitate more explicit attention as a result of the changing social, economic and professional contexts. Through the mind mapping process we have come to recognise that the ways in which we conceptualise the relationship between student ontology and their engagement with knowledge is complex and needs to be explicitly focused on in the teaching of our formal course.

(ii) Reflectivity

The second component of our RD is the notion of *reflectivity*. Stierer's (2008) conceptualisation of reflective practice as requiring criticality, reflectivity and praxis has been a useful tool in enabling us to make explicit important aspects of the kind of learning and in particular the kind of writing that is required on the course. It also forms the basis for developing cumulative knowledge about teaching and learning. Cumulative knowledge is built on prior knowledge, develops systematically over time in terms of depth and breadth and can be applied in novel contexts (Maton, 2013). We believe that it is necessary for academics to engage in powerful *theoretical knowledge* about teaching and learning and not only to learn a set of strategies or tips for teaching. If they understand the principles that shape how they structure students' engagement with their discipline, they will be able to devise ways to apply the principles in various contexts taking into account the needs of students and of the discipline. This capacity is a necessary condition to counteract pedagogic frailty.

We ensure that academics consider the influence of the shifting higher education context on teaching and learning and in particular the extent to which the student protests have influenced how we understand the various contextual, epistemic, socio-cultural and personal influences on student engagement in and alienation from learning. It is important for course participants to critically reflect on the extent to which their pedagogic practices build ethical relationships (Belluigi, 2012) or engagement with students and offer students "solidarity, hospitality (and) safety" and the extent to which they are able to redistribute power so that students feel more engaged in their studies (Mann, 2001: 18).

In a traditional, research-intensive university such as ours many *academics' identities* are strongly tied up with their disciplines (Henkel, 2002) and/or their professions (Jawitz, 2009). Teaching for them is thus about inducting their students into the traditional disciplinary canon and/or into a specific profession. However, given the decolonial turn, critical questions need to be posed to academics about the degree to which curricula reflect the life-worlds of students and the communities they come from, so that more meaningful ways can be devised to facilitate student engagement with a broader range of disciplinary knowledges. In making this argument we are not advocating that disciplinary canons be disregarded, but rather than they should be expanded to take account of powerful knowledges that have emerged from the global South (Mbembe, 2015).

A major focus of our course has been the role of language and literacies in teaching and learning. South Africa has eleven official languages, but African languages (the home languages of the majority of students) have not been harnessed to promote student learning of disciplinary concepts and theories. We now need to model and argue strongly for the need to create spaces in the classroom for students to use their home languages to build their understanding of concepts and theories in informal exploratory talk (Barnes, 1975) while scaffolding their use of English

in formal presentational talk (ibid) and in writing. We continue to model and offer theoretically sound arguments for pedagogic and assessment practices that make it possible for students to develop the requisite language and academic literacies to study and articulate their learning in the various disciplines.

(iii) Disruption

The third idea in our RD is that of *disruption*. In our engagements with academics we aim to disrupt common-sense notions of teaching and learning. We approach teaching as a scholarly activity underpinned by powerful theoretical ideas about how students learn and what that means for curriculum, pedagogy and assessment (Quinn, 2012). In our course we promote a view of learning as a social process and aim to develop academics' understanding of how students' prior experiences in other social contexts (including school and home) impact on their conceptualisations of what it means to be a student (Boughey & McKenna, 2015). We therefore argue that teaching and learning are processes through which students are socialised into new understandings of the world and new academic practices.

The student protests have sensitised us to the need to expand disciplinary canons. As such we believe it is important to disrupt academics' notions of what constitutes or could constitute disciplinary canons or archives. The process of having to rethink the disciplinary canon and what that means for the selection of course content has the potential to contribute to pedagogic frailty. However, the recognition that doing so is likely to have profound effects on students' conceptions of themselves as learners and concomitantly on the quality of their engagement with the discipline, may contribute to minimising such frailty.

(iv) Difference

The final idea in our RD that we have now expanded is the notion of *difference*. This notion has several dimensions. On the one hand we appreciate disciplinary differences, including different disciplinary knowledge and knower structures (Maton, 2013; Vorster & Quinn, 2012). We continue to respect academics as disciplinary experts; however, we have recognised that it is necessary to ask searching questions about what knowledge is included in the curriculum, where the knowledge comes from, whether it is possible to expand the canon to include knowledge from the global South, whether the examples that are used to explore disciplinary theories and concepts are drawn from local as well as international contexts, and so on. As part of modelling good practice, we also interrogate where we draw the theories from that we use in our course. In addition, we have begun to think about differences between students in terms that extend beyond the safe notions of diversity and that recognises the effects of the intersections between race, class and gender on student identities.

In this section we explored expanded ideas and concepts that make up the RD of the postgraduate diploma in higher education. We have over the years realised the

need to make explicit the values that we as course designers and facilitators share and why we embrace the particular RD that we do. We continue to believe that it is important to be explicit about the regulative discourse that informs our instructional discourse. Through modelling and discussion we encourage academics to be explicit about the regulative discourse that underpins their curricula and pedagogic practices.

PEDAGOGY AND DISCIPLINE

In this section we examine how calls for decolonisation might be contributing to academics experiencing "… a disconnection between the practices of the discipline with the pedagogy that underpins the teaching in the discipline …" (Kinchin, this volume: 6). In our deliberations we came to the conclusion that this *disconnection* has resulted in many academics feeling that their *disciplinary and/or professional identities* are under threat by the calls for them to pay far more attention to how they teach their disciplinary knowledge (see Figure 2).

As alluded to earlier, research has shown that many academics identify more strongly with their disciplines or professions (Becher & Trowler, 2001; Henkel, 2002) than with being 'teachers'. According to Henkel (2002: 138), disciplinary

> [c]ommunities provide the history, the myths, the very language, concepts and values through which identities are shaped and reinforced (MacIntyre, 1981). At the same time, they provide the 'normative space' (Bleiklie, 1998) within which individuals make choices, enter into ongoing dialogue with community members and construct their identities.

What has now emerged as part of the decolonial turn, are new voices, not necessarily from within the disciplines, which are demanding that academics interrogate not only the *knowledge* they introduce to students but also the theories and beliefs which inform their *teaching practices*. Academics are being required to not only think about current *contextual realities*, but also to consider the effects of the historical legacies of apartheid and colonialism on teaching. They are being asked to think much more about exactly what they are teaching, who they are teaching and about whether how they are teaching is appropriate for the students in front of them.

For academics whose identities are strongly enmeshed in the traditions of their disciplines, being challenged to take on an additional 'teacherly' identity is very difficult and contributes to feelings of uncertainty. Particularly in a research-intensive university, teaching practices in some disciplines have not shifted much beyond traditional teaching methods where student groups are treated as largely homogenous (Scott, Yeld, & Hendry, 2007).

Academics are being challenged to develop teaching practices and ways of interacting with students that take account not only of the diversity of groups but also the lived realities of students they teach. They need to see their students as more than consumers of knowledge and to understand that the differences between students are not harmless or unimportant; positionality and subjectivity[1] need to be

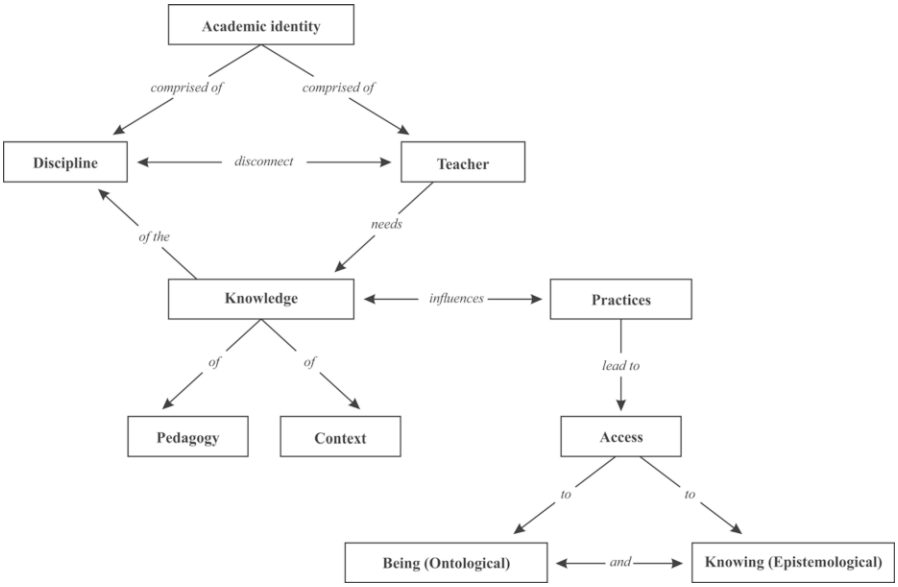

Figure 2. Pedagogy and discipline

considered when pedagogic decisions are being made (Bilge, 2013). By keeping these considerations in mind, academics can also challenge the perpetuation of inequalities in society.

In our teaching we need to find ways of encouraging academics to explore how they can integrate disciplinary and teacherly identities in ways which enable them to recognise that teaching and learning is not only an *epistemological* project, but also an *ontological* one. In their work on the 'ontological turn' in higher education Dall'Alba and Barnacle (2007) and Barnett (2009) argue that epistemology shapes ontology. Knowledge is learned in order for a student to be(come) a particular kind of person in the world. As suggested above, in our courses we insert these sorts of ideas so that academics can make explicit to themselves the RD that underpins their teaching; we then introduce them to a range of teaching and learning theories and practices that can be used to inform their ID. We thus offer them theoretical and practical 'tools' for building their teacherly identities and to become more resilient in the face of the multiple demands that threaten to overwhelm them.

RESEARCH-TEACHING NEXUS

Being an academic in higher education has become progressively more complex and demanding particularly in relation to the tension between the roles of teacher and

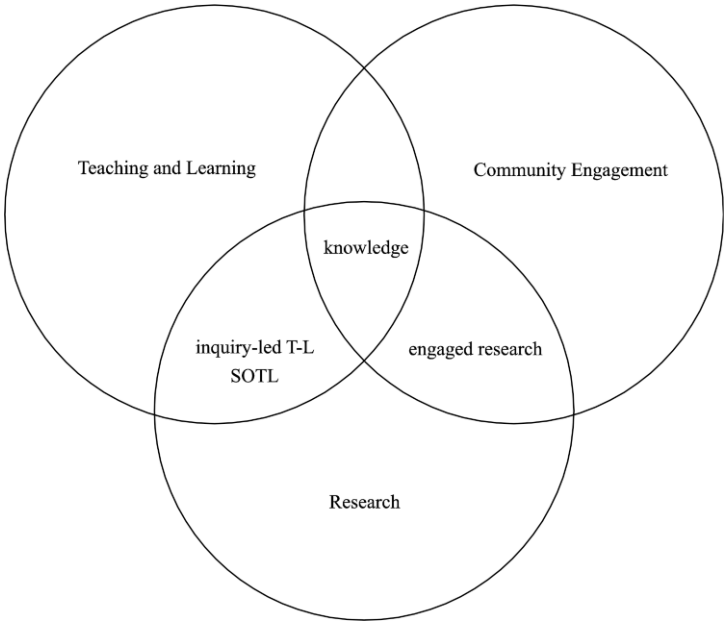

Figure 3. Research-teaching nexus

researcher (see Figure 3). In addition, over the last few years *community engagement* has become a central feature of academic practice. If academics are not able to find a successful way of negotiating their various complex roles and continue to experience these demands as competing, pedagogic frailty is likely to ensue.

In our work with academics we conceptualise the teaching-research nexus as a generative space in which engaging with communities through the pedagogic strategy of service-learning can contribute to both students' engagement with knowledge as well as to the production of new knowledge through what can be understood as *engaged research*.

Service-learning is traditionally seen as situated in the intersection between teaching and community engagement. As a pedagogic strategy it creates opportunities for students and communities to engage in mutually beneficial ways. The nature of the service that students are able to offer and that is needed by the community is negotiated between the respective parties. Students offer their academic knowledge to provide a community service, while at the same time learning from the community. In the process both groups learn and share knowledge and it is possible that new knowledge is produced in the process. Through engaging in service-learning, students experience the community outside the academy as a source of legitimate knowledge and they get to understand the power of disciplinary knowledge to address social issues or contribute to real-world problem solving (Bringle & Hatcher, 2009).

Service-learning is a form of *inquiry-based or inquiry-led learning* and as such can contribute to knowledge production, as part of the scholarship of discovery through generating or discovering new knowledge; as part of the scholarship of application when students apply their knowledge in novel contexts, or through the scholarship of integration where student knowledge from across disciplines and contexts is integrated into new understandings. Furthermore, service-learning is potentially the object of the scholarship of teaching and learning as lecturers undertake research on various ways in which they apply this pedagogic strategy in different disciplinary and community contexts (see Boyer, 1990). Academics can therefore harness the complexity of their academic roles to produce research and publications in their discipline and on their pedagogic practice. Community engagement and engaged research are now included in the criteria for promotion and our university *recognises and rewards* excellence in these areas in the same way as it does excellence in research and teaching.

If academics are able to resolve tensions inherent in the multiple roles of teacher, researcher and contributor to communities outside of the academy through service learning, pedagogic frailty that could potentially result from an over-complex role could be overcome.

LOCUS OF CONTROL

The final dimension of pedagogic frailty which we used in our reflections was locus of control which is '… the connection between the practicing academic and the decision-making bodies that regulate teaching …' (Kinchin, this volume: 6) (see Figure 4).

For decades now academics have felt that the autonomy and academic freedom that used to characterise academia is under threat (McKenna, 2012; Shore & Wright, 1999). In the teaching domain, there are now a number of policies and decision-making bodies (both from national governments and professional bodies) that regulate what should be taught and how it should be taught. Academics feel the locus of control in relation to curriculum and pedagogy is shifting from them as disciplinary experts.

In contemporary South Africa, some academics experience the decolonial turn as external pressure being exerted on them and as an imposition on their *academic freedom and autonomy*. For those who view the purpose of higher education as essentially being a private good for the transformation of individuals, broader forms of *responsiveness* are not regarded as core to their business. The pressure is to move beyond only disciplinary concerns to teaching in ways that are responsive (Moll, 2004) to the economy, the socio-cultural and political *contexts*, and most importantly to the legitimate learning needs of students (Scott et al., 2007). Furthermore, students are no longer content for institutions and lecturers to control the pedagogic device (Bernstein, 2000); they are demanding curricular content that reflects a commitment to *decolonising* the academy.

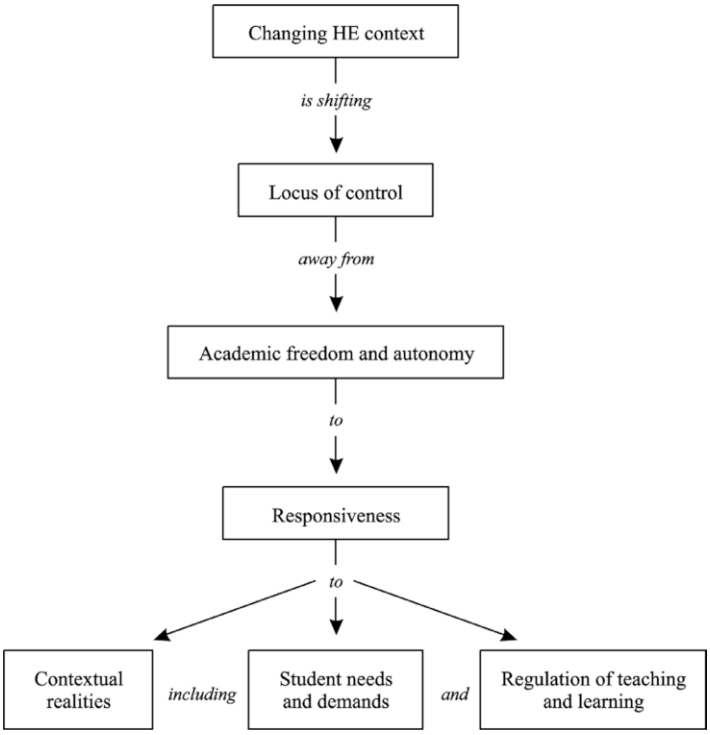

Figure 4. Locus of control

In order to understand what the decolonial turn means for academic practice, in our formal staff development courses we explore with lecturers the impact of contextual factors at all levels (global, national, institutional, disciplinary) on their teaching and their students' learning. We argue strongly for, and model, teaching methodologies that move away from traditional lecturing to methodologies underpinned by socio-cultural and critical theories of learning. We continue to believe in the imperative for teaching and learning processes that enable students to gain epistemological access (Morrow, 1994), that is, access to powerful disciplinary knowledge (Wheelahan, 2010). It is also important for academics to interrogate the extent to which their disciplines include theories, perspectives and applications of knowledge that emanate from the global South and where possible to contribute to the expansion of their disciplinary canons (Nyoka, 2013).

CONCLUSION

In this chapter we considered how the challenges to South African higher education institutions, curricula and pedagogy that have emanated from the student

protests, (2015–2016) have contributed to academics' and academic developers' experiences of pedagogic frailty. The call for decolonisation has resulted in disrupting higher education in unprecedented ways.

Using the four dimensions that contribute to pedagogic frailty we speculated on how academic staff developers in South Africa and possibly elsewhere, can reframe their practices to take into account: Firstly, the need for academics to explicitly articulate a set of strong ideas and shared values to inform their pedagogic practices. Secondly, the need for academics to strengthen their identities as teachers of their disciplines so that they are able to respond to the ontological and epistemological needs of all students, especially those who have, in the past, been alienated and thus excluded from the goods of the university. Thirdly, the need for academics to reconceptualise the research-teaching nexus to include service learning as a pedagogic strategy. This will enable them to recognise and exercise the moral obligation to rethink the roles of disciplinary knowledge, curricula and pedagogy. Fourthly, the need for academics to look beyond the ivory tower of the university and of their disciplines in order to respond to contextual realities in the world so that the real learning needs of all the students in front of them are addressed and all students receive the education they deserve in a country that it is in the process of casting off the shackles of its colonial and apartheid past

NOTE

[1] Positionality refers to how people are defined (race, gender, class, sexuality, etc.) and subjectivity refers to how social, cultural, economic and political factors shape students' lived experiences.

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9. TRAJECTORIES OF PEDAGOGIC CHANGE

Learning and Non-Learning Among Faculty Engaged in Professional Development Projects

INTRODUCTION

In the 21st century higher education contexts, academic faculty face the challenge of developing teaching practice to meet contemporary demands of the rapidly changing world. Consequently, in many higher education contexts professional learning among faculty becomes an integral component in efforts for improving teaching practice. While these endeavours may vary widely in content and format, most share a purpose to change the pedagogical practices, beliefs, and understanding of educators in order to improve student learning (Guskey, 2002). Although a desire for professional learning and growth underlie the motivation for engaging in professional learning activities, participation does not guarantee a change in teaching practice (Brody & Hadar, 2011; Opfer & Pedder, 2011).

In order to achieve the goal of change, individuals must go through an internal process that involves departure from the way things used to be, entering a neutral zone that diverges from the old way but is not yet the new way, and lastly adopting a new beginning (Zellermayer & Margolin, 2005). This process experienced by individuals to achieve change is referred to in psychological literature as *transition* (Amado & Ambrose, 2001). Transition is dynamic in nature, representing how individuals adjust to a new situation and how they respond to change efforts as they let go of current practice or incorporate new pedagogy within their existing practice and then reorient themselves to enable new circumstances, procedures or practices. This process often disrupts existing patterns, creates uncertainty, and may result in confusion, anxiety, feelings of incompetence, and withdrawal (Bolman & Deal, 1999; Brody & Hadar, 2011; Wheatley, 2005). It may also involve conflict, stress, negotiation and compromise (Andrade, 2011).

In order to adapt to the learning situation individuals in transition are involved in multiple evaluations that strongly affect learning behaviours and actions (Helsing, Howell, Kegan, & Lahey, 2008). These evaluations are not always conscious; however, they serve the individual's adjustment to the demands of a challenging learning situation. When the professional learning context is intended to effect pedagogic practice, these considerations can cause resistance or avoidance of change, thus increasing pedagogic frailty. These sometime unconscious responses

I. M. Kinchin & N. E. Winstone (Eds.), Pedagogic Frailty and Resilience in the University, 123–134.

are aimed at maintaining and defending the current professional status, with the hope of stopping, delaying or altering change (Bemmels & Reshef, 1991; Berkovich, 2011; Van den Heuvel & Schalk, 2009). These also serve as defence mechanisms which a person employs in order to protect himself from the demands of the learning situation. By employing multiple evaluations, the learner actually questions the fundamental meaning of the situation (Illeris, 2002). This understanding of pedagogic frailty finds its roots in the psychological perspective on adult learning theories.

PSYCHOLOGICAL PERSPECTIVE ON ADULT LEARNING THEORY

A psychological perspective on adult learning theory looks at the interaction between the conscious and the unconscious evaluations made by adult learners in a professional learning process. In general, adult learning theories suggest that many adults approach professional learning with ambivalence. On the one hand, adult learners usually emphasize that they have chosen to participate in professional learning activities because they want to advance themselves personally and professionally; on the other hand, many join such endeavours because they feel compelled to do so, thus leading to passive resistance and perplexity (Illeris, 2002). Another crucial characteristic of adult learning relates to the adult's need to take responsibility and personally choose, consciously or unconsciously, both the content and the method of their learning (Illeris, 2002). However within a pre-planned learning situation, even when it is voluntary, they experience loss of control which may trigger defences. These defences aid adult learners to cope with contradictions arising from their need to take control and their lack of control in a pre-planned learning situation (Illeris, 2002). This tendency can be even more influential when the adult learners are faculty in higher education one of whose central roles involves teaching, because s/he experiences loss of control in an area which is a central part of his perceived expertise. In that sense, what faculty may conceive of as stable factors in their lives become uncertain. This experience which is mostly unconscious can overwhelm conscious professional learning interests (Baum, 2002). This psychological perspective recognizes the possibility that in a professional learning situation, faculty exhibit unconscious interests in regard to their perceived expertise that matter more to them than using knowledge to advance and change their practice.

An additional form of defence can result from perceived threats to adults' expertise which challenges the professional identities they have developed throughout their career. Actions pointing at maintaining one's professional identity are also coping mechanisms that may enhance or limit actual growth. Theories of adult learning deal intensively with aspects of identity formation in the process of professional learning or change (Usher, 2000). For professionals who managed to build a stable identity this very identity may function as armour preventing flexibility that could enable development and growth. A well-established professional identity can be accompanied by the formation of a strong identity defence that may hinder change (Illeris, 2002).

Furthermore, the presence of a well-formed professional identity can lead to dissonance between self-perception of expertise and a position of learning new and unfamiliar material in the professional development context. This is especially true for the professional learning of higher education faculty members who have reached their position after many years of experience and have a well-earned professional identity as experts. In a professional learning situation for faculty, they are put back to a position of novice, a phenomenon which may arouse uncertainty about their perceived status as experts in their field (Borko, 2004). This could result in dissonance between their view of themselves as expert and their lack of expertise in the new pedagogy (Brody & Hadar, 2011). This dissonance created by the professional development endeavour can hinder the professional growth process by triggering anxiety (Beck & Young, 2005; Sikes, 2006) and activating defence mechanisms as mentioned above. Furthermore, participants who engender these defence strategies in the face of such contradictions do not necessarily recognize these processes as coping mechanisms (Illeris, 2002) and therefore impede their own further learning. The vulnerability of university faculty in the context of professional learning brings to light different aspects of their frailty when confronted with new pedagogies in their practice.

In order to understand the dynamics of higher education faculty transitioning towards pedagogical change and to capture the complexity of his process, multiple perspectives on their evaluations, coping mechanisms and resistance to change are needed (Schmidt & White, 2004). With this challenge in mind, over the past eight years we initiated, lead, and researched seven groups of college faculty involved in a communal professional learning endeavour aimed at pedagogic change (see for example, Brody & Hadar, 2011; Hadar & Brody, 2010, 2013). Among other phenomena, we explored how the participating faculty members fluctuated towards and away from innovation, and how they responded to situational factors by adopting or rejecting new pedagogies. Thus, we revealed salient influences on faculty who dealt with challenges in the course of their professional learning. We address these issues in the following sections.

THE DYNAMICS OF PEDAGOGIC CHANGE

Understanding transition towards change in light of adult learning theory is an important step in attempting to understand pedagogic frailty among faculty in higher education contexts. This connection sheds light on different paths taken by faculty members in their encounter with innovative pedagogies. In attending to this goal of improving the teaching practice of faculty, we mapped some major aspects characterizing the transition of college faculty whom we followed.

Consideration and negotiation of dissonance is one central process that characterizes ways in which higher education faculty engage in the process of applying changes to their teaching practice. Consideration involves examining the new practices from many angles, both emotional as well as pedagogical, while negotiating dissonance involves active balancing of many competing factors (psychological,

emotional, professional). This dual process of consideration and negotiation enable faculty to move out of their comfort zone, try out something new, and then reassess their old practice while appreciating the advantages of the new. One example of how faculty engage in active consideration of dissonance between the ways they are accustomed to teaching and a new pedagogy was brought forward when one faculty member who participated in the professional learning endeavour shared her considerations concerning the integration of new pedagogy in her language course:

> I asked myself: "Can I use this method in the framework of a language lesson?" Even if it is possible in the language lessons, this method takes a great deal of time, and there is this problem of completing the required material. In spite of the fact that this is an excellent method and that [I could see myself using it], I can only do it infrequently.

Consideration of the pros and cons of the new method lead this faculty member to reach pedagogic compromise. Negotiation involves balancing her appraisal of the benefits of the new pedagogy with her allegiance to the prescribed curriculum. Both of these processes drive her decision about whether or not to implement change.

Our experience with professional learning in higher education contexts reveals that the process in which faculty negotiate dissonance in their teaching is characterized by sensitivity to multiple feedback loops affecting their pedagogical decisions. Feedback loops in the context of higher education can originate from different sources. One type of feedback originates from how faculty members understand their student learning, or how they think that learning should occur in the context that they teach. This feedback is based on how faculty members assess students' progress as a result of the newly implemented pedagogy. This feedback takes different forms, such as the presence or absence of student cooperation, engagement, satisfaction, motivation, understanding, achievement, and even excitement. When faculty members feel that the students are learning as a result of their pedagogy, then they feel encouraged to continue. On the other hand, if they conclude that students are not progressing, then they may switch gears and abandon the innovative teaching techniques, returning to tried and true methods.

The following example discloses one faculty's thinking about her students' learning in a course where she implemented innovative techniques. This example clearly shows how she negotiates feedback deduced from observing her students in a class where she attempted to implement new pedagogy:

> The students cooperate. But, it makes me think. It seems [despite their cooperation] that they don't understand. I wonder if this activity really contributes to their learning. I wonder if they are aware of the effort involved in this thinking process. Are they actually aware of their thinking? How can I give a higher value to thinking? They want frontal teaching and to be spoon fed.

A second type of feedback consists of both formal and informal student evaluations of the teaching performance. Adult learners feel a need to manage risks to minimize

harm especially in the presence of those who evaluate them (Edmondson, 2003). Professional learning is a risky endeavour in which learners need to abandon old perceptions, behaviours, and habits and embrace new ones. Risk involves taking action without knowing whether things will work. Our experience in higher education contexts shows that one solution to minimizing risk is simply to avoid engaging in behaviours for which outcomes are uncertain (see also Chapter 3). The problem with this solution is that it precludes learning. On the other hand positive student feedback can bolster faculty's self-confidence to integrate new pedagogies into their teaching, thus expediting the process of transition towards change.

A third type of feedback relates to the institutional messages about the relevance and appropriateness of pedagogical innovation attempted by faculty members. In our research we found evidence that support for faculty learning leads to increased satisfaction, sense of belonging to the institution, and commitment to developing teaching practice. A feeling of belonging is an important and powerful need, and individuals' sense of belonging to the institution is a central contributor to the organizational culture (Stroope, 2011). Sense of belonging promotes commitment, responsibility, and satisfaction. This feeling increased faculty members' commitment to making significant and lasting changes in their practice while it decreased faculty's vulnerability, insecurity, and fear of implementation.

On the other hand, negative feedback from institutional authority can have a deleterious effect on implementation. The effect of negative feedback through institutional messages is seen in the following example when one faculty member implemented pedagogic change by bringing his students to the library to actively investigate a topic. He was rebuffed by the librarian, and this incident squelched his willingness to innovate in his courses in this institution. He reported on this incident to the group:

> The librarian wrote a letter reprimanding me, and sent a copy to the college president. She wrote that she will not accept such activities in the library. I felt so frustrated…. When the librarian and the college president didn't know what stands behind the activity, it caused a blow-up… Wow, and I thought I was going to get dismissed in the middle of the semester. But when the [college] environment is supportive, it could have been a different story.

The dynamic process in which faculty members consider, evaluate and negotiate pedagogic development through various feedback loops characterizes their transition towards change. For many in our research, this dynamic process created dissonance. In these cases the process of negotiation supported their decision whether or not to implement change. While all faculty members that we followed engaged in these processes, individual experiences differed in *the content* of the negotiation. Based on evaluation of current circumstances, faculty members were found to exhibit different modes of adjustment, defining their adaptation and reaction to the pedagogical changes. Such reactions can be explained by the manner in which faculty members negotiate input from different feedback loops. As mentioned above, one common reaction

rooted in the negotiation process concerns defence mechanisms that higher education faculty members develop as they confront new possibilities for professional growth.

THE MULTIPLE FACES OF DEFENCES TO LEARNING

In the context of higher education teaching, pedagogic frailty can stem from a range of avoidance strategies that adults adopt in order to cope with the circumstances of concrete learning situations. These can hinder professional learning and growth either temporarily or over the long term. We understand these coping strategies to be defence mechanisms, and some are more conscious or visible than others. These strategies prevented faculty who participated in our groups from implementing pedagogic changes in their practice.

One on the most dominant avoidance mechanisms results from the faculty member's claim to expertise in teaching combined with their self-assessment as experts. The resulting avoidance strategy manifests itself in multiple ways. Some participants avoided implementing new pedagogies by relying on their current practice, which they claimed to be identical with new methods presented in the professional learning process. One example of claiming expertise in seen in the following quote in which one faculty member confirmed that her own pedagogy resembled the newly introduced method:

> In my case, I find that this is exactly what I have been doing each year in the first semester. My view concerning teaching is that you cannot teach in the classroom without teaching the students thinking skills…. When I joined this group I thought that there is something beyond… I feel that these are exactly the same things... So I am satisfied … Our meetings give me the feeling that I am doing it right, that I am doing it well, and I should continue as I have always done.

These expressions explain why this faculty member exempts herself from engaging in transformational learning. Her claim for expertise serves as an avoidance mechanism. Once she determined that she was already implementing the proposed pedagogy and claimed that her established practice coincided with innovative approaches, she saw no need to acquire new pedagogies. Continued participation in the professional learning process served to strengthen her sense of expertise. As new pedagogies were brought to the fore, she continued to identify them with previously used teaching methods. In their reliance on their current practice, other faculty attempted to use elements of their ongoing teaching in order to claim expertise in the new pedagogy, thus resisting change by providing evidence for their well-established professional identity.

The claim for expertise can manifest itself in additional forms, one of which is bringing evidence from students' thinking. As noted above, negotiating change involves different feedback loops. One of these loops in higher education contexts comprises assessing student learning. This assessment can obviate the need to acquire

new skills because the teacher concludes that the students are already learning with the current methods. An example of such a claim follows:

> I cannot tell you exactly how I do it, I am not sure that I can. But I do it. And from the assignments that the students hand in I can see that the students understood that they have to think.

Another form of faculty's claim for expertise involves relabeling current practice by acquiring professional nomenclature for procedures already in use and previously unnamed. This form of avoidance views the contribution of professional learning to be limited to provision of correct and current terminology without any significant change in teaching practice. An example of this assertion of expertise is evident in the following quote made by a participant in a professional learning course:

> During the meetings I felt that I have received positive feedback for what I am already doing. The meeting confirmed many things that I have been doing intuitively in my courses. It gave me definitions, a framework, something more accurate. We talked about higher order thinking skills (in the group) and I realized that this is exactly what I am aiming for – to develop higher order thinking skills. What I have learned is to be more accurate in the terms I am using. I have received new terms for the things that I am trying to do.

The different faces of faculty's claim for expertise serve as avoidance from changing current pedagogy while leading to the same outcome of inaction, as faculty members boast assuredly that their practice is up to date. By this claim for expertise they therefore strengthen pedagogic frailty.

While many faculty members in our groups related to their knowledge, expertise, prior experience, and existing teaching practices, they also talked about student opposition as an inhibitor to pedagogic innovation. We call this avoidance mechanism the appraisal of student perspective. Arguments concerning students' disapproval remove responsibility from the faculty member to implement changes in his/her teaching and places blame for inaction squarely on the other. Students may react negatively to challenging and difficult learning situations. When faculty members foresee such responses, they might back away from these teaching techniques in order to satisfy their students. In addition to a genuine desire to meet the demands of the students by avoiding challenging tasks, some faculty exercise caution in their teaching for fear of low student ratings. We have already discussed this issue above in relation to evaluation of feedback loops. Indeed, in the current higher education contexts, when teaching practice becomes more and more important, poor evaluations might result in a low teacher rating, and reduced enrolment in courses taught by teachers with low ratings. An example of this concern is expressed in the following quote in which one faculty member related to the conflict between wanting to engage the students in thinking while fearing their dissatisfaction and its consequences:

> I can require something, and the students see this as more difficult. I made their life difficult, so I become the bad teacher, and someone else is the good teacher, because he doesn't make those challenging demands. So it's a conflict. You know you are going to be a very very very demanding professor, and you are going to request these difficult things all the time. It's not simple.

Another common explanation for lack of pedagogic development concerns the faculty claim of lack of fit with the reality of the higher education institution. Without attempting to try out or adapt new methods in their own teaching contexts, some participants in a professional learning course made a blanket assessment that all the methods being taught were inadequate. This criticism led them and colleagues to resist adaptation of the methods, and served as a strategy of resistance to innovation. The following conversation between four faculty members occurred in one of the professional learning meetings:

Teacher 1: *It needs to fit into what we're already doing. These methods don't fit naturally. They seem very artificial.*
Teacher 2: *Maybe it does not need to be so visible. Maybe if we do this invisibly then we will have fewer problems.*
Teacher 3: *The methods don't work with our teaching situation. It might work great elsewhere but not here.*
Teacher 4: *These practices are better for young ages, not college students.*

In this conversation change in practice was avoided by the perceived inadequacy of the new methods in the context of the college reality. Interestingly the possibility to adapt those methods did not arise, nor were these faculty members interested examining their claims in a more thoughtful manner.

Lack of fit with the higher education context reality is often related to concerns with compliance to standards. The need to achieve externally or internally imposed content standards was found to be a particularly salient factor in preventing implementation. In these cases, faculty members express a dilemma between emphasizing meaningful pedagogy and covering material in their syllabi. The tacit source of standards elicits a conflict that leads to reconsideration of implementation. This conflict is evident in the following quote, elicited from a Bible professor:

> I think that perhaps you feel (the conflict) even more because of the demands for coverage of material. I feel this also because I am supposed to teach the book of Joshua, and by the end of the course I reach chapter 6… when there are 14 chapters, and this is not okay. And (the students) will feel "Wow, we only did five chapters… what about the expectation that we know the entire book?"

In addition to material coverage, time constraints are another contextual barrier to pedagogic development. This issue is at stake in the following quote, made by a participant in one of the professional learning sessions:

> The structure of the courses here prevents me from doing this. There is not enough time. The students need to attend class, they need to do the assignments, and they need to take the test, so you cannot ask them to do extra and you cannot count on them to prepare something from one session to the other. You cannot do it instantly.

In these two examples the argument for standards comes to the fore and leads to avoidance of pedagogic development. While innovative approaches appeal to these faculty members' pedagogical judgment, their perception of pressure due to academic standards leads to their pedagogic frailty.

IN CONCLUSION

In this chapter we addressed the issue of pedagogic frailty by presenting different ways in which faculty members in higher education institutions deal with the possibility of pedagogic development in the context of professional learning. We analysed faculty's reactions in the learning situation in light of the psychological perspective on theories of adult learning (Illeris, 2002). Through this lens we indicate how adults typically react to professional development endeavours by generating various strategies to cope with the concrete learning situations but also to protect their self-esteem and maintain their professional identities and self-respect without risking their current stature.

We show how faculty members engage in multiple evaluations of the learning situation and show how they generate various coping strategies. In relating to the issue of pedagogic frailty we presented those strategies that we understand to be defence mechanisms, and recognize that the faculty members were largely unaware of these processes. Evidence for this lack of awareness can be found in their self-assurance in asserting their expertise regarding the pedagogic innovation (in our case – thinking education). These assertions were made in the context of non-implementation. Rather they repeatedly spoke about former accomplishments.

As discussed in the beginning of this chapter, strategies developed by adult learners to deal with the contradictions of the educational situation are not always conscious endeavours (Illeris, 2002). Each of these various defence mechanisms to implementing new practices show that addressing pedagogy in higher education contexts challenges not only the faculty members' knowledge and skills but also their professional identity. Examples of strong identity claims such as "*I have been doing it for ages*;" *"I was one of a kind in this respect,*" appear frequently in our groups and lend credence to our claim that a strong professional self-identity often leads to resistance to change, as suggested by Beck et al. (2005) and by Sikes (2006). Faculty members' motivation to confirm their own expertise creates dissonance when they are confronted with new and unfamiliar pedagogies.

The dissonance (Harmon-Jones & Harmon-Jones, 2008) between the perceived professional identity as expert and the possibility of reverting to a status of a learner in the new domain of the professional development leads to attempts to defend one's own status. The resolution of this dissonance leads faculty members to look inward in order to support their current practice by claiming expertise in a variety of ways. In addition, they resist new practices by looking outward and by searching for external reasons such as students' perspective or compliance to standards. In the context of teacher education, Murray and Male (2005: 136) call this phenomenon "experts turned novices". This uncertainty itself leads to defensive behaviours in the face of new and unfamiliar academic subject matter.

In this chapter we provided support for the claim that faculty members struggle to maintain their perception of themselves as experts, while using various strategies to protect their identity and maintain themselves as masters of their own learning processes and behaviour. While claiming expertise, most faculty members showed interest and enthusiasm about the proposed pedagogy; however, many refrained from implementing changes in their practice. This process points to what Illeris (2002) refers to as uncertainty about the rationality and sense of the professional learning project. Some resistance strategies were conscious as faculty talk openly about not implementing new pedagogies in their courses. Both conscious and unconscious strategies serve as coping techniques with the new information presented in the professional development framework.

Planners of professional learning in higher education contexts need to consider the personal struggles of faculty in transition towards change. The professional learning endeavour can productively address the dilemmas and uncertainties that arise throughout the process. Such a framework needs to not only support participants as they learn but also find ways to encourage a spirit of critical inquiry where professionals gain insight into their own learning and identity assumptions. While individuals' conceptions about their practice can be very resistant to change, professional development programs should address these limiting beliefs and assumptions, thereby helping participants acquire new ones that are aligned with more effective practices (Hadar & Brody, 2017). An appropriate framing of professional development includes a respectful attitude towards the struggle in which these faculty members engage as they deal with dissonance between their established professional identity and the challenge of innovative pedagogy.

This fine grained presentation of transition towards pedagogic change serves to enhance our understanding of pedagogic frailty among faculty members engaged in professional development projects and the challenges they face when they choose to improve their pedagogy by learning about innovative practice.

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10. PEDAGOGIC FRAILTY AND THE RESEARCH-TEACHING NEXUS

INTRODUCTION

'Publish or perish' has been a phrase that has summed up the work of academics for at least the last half century. The need for research publications to move one's academic career forward has become a source of tension between that and the other main focus of the academic, that of teaching. Teaching, by itself, is not often seen as a scholarly activity whilst research is, and thus research often represents the embodiment of an academic. Boyer (1990: xii), however, suggests it is time for universities to 'break out of the tired old teaching versus research debate' and instead look at broader conceptualisation of what the role of the academic is, by redefining 'scholarship as purely research' into four categories. In his categorisation, there are four main types of scholarship for a discipline:

- Scholarship of discovery: this is the search for knowledge (and the current concept of pure disciplinary research);
- Scholarship of integration: this is finding the relationships of knowledge between disciplines (the current concept of interdisciplinary research);
- Scholarship of application: applying knowledge to solve problems at the societal level (the current concept of applied research);
- Scholarship of teaching: both the enterprise of acquiring knowledge of the discipline and how to teach it (a conflation of both disciplinary knowledge and pedagogical practices).

Even with this new categorisation of scholarship, there is still more emphasis on research and less on the teaching. Further, the categorisation of scholarship of teaching, in fact, contains three aspects of scholarship, that of:

- acquiring knowledge of the discipline (that is being "well informed and steeped in the knowledge" of the field (Boyer, 1990: 23);
- acquiring pedagogical knowledge of how to teach the discipline;
- conducting pedagogical research within the discipline (also referred to as the 'scholarship of learning and teaching' (SoTL, see Hubball, Clarke, & Poole, 2010).

However, these aspects of scholarship of teaching still do not carry the same prestige for an academic's career, as the other three types of scholarship (discovery,

I. M. Kinchin & N. E. Winstone (Eds.), Pedagogic Frailty and Resilience in the University, 135–149.

integration and application) are all related to disciplinary research scholarship. This creates an environment where the scholarship of teaching and the scholarship of research compete for academics' time and energy resources. This competition for resources, according to Kinchin (2016), is a reason that pedagogic frailty may occur, unless there is a resolution on how the resources are distributed.

In this chapter, I consider that the potential for pedagogic frailty is manifested when the academic's scholarship of teaching becomes weakened, and pedagogical frailty is explored further within this context of the academic's research and teaching roles. The definition of the academic is taken to be anyone who is employed for teaching and/or researching in the higher education context. This is a broad definition of academic as the nature and role of academics are changing, with many academics now on teaching-only or research-only contracts. This definition certainly does not reflect the Humboldtian ideal of research and teaching as mutual prerequisites of academics which are merged rather than separate roles (Josephson, Karlsohn, & Östling, 2014). In fact, Humboldt, during the 19th century, expected that academics should be able to test and develop new knowledge with their students through a dialogic process and this constituted the merging of research and teaching (Josephson et al., 2014). This is quite different from Boyer's idea of scholarship which still keeps research and teaching separate. Hattie and Marsh (1996) found that for academics, there is no relationship between teaching and disciplinary research. That is, an academics' research and teaching roles are mutually exclusive. However, Robertson and Bond (2001) have found that this is not as clear cut, in that academics have varying experiences of the relationship between research and teaching (see Table 1) and these roles can merge. For example, they found in their study that there were two relationships that appeared to resemble the Humboldtian ideal (Relationships D and E) and two relationships resembling the findings by Hattie and Marsh (1996) (Relationships A and B).

Table 1. The five qualitatively different experiences of the relation between research and teaching (from Robertson & Bond, 2001)

Experiences of the relationship between research and teaching
A. Research and teaching are mutually incompatible activities
B. Little or no connection exists between research and teaching at undergraduate level
C. Teaching is a means of transmitting new research knowledge
D. Teachers model and encourage a research/critical inquiry approach to learning
E. Teaching and research share a symbiotic relationship in a learning community

Using the work by Robertson and Bond (2001), Jones and Kinchin (2009) suggested five different teaching-research environments that the academic can experience within a research-intensive university. These are extended here to eight categories to take into account situations that may arise in teaching-intensive universities (see Table 2).

Unlike Jones and Kinchin (2009) that used the categories to represent environments, in this chapter, they are used to represent the type of research-teaching roles that an individual academic may adopt depending on how he/she allocates his/her resources of time and energy. These roles represent the extent to which an alliance between research and teaching is forged and the nature of that alliance.

Table 2. Qualitative variations in research and teaching roles depending on resource distribution (adapted from Jones & Kinchin, 2009)

Research-Teaching Nexus Resource Distribution	*Description*
Teaching-absent	Teaching is not present at all. The academic is purely a researcher.
Research-absent	Teaching is conducted in an environment where research is not undertaken. The academic is purely a teacher.
Research-separated[1]	Teaching and research are undertaken equally by the academic but resources are kept separate
Research-drained	Academics' time and energy spent on research and teaching are unbalanced to the detriment of teaching. Resources are diverted towards research.
Teaching-drained	Academics' time and energy spent on research and teaching are unbalanced to the detriment of research innovation. Resources are diverted towards teaching.
Research-informed	Research and teaching are connected and hence some resources are used to do both. Research is used to inform teaching.
Teaching-informed	Research and teaching are connected and hence some resources are used to do both. Teaching is used to inform research.
Research-integrated	The boundary between teaching and research is blurred as they are seen as complementary components of academic practice and the same resources are used to do both.

For both the research- and teaching-absent academic staff, those academics are contractually obligated to do only teaching and research respectively. All the other academic roles have both teaching and research as a requirement of their contract and in those roles, it is the individual as well as their work environment (for example, teaching-intensive versus research-intensive universities) which may determine the nature and extent of an alliance between research and teaching.

The roles of the academic which are adapted from Jones and Kinchin (2009) are used for organising this chapter and discussing pedagogic frailty. In using these different perceptions of the research-teaching nexus, the chapter looks to how pedagogic frailty may manifest itself within each of these perceptions and to consider

which might have a greater influence on an academic profile in promoting pedagogic frailty. Inevitably, generalisations are made within each category that may not represent all academics as there may be individuals that may deviate from the norm.

TEACHING-ABSENT OR RESEARCH-ONLY

In the teaching-absent role, the academics are researchers (such as research fellows) and hence only engage in the scholarship of disciplinary research. There are limited opportunities of doing any teaching and hence they have little chance of developing and improving their scholarship of teaching except in improving their disciplinary knowledge. These academics are facing the greatest potential for pedagogic frailty as their limited knowledge of pedagogic practice may be further weakened by a role in which teaching is not valued, encouraged or expected.

RESEARCH-ABSENT OR TEACHING-ONLY

In many universities around the world, there has been a rise in Teaching-Only faculty members. These teaching professionals' contracts do not have a research requirement (see for example Geschwind & Broström, 2015). In the UK, some universities call these professionals "Teaching Fellows" and they are (depending on the university) not considered to be full-fledged academics as they do not carry out any research responsibilities (see for example UCL, 2016). Hence, they may be seen as lower in status than lecturers with research responsibilities (Mitten & Ross, 2016). In some UK universities to minimise this inequality by the use of titles, they are sometimes given the title of Lecturer (Teaching and Scholarship). Whilst these teaching-only academics do not have a research role in their discipline, they are expected to ensure they improve on their scholarship of teaching namely in either disciplinary or pedagogical knowledge, but not necessarily pedagogical research.

The question here is whether, in this situation, there is potential for pedagogic frailty. As these academics' main role is teaching and hence expected to have continuing professional development (CPD) in both their disciplinary and pedagogical knowledge, it may be expected that there will be limited pedagogic frailty. However, this is where a disjuncture may arise in expectations. As these academic staff are seen as teaching-only, there may be limited allocated space for the scholarship of teaching as they usually have high teaching loads. For example, in some universities within the UK, this can be as high as 18 hours of contact time per week or a total of 550 hours of contact time per academic year (UCU, 2015). Within a 40 hour week, this workload does not allow sufficient space for reflection on teaching, updating pedagogical practice and engaging with both new pedagogical and disciplinary literature except during the five weeks outside the teaching year. However, these weeks could often be filled with administrative duties. Instead, these teaching-only academics during the term time are often 'just surviving' their

teaching as they prepare their materials, meet student queries as well as be involved in the required administrative duties of their job and hence there is little space for engaging in the scholarship of teaching.

In addition, these teaching-only academics are likely to benefit from academic development when they first start their job (such as the popular Postgraduate Certificate in Academic Practice in the UK). However, this might be the only pedagogic training they attend and there is perhaps little time after this training has finished to up-skill unless there is a genuine interest to do so. They are thus minimally skilled in searching and finding pedagogical knowledge for their discipline or in having the awareness of which communities of practice they can join to help them develop their pedagogy. Further, they are less likely to go to pedagogical or disciplinary conferences to update their teaching practices as these places are often funded through research grants or departmental research budgets. As teaching-only academic staff are unlikely to present at these conferences, departmental budget holders may find it more parsimonious to fund a place for a research-active academic.

Therefore, these academic staff may have little opportunity for updating their pedagogical and disciplinary knowledge from the time they were trained initially. They may then be unaware of their weaknesses and become out-of-touch with the new directions of their pedagogical and disciplinary fields. This may thus lead to the fracturing of up-to-date pedagogical and disciplinary knowledge across the community which may leave individuals eventually having feelings of low self-efficacy in their discipline and teaching skills (see Tierney, 2016). However, some academic staff may engage in the scholarship of research covertly. As some of these teaching-only academics are trained to the doctoral level, research is not new to them and they can carve out personal time to conduct scholarship in research and teaching (Tierney, 2016). This, however, may create tensions in the system between those who are conducting research and those who are not. This difference in view may contribute to the development of an environment of frailty.

Further, as the teaching-only academic staff are being evaluated only on teaching (and not any additional aspects such as their research), they may be tempted to stay safe in their pedagogical practices and limit their evidence-based innovation, as other additional parameters such as research cannot compensate in their performance appraisals, if their teaching practices are lacking. These academic staff, therefore, may require a supportive community that can help draw them out to engage in updating their pedagogy and disciplinary knowledge to not be afraid to read and be involved in pedagogical research and to try new and different practices (Hubball et al., 2010). These teaching-only academic staff can possibly look to online communities of practices, such as those that are on JiscMail (a worldwide National Academic Mailing List Service), for developing their scholarship, but the usefulness of the communities of practice can be dependent on whether there is a strong disciplinary presence online.

RESEARCH-SEPARATED

This section explores the issues of pedagogic frailty that face those academics who perceive having equal teaching and research responsibilities, that is, the teaching and research are seen as equally important to their career and to themselves. The question I raise here is that since equal time and effort are devoted to teaching and research, is it possible for pedagogic frailty to occur? In this particular instance, the academic keeps their two identities separate, one as a researcher and one as a teacher. The academic carves out sufficient time for both. However, in the instances where research is mainly disciplinary rather than pedagogical, this is where indicators of pedagogic frailty might start to form unless steps are taken to minimise this, either through serendipity or design. In this particular role, teaching is seen in one camp and research in the other, and there is no requirement of pedagogical research, unless for personal interest. Although no pedagogical research is occurring, disciplinary research continues and these academics are able to go to conferences and meet other disciplinary academics in their fields. Whilst disciplinary research may be the main highlight of their conversations at the conferences, as these academics are also interested in teaching, they may have instances where they share the practice of their teaching with others who teach similar disciplinary topics. However, these are serendipitous rather than planned instances. These serendipitous incidents of sharing pedagogy with other academics (George, 2005) may not be grounded in pedagogical evidence but rather as tips and tricks. In this way, these research-separated academics are at an advantage over the budget-limited Teaching-Only academics in that they are able to meet academic staff from different universities and countries and share in different teaching tips; the Teaching-Only staff are more susceptible to occupying locally isolated knowledge silos.

It is possible that these Research-Separated academics can then cascade the serendipitous teaching practices to other colleagues in their department. They are perhaps then placed at an advantage being able to meet like-minded colleagues, improve teaching practice as well as their disciplinary research. This ensures better upward mobility for them in terms of their academic roles as a researcher and teacher. However, pedagogic frailty may occur across a local community if these academics are unable to identify and determine these serendipitous instances of teaching practices and act upon them. They may not be able to keep abreast with developments in pedagogical knowledge or conduct pedagogical research but they can keep abreast with their disciplinary knowledge. Further, if the academic is satisfied with their research outputs, and their department and institution are also satisfied with these outputs, then the likelihood is that the academic will continue seeing their roles of research and teaching as separate. In this instance, the research-teaching alliance is minimally threatened and there is limited opportunity for pedagogic frailty. However, pedagogic frailty may be more likely to occur when the department may start requiring more from the individual either in research or teaching. They may then start straying into one of the other roles.

RESEARCH-DRAINED

For the Research-Drained academic, research is seen as the most important aspect of their role and teaching is only a necessity of the job. These academics are most likely to be found in research-intensive universities. There is more of a threat of pedagogic frailty in these instances as there are likely to be more unresolved tensions. Firstly, for this academic, teaching is not uppermost in their minds and it may be seen as an aspect of their role that they can compromise on as excellence in this area makes a minimal contribution to their career advancement. As Shulman (1993: 24) puts it:

> Like it or not, the forms of scholarship that are seen as intellectual work in the disciplines are going to be valued more than forms of scholarship (such as teaching) that are seen as non-disciplinary.

Gonzales, Martinez, and Ordu (2014: 1108) provide further evidence of this partitioning of the roles of the academics. For example, one of their participants remarked: *'[I am] more focused with time, spend less time on things that do not contribute to success in research and grant writing*'. In this role, pedagogy is not at the forefront of the academic's mind and therefore teaching may be perceived as a job to be done expediently, that is, the development of 'routinised' expertise (Kinchin, 2016). There may be a temptation for the academic to undertake minimal development of lectures resulting in the use of the same lecture notes year after year with no updates, or using the same teaching methods that they are accustomed to without any reflections on how to change – unless there is some external force that stimulates change (such as low teaching evaluations). Except for those with a genuine interest in their students' learning, the prevailing mindset that may develop is a *laissez-faire* attitude to the scholarship of teaching. This is perhaps a reflection of the changing higher education landscape from the Humboldtian ideal to one in which an academic's worth is measured by their research contributions, not teaching. This ideology of academic worth is based on research and is perhaps re-emphasised where international university league tables measure institutions based on their research citations and perceptions of research prestige with little accounting of the teaching beyond staff-student ratio (for example Times Higher Education World University Rankings and Quacquarelli Symonds (QS) World University Rankings). This ideology of academic worth is strengthened even further in those countries where universities' government funding is linked to research outputs such as in the UK with the Research Excellence Framework (REF). To re-address the balance, some league tables try to account for more aspects of teaching or as here in the UK, the introduction of the Teaching Excellence Framework (TEF), the counterpart to REF.

However, this is not sufficient for ensuring that teaching is seen as equal to research as the fundamental challenge is that research is perceived to be an individual effort whilst that of teaching is a shared effort. For example, with research, it is easy to pinpoint that Person X is an excellent researcher by having brought in large research grant funding and had a high number of impact publications. Teaching, on the other

hand, is a shared endeavour across the university and departments and hence an increase in student numbers and their outcomes has little monetary value attached to it, as the income is shared. Therefore whilst Person Y may be an excellent teacher, there are no monetary or tangible outputs to measure this excellence. Therefore, the academic may distribute their resources (such as time and energy) into improving themselves for where there are recognition and monetary rewards, which in this case will be research. However, this leaves these academics in a vulnerable position for when they can no longer attract research income or produce high impact research publications. They may eventually find themselves being more teaching-facing, as their grants can no longer buy-out their teaching time, and being unable to cope adequately with more teaching.

For these Research-Drained academics, their pedagogical knowledge is likely to be weak as their experience in teaching would have been limited as research bought out most of their time. Further, unless their research was interdisciplinary, it is likely that they conducted research in a narrow field, and would, therefore, need to update their wider disciplinary knowledge as it has changed and emerged. This is because an academic needs to be both a generalist and specialist in the disciplinary knowledge, as they are likely to teach a range of subject areas in their discipline. The Research-Drained academics may therefore only be aware of specialist knowledge which makes it difficult for them to teach the generalist aspects of the subject. The Research-Absent and Research-Separated academics are therefore at an advantage over the Research-Drained as they perhaps understand conceptually better how all the knowledge in their discipline is inter-related because they have to teach different courses on a regular basis. These Researcher-Drained academics may thus need to take some refresher workshops or continuing professional development to help them keep up-to-date to ensure limited pedagogic frailty.

TEACHING-DRAINED

In contrast to the Research-Drained academic, there are the Teaching-Drained academics who are most likely to be found in teaching-intensive universities. These academics have a large teaching role with a requirement for some research, where both their teaching and research roles are kept separate. In this role, academics are trying to re-divert their energy and time resources from teaching to do research because of their own self-interest and their credibility as academics. Similarly to the Research-Drained academic, the Teaching-Drained academic may see their teaching load as an impediment to achieving their research objectives. The difference being these two academic roles is the level of time that each academic has under their control. The Teaching-Drained academic will have the least autonomy in controlling his/her time, as their time would be constrained and scheduled by their large teaching commitment which may be similar to the Research-Absent academics.

This sentiment of needing more research time may lead to short-cuts or pedagogical efficiencies (Gonzales et al., 2014). Efficient pedagogies by the Teaching-Drained

academics can be generated in order to have both effective and efficient ways of teaching. Pedagogic efficiencies can provide situations in which pedagogic frailty may occur. For example, one pedagogical efficiency to reduce teaching workload may entail creating group assessments rather than individual assessments, which in some situations can be more appropriate. This can lead to issues of quality assurance and grading such as ensuring that each student in a group has achieved a grade commensurate with their meeting of the learning outcomes measured by the assessment. However, it may also lead to ways through which pedagogy can evolve, adapt or innovate, that is, more efficient ways of assessing students that may arise which can either lead to frailty or innovation and creation. In the former case, pedagogic frailty may arise if one of these pedagogical assessments try to meet the needs of lecturer (such as less marking) rather than the needs of the students such as the use of automated multiple choice questions which are based mainly on information recall. However, there can be a creation of innovative assessments that can do both; for example, the use of recorded oral and peer feedback (Gibbs, 1999; McCormack & Taylor, 2006). This is more efficient and students prefer oral to written feedback in some cases. However, pedagogical efficiencies may not always lead to pedagogic frailty but there may be some pedagogical bending. In pedagogical bending, the rules of the disciplinary pedagogy may not at first be acceptable to the pedagogical efficiencies and hence pedagogical rules need to become acceptable through appropriate evidencing of practice, that is, through pedagogical research. For example, oral feedback may not be the accepted procedure within the discipline and hence rules need to be bent until appropriate evidence is provided to show why these pedagogical innovations are acceptable.

Further, one may conjecture that the sharing of pedagogical knowledge by Teaching-Drained academics would be the same as for Research-Absent academics. However, in this environment, universities which emphasise teaching usually ensure that their professionals are up-to-date with pedagogical knowledge and may have a number of internal/external seminars or conferences which encourage academics to share practice and be aware of new practices as well as providing funding for teaching innovation. However, these teaching-intensive institutions with mainly Teaching-Drained academics may face a risk if their academics want to achieve more acknowledgement of their research and may use the teaching-intensive institution as a stepping stone in order to gain an academic role in a university which dedicates more time to research. Thus, any pedagogical initiatives that were started up by these individuals may be left without anyone to steer them and hence the institution may have a limited pedagogical knowledge economy within which shared knowledge can be transferred.

CONNECTED RESEARCH AND TEACHING

In both the Research-Informed and Teaching-Informed roles, the academics can benefit from a symbiotic relationship between their research and teaching roles,

that is, the roles complement each other rather than being separate and competing entities. In this instance, there are two perspectives of describing these roles: research informing teaching and teaching informing research. This is not to be confused with how Griffiths (2004) explains curriculum design based on the research-teaching nexus and later further developed by Healey (2005) and Healey and Jenkins (2009). In the model by Healey (2005) and Healey and Jenkins (2009), the focus is on the learning gains of the students through a research-teaching nexus but not on the scholarship of teaching and the issues relating to pedagogic frailty which is the focus of this chapter.

Research-Informed Teaching

Research-Informed academics wish to link their research to their teaching by teaching the areas that the academic currently researches (Douglas, 2012). This can work quite successfully depending on student level. For example, masters and doctoral students are at the level to learn about current research developments and how this impacts on issues they are researching or learning about. However, at the undergraduate level, this may be less successful, depending on the discipline such as the physical sciences where students are still grappling with the basic underpinning disciplinary knowledge. In terms of scholarship of teaching, these academics are able to update their disciplinary knowledge. Further, the transfer of research knowledge into a pedagogical format may provide some challenges to the Research-Informed academic and hence are more likely to engage in pedagogic scholarship to determine the appropriate way of incorporating research into their teaching. For example, Douglas (2012) noted that the Research-Informed academics in his study drew from examples in their research for teaching as well as using their teaching sessions as a way to test research questions and gather data. One of the pitfalls that a Research-Informed academic may fall into if they have not engaged fully in pedagogic scholarship is that their teaching may tend to be more like a research conference presentation to students rather than a learning experience which informs the programme curriculum and student learning outcomes. This can lead to problems in the students' understanding of the topic as there may be no backwards and forward linkages between subject areas and topics in past and upcoming lectures and/ or modules – particularly for undergraduate students who are still trying to develop relational knowledge.

Teaching-Informing Research

Teaching-Informed Academics use their teaching to inform their research which may lead to less pedagogic frailty as it strengthens their pedagogical stance. In this role, academics are actively seeking to see how the theories they teach can influence what they research and to test these in different situations. For example, those academics who teach more generalist or even cross-disciplinary modules are more

likely to come across incidents of different theories in their field that they might be unfamiliar with but have the opportunity to learn through teaching it. Through the teaching of the theories, they become familiar with the concepts and are hence able to use them in their research. If they use it in their research, then it strengthens their disciplinary knowledge and research. Further, this can strengthen their teaching in the future, as they can use their research as examples of how particular theories are used for their students. Here, the teaching-informed academics are engaged in both their teaching and research and have an intrinsic motivation to both and hence there may be limited pedagogic frailty where this is the dominant model for a teaching community. However, a teaching-informed academic working in an environment dominated by disciplinary research may be an outlier, and therefore at risk.

RESEARCH-INTEGRATED

The Research-Integrated academic's role is where there is no separation between research and teaching. This is where research and teaching are seen as one. This is perhaps similar to the teaching-informed research but the difference here is that teaching and research cannot be distinguished but are considered as complementary components of a holistic academic role. In this role, the academic is often engaged in research about teaching. Pedagogic frailty should be minimised in these situations due to the research-teaching alliance as they are integrated. These roles may be less likely to happen in modern university systems except those who use Socratic dialogue, where questioning and researching with students is about pushing the boundaries of knowledge and where knowledge is created and reformed and hence the teaching situation is the same as research. The teaching itself helps the questioning of disciplinary knowledge and the creation of the new knowledge for furthering both disciplinary and pedagogical research. The research-teaching nexus dimension, therefore, has to be tightly integrated to the 'discipline and pedagogy' dimension of the model. In here, pedagogical research, disciplinary knowledge, disciplinary research and pedagogical knowledge are merged. However, even here a department in which teaching and research are integrated may find tensions across the campus with other departments where this model does not operate.

CONCLUDING REMARKS

In this chapter, I have explored how the alliance between research and teaching roles can influence susceptibility to pedagogic frailty. In particular, I have looked at how pedagogic frailty may manifest itself depending on the extent that academics develop their different types of scholarship of teaching (acquiring of disciplinary knowledge, acquiring of pedagogical knowledge and conducting pedagogical research). Whilst pedagogic frailty was considered at an individual level through academics' job roles based on their research-teaching conditions, it is worthwhile to note that pedagogic frailty may also occur when some parts of an institution

are working within one regime, whilst other parts are working within a different regime. For example, a School of Nursing might be more focused on professional practice and teaching rather than on research, whereas a Physics department in some institutions may have a stronger focus on research. The inequalities between these units may emphasise conditions that contribute to frailty across the institution. The academic roles that are discussed in this chapter may possibly extend to explain a department or institution's pedagogical frailty depending on how they allocate their resources to teaching and research.

In general, those academic roles in which research and teaching are not tightly integrated are considered the most susceptible to localised pedagogic frailty (see Figure 1). In this figure, the horizontal axis represents the extent that the alliance between teaching and research roles are integrated with each other. The vertical axis represents autonomy or control that the academic has on their time. It is assumed that if the academic has more teaching then their autonomy will be low as their time is fixed to schedule class time. This figure does not, however, indicate why there may be pedagogic frailty. In Table 3, this is explored further with respect to Figure 1 in terms of scholarship, in particular, the scholarship of disciplinary research (which includes discovery, applied and integrated) and the subsidiaries of the scholarship of teaching (namely disciplinary knowledge, pedagogical knowledge and pedagogical research).

In the first quadrant of Figure 1, where the academic roles involve limited teaching, there is a greater likelihood that pedagogic frailty will occur because of lack of pedagogical knowledge and research. Further, as Ryan and Deci (2000) explain that those who feel they have the most autonomy in an environment they feel connected to, are the ones who will be motivated to find opportunities to improve themselves. Whilst those in roles that have high autonomy, will experience low connectedness to teaching as there is a concentration in research and hence may not have the motivation to strengthen their scholarship of teaching. Getting these academics to minimise their potential for pedagogic frailty by strengthening their pedagogical knowledge will be challenging unless there are external factors that would drive them to seek opportunities (for example, CPD workshops or engaging in reading pedagogical research) such as the need to improve their performance indicators in teaching.

In the second quadrant lies mainly those academic roles that relate mainly to teaching. These academic roles have little control of time and whilst there may be a connectedness to teaching, the issue of time may make this group more vulnerable to pedagogic frailty. These academics may already engage to some extent in teaching practice, but little on pedagogical research because of time constraints. If opportunities are placed for these academics in which pedagogical research and acquiring of pedagogical knowledge can occur as part of their teaching (that is moving perhaps to a more research-informed teaching or research-integrated roles), then the potential pedagogic frailty is minimised. One way of doing this is trying to get these academics to engage in evaluation research, possibly with an academic

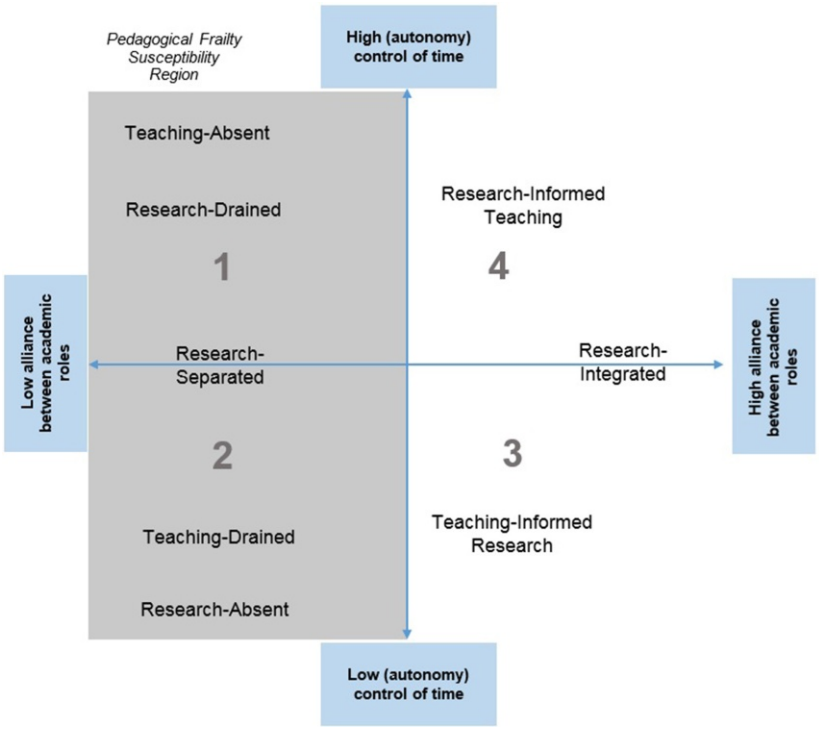

Figure 1. Region of greatest pedagogic frailty susceptibility based on research-teaching alliances and levels of time control

development mentor, of their teaching on courses as it strengthens both their teaching practice and pedagogical knowledge (see Norton, 2009).

The academics described by the third and fourth quadrants of Figure 1 may lack opportunities to engage in pedagogical research. These academics may feel more connected to the teaching environment and may be more receptive to engaging in pedagogical research if given the opportunity, and hence through this be able to minimise their potential for pedagogic frailty. Finally, the research-integrated academic should exhibit few indicators of pedagogic frailty. The research-separated academic may be willing to engage in both strategies that were outlined in the predominantly research and predominantly teaching academic roles (first and second quadrant), as they have more control of time and more connectedness to the teaching environment.

The difficulty for the institution is balancing staff roles across these four quadrants and enabling communication between them. This is in order to minimise tensions and maximise understanding of the various roles undertaken by university teachers. In doing this, the university may maximise resilience and minimise the potential for the development of an environment that exhibits pedagogic frailty.

Table 3. Relationship between academic roles and scholarship

Scholarship/ Roles	*Disciplinary Research*	*Disciplinary Knowledge*	*Pedagogical Research*	*Pedagogical Knowledge*
First Quadrant				
Teaching-absent	✓✓	✓		
Research-drained	✓✓	✓		
Second Quadrant				
Research-absent		✓		
Teaching-drained		✓✓		✓✓
Third Quadrant				
Teaching-informed	✓	✓✓		✓
Fourth Quadrant				
Research-informed	✓✓	✓		✓
In-between quadrants				
Research-separated	✓	✓		
Research-integrated	✓	✓	✓	✓

Tick marks represent the relative emphasis on a particular scholarship for each role. Two ticks do not represent a proportion of twice as much emphasis, but instead "more emphasis".

NOTE

[1] The research-separated situation as defined by Jones and Kinchin (2009) indicated in this environment that there were separate research and teaching staff. This environment is redefined to reflect an individual academic's view of his/her research and teaching roles as being separate activities but allocated equal resources (similar to Experiences A and B from Robertson & Bond, 2001).

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11. BREAKING DOWN STUDENT-STAFF BARRIERS

Moving towards Pedagogic Flexibility

PEDAGOGIC FRAILTY AND FAMILIARITY

Jenkins and Healey (2005) have argued that there are many factors that can lead to a separation of research and teaching within universities. Teachers often introduce research to students in ways that suggest knowledge is fully formed and that students' role is simply to digest this knowledge. This situation is often exacerbated because teachers fall into pedagogical habits that they can find hard to break; often due to the time and regulatory constraints faced when planning new teaching. Indeed, academic staff and students often find themselves constrained by pedagogic familiarity, and a sense that it is difficult to innovate and evolve new teaching approaches if alternative pedagogic possibilities have not been previously experienced or imagined (Bovill, 2014). Many teachers will experience overwhelming day-to-day demands of academic life, and may avoid or resist change to their teaching due to pressure to focus on research and not to spend too much time (re)designing teaching. In this context, investing time in changing teaching may be considered futile or risky; a situation that leads to pedagogic frailty and conservative teaching approaches. So how can academic staff move beyond pedagogic frailty and familiarity? There is a growing array of research and practice exploring how students and staff are collaborating to undertake co-inquiry, co-research and co-construction of knowledge through the co-design and co-creation of learning and teaching. I argue in this chapter, that co-created learning and teaching may offer an opportunity for staff and students to move from a position of pedagogic frailty towards pedagogic flexibility.

Gibbs (2012: 37) has argued that

> students do not consume knowledge but construct it in a personal way in the context of learning environments that include teaching: they are co-producers and collaborators.

Indeed, Werder et al. (2010: 17) agree and suggest that there are significant benefits to

> constructing an intellectual space that invites students to participate as co-inquirers in investigating teaching and learning questions.

I. M. Kinchin & N. E. Winstone (Eds.), Pedagogic Frailty and Resilience in the University, 151–161.

They emphasise that collaborations between staff and students should be based on dialogue and the creation of structured informality. Healey et al. (2015: 149) add that as teachers, we have a role to

> …bring students into the nature of scholarly knowledge in our discipline, the issues that discipline focuses on, and the research methods it uses to explore that knowledge.

This notion of co-enquiry embedded within curricula, can help to ensure meaningful connections are made between research and teaching. Where that co-enquiry is also embedded within a co-creation approach to learning and teaching, it can be even more powerful because it focuses on breaking down the traditional barriers between students and staff, in relation to research and teaching, and this enables new relationships and conversations to emerge. It opens up higher education learning and teaching to become a dialogue between staff and students. This dialogue can lead to both new perspectives and development of shared goals for learning and teaching that can be achieved either creatively within existing constraints or by challenging constraints. Many academic staff are adopting new collaborative approaches in their teaching and others are interested in exploring how they can adopt new co-creation approaches, as can be seen in the many articles contained in an increasing number of journals focused on student engagement and partnership (see for example, Teaching and Learning Together in Higher Education, International Journal for Students as Partners, Journal of Educational Innovation Partnership and Change, Student Engagement in Higher Education Journal).

Those academic staff and students who have co-created learning and teaching, often experience it as a powerful approach that can fundamentally transform student and staff understandings of learning and teaching practices (Cook-Sather et al., 2014). Yet, co-creation is far from a risk-free approach as it challenges and changes the rules governing how students and staff interact and relate to one another, and often suggests the need to negotiate new shared learning goals and new pedagogic approaches.

INTRODUCTION TO CO-CREATION OF LEARNING AND TEACHING

There has been a huge rise of interest in co-creating learning and teaching over the last five years in the UK and internationally. Dunne (2016: 3) illustrates the growth of collaborative work by listing the myriad ways in which collaboration between staff and students is currently described, including

> Students as Partners, Student Partnerships, Student-Staff Partnerships, Students as Researchers, Students as Co-Researchers, Students as Learners and Teachers, Students as Change Agents, Students as Change Makers, Student Fellows, Student Colleagues, Students as Producers/Co-Producers, Students as Co-creators, Students as Co-constructers of knowledge, Students as Champions'.

This plurality leads to some significant challenges in defining the nature of specific forms of collaborative activity. There is a great deal of overlap between these areas of work and the concept of student engagement, and Bryson (2014) and Trowler (2010) assert that student engagement also remains a highly contested term. One useful distinction is that made by Buckley (2014) who contrasts student engagement in learning and teaching, and student engagement that involves representation within university governance. He argues that in the USA, student engagement tends to refer only to student engagement in learning and teaching, while in the UK, the tendency is to use student engagement to capture both student engagement in learning and teaching as well as in governance. This division has also been noted by Bovill et al. (2016) who suggest there is a distinct difference between co-creation roles adopted by students that involve student representation and those that involve other collaborative roles focused on co-creating learning and teaching.

Co-creation of learning and teaching (CCLT) is not a new phenomenon; indeed, part of its appeal is that it builds upon a strong tradition of critical pedagogy from schools education as well as some of the large scale studies of learning and teaching in higher education. Some studies have demonstrated the key role of active learning in achieving learning gains (see for example, Michael, 2006).

> Active learning implies not only a shift from passivity to agency but also from merely doing to developing a meta-cognitive awareness about what is being done. (Bovill et al., 2011: 134)

Other studies have highlighted the importance of interaction (Huxham, 2005; Revell & Wainwright, 2009), and the relationship between teacher and students (Chickering & Gamson, 1987; Kuh & Hu 2001), in leading to effective learning outcomes. What these studies and ideals have in common is a requirement for change to the traditional pedagogical rules where a powerful teacher instructs subordinate students. The research evidence highlights the critical role of a more relational pedagogy. 'Relational pedagogy equips learners to become partners in their own education…' (Boyd et al., 2006: 1) and challenges the notion of individualism within education (Aspelin, 2011). Relational pedagogy implies movement towards developing shared goals, processes and outcomes of learning and teaching – a key factor in overcoming pedagogic frailty. CCLT suggests a more radical recognition that students have a valuable role as co-constructors of knowledge and co-creators of higher education learning and teaching; this is anything but the safe and conservative teaching that can often result if market values dominate higher education. In contrast, co-created learning and teaching is a more democratic and open pedagogical approach, it requires new ways of thinking and practising from both students and teachers.

I purposefully use the term co-creation of learning and teaching (CCLT) in this chapter to refer to students actively collaborating with academic staff in designing, and decision making within, learning and teaching. Co-creation can take a variety of forms across different disciplines and institutions. Co-creation may focus on: course evaluation; course content; learning and teaching processes; course (re)design;

researching learning and teaching; disciplinary research; and co-designing assessments. Also co-creation can occur at individual, classroom, course and institutional levels addressing pedagogical, operational and strategic goals (Bovill et al., 2016; Cook-Sather et al., 2014; Healey et al., 2014). CCLT focuses specifically on a collaborative learning and teaching process that requires active student participation and shared responsibility, in contrast to the very broad use of the term 'student engagement', which can be used to refer to everything from a student turning up to a lecture, to a student leading a range of extra-curricular activities. Co-creation also avoids the assumption that collaboration between staff and students is equal, as the term partnership tends to imply. In higher education, where staff are usually assessing students' work and where they are often gatekeepers of the curriculum (Bourner, 2004; Bovill & Bulley, 2011; Bovill, 2014), achieving a genuine partnership can be challenging and can lead to concerns that some partnership claims are slightly disingenuous (Arnstein, 1969; Bovill et al., 2016; Bovill & Bulley, 2011).

Despite the differences highlighted between partnership and CCLT, Bovill et al. (2016), Bryson et al. (2015) and Healey et al. (2014) have all presented different models demonstrating that both partnership and CCLT activity commonly involves only selected students. Bovill (forthcoming) highlights the important distinction between these selective approaches to CCLT and 'whole cohort' approaches to CCLT. Whole cohort CCLT reclaims the classroom to be what hooks (1994: 12) described as '…the most radical space of possibility'. Co-creation makes use of a range of democratic decision-making processes within a more relational pedagogy. Students make sense of what they are learning in critical dialogue with their teacher and peers. Moore-Cherry et al. (2016) and Bovill (forthcoming) argue that while there is merit in all work that involves students meaningfully, whole class approaches have the potential to be more inclusive of students than initiatives involving only a few students. Bovill (forthcoming) goes on to add that whole cohort CCLT can be embedded directly within students' programmes and courses but effective CCLT relies fundamentally on enhancing the relationship between teacher and students, and between students and students.

Cook-Sather et al. (2014) argue that there is evidence of many shared benefits to students and staff from co-creating learning and teaching, including: enhanced engagement and motivation for learning and teaching; increased meta-cognitive awareness of learning and teaching and a more developed sense of identity; and enhanced classroom practices. Many developments in pedagogy, assessment and curriculum are limited unless students are actively engaged in their own and others' learning experience (Bovill, 2014; Bovill et al., 2011; Deeley & Bovill, 2016; Jessop et al., 2014).

However, adopting a co-creation approach is not always easy, and what is possible and desirable can vary within each different disciplinary context (Bovill & Bulley, 2011). Some common challenges include trying to co-create learning in large classes or within programmes where there are professional body requirements. Bovill et al. (2016) have argued that these challenges can be reconsidered as opportunities if academic staff are open to new pedagogic possibilities – although, where staff face

the day to day pressures of working in universities, this might require support and guidance for staff to be able to re-envisage and enact new ways of working.

BREAKING DOWN STUDENT-STAFF BARRIERS

Too often in higher education, pedagogy is considered as something 'done to students' rather than with students (Cook-Sather et al., 2014). Yet the relationship between academic staff and students does not need to be combative or adversarial. Frequently, academic staff and students are referred to in university documents and in conversations, in terms of 'them' and 'us', and this discourse emphasises difference and 'otherness'. CCLT does not mean that the expert disciplinary and pedagogic knowledge of academic staff is not valued (Breen & Littlejohn, 2000; Cook-Sather et al., 2014), but rather, CCLT demands further knowledge and skills in the form of excellent facilitation and negotiation skills, as well as a genuine willingness to hand over some level of control over learning and teaching. Staff who invite students to co-create learning and teaching have a responsibility to discuss expectations and be clear if there are any pedagogic elements that are not up for negotiation and why. If staff offer to co-create learning and teaching, but are not genuine in opening up possibilities for students to be involved in pedagogic decision making, this can lead students to disengage in the specific pedagogic context, but perhaps more seriously, students' experiences of poor consultation and empty claims of co-creation can lead students to have a greater distrust of future offers of collaboration (Arnstein, 1969; Bovill & Bulley, 2011). As Bovill and Bulley argue

> …'participation claimed but tutor in control' is particularly concerning. Students are led to believe falsely that they can participate in a process. Some might argue that … the 'dictated curriculum' does not deceive students with an empty claim of participation. (2011: 181)

Where staff are genuine about wanting to collaborate with students, there are a number of factors that can influence the possibility of greater staff- student interaction. As previously mentioned, these include the size of the class. Cuseo (2007) and Gibbs (2012) argue that large classes interfere with the likelihood of good student-teacher and student-student interaction. Some researchers and practitioners have responded to this by using advances in technology to help create the sense of a more intimate student cohort. For example, Moore and Gilmartin (2010) co-designed the virtual learning environment (VLE) for a first year geography course with a small group of students and then used the VLE to offer a blended learning experience to the class of 400 students that effectively led to greater group cohesion and excellent learning outcomes. Other teachers and students are using Twitter, Facebook, classroom voting systems and other technology effectively to enhance interaction in large classes (Cook-Sather et al., 2014; Tyma, 2011). Indeed we need to be careful in suggesting that CCLT is always focused on classroom practices. While many teachers express the view that they can form more meaningful relationships with students in face-to-face settings, the exciting ways in which people are co-designing

learning in online spaces, using social media and technology enhanced active learning spaces, offer great possibilities to enhance interaction and also to offer different ways of interacting than might be possible in traditional classroom spaces.

Roxå and Mårtensson (2009) have researched university departments that have the most effective learning outcomes, and their work has highlighted the importance of learning and teaching 'micro-cultures' which are made up of 'significant networks' of small groups of staff that interact and have informal meaningful conversations about learning and teaching:

> …our findings clearly indicate that teachers have sincere conversations about teaching with a few specific colleagues. The data also indicates that some features of these conversations are critical: they are permeated by trust, they have an intellectual component of problem solving or idea testing, and they are private and involve only a few distinct individuals. (Roxå & Mårtensson, 2009: 554)

If the evidence suggests that student-staff interaction is key to good learning outcomes and student success, perhaps we need to recognise the key role that students may also play in learning and teaching conversations. Student and staff perspectives are often different, but all perspectives are important for developing new pedagogic possibilities. Pyörälä et al. (2015), building on the extensive research body from Mårtensson and Roxå, carried out a study of significant conversations about learning and teaching at the University of Helsinki in Finland, and found

> …teachers had meaningful conversations on teaching and learning with their students and thereby students formed part of their significant network. The discussions with students stimulated some teachers more than the discussions they had with their teaching community, and gave them an impetus to explore new educaional technologies and learning environments. (Pyörälä et al., 2015: 158)

In another study by Huxham et al. (2016: 12) in Scotland, student and staff feedback on teaching observations were compared and, they argued that in reaction to receiving observation feedback from student colleagues, 'most found it more useful than that provided from their academic peers'.

The conversations and interactions between staff and students, and the changes enacted as a result of staff and students co-creating learning and teaching suggest a more flexible and relational pedagogy that offers an alternative to the constraints and constant compromise experienced within the frenetic current higher education context that is causing pedagogic frailty.

MOVING BEYOND PEDAGOGIC FRAILTY AND FAMILIARITY TOWARDS PEDAGOGIC FLEXIBILITY

Ryan and Tilbury (2013) in their report for the UK Higher Education Academy propose six new pedagogical ideas in higher education that contribute to pedagogic flexibility: learner empowerment; future facing education; decolonising education;

transformative capabilities; crossing boundaries; and social learning. They consider a range of developments that are flexible in terms of pace, place and mode of learning, but notably, they situate the idea of 'learner empowerment' at the centre of their model of pedagogic flexibility. They consider learner empowerment as

> …actively involving students in learning development and processes of 'co-creation' that challenge learning relationships and the power frames that underpin them…. (Ryan & Tilbury, 2013: 5)

The centrality of the learner empowerment theme is because it:

> …provides an important connection point and is centrally positioned, in dynamic interaction with the other five themes, to underline the significance of the shifting learning relationships that are implicated in discussions of flexibility and pedagogy. (Ryan & Tilbury, 2013: 14)

The identification of learner empowerment and co-creation as a key new flexible pedagogical approach can be seen in the huge shift within the higher education sector towards pedagogies of partnership, 'students as partners' initiatives and co-created learning and teaching in the last five years. This is taking place not only in higher education in the UK and USA, but increasingly also in Sweden, Australia, Canada and other parts of Europe. Co-creation of learning and teaching is becoming less of a niche interest and more of a movement for significant change in universities.

A cynic might suggest that the consumer culture within the higher education sector reifies the voice of the student as a customer, and indeed, many calls for co-creation and student engagement initiatives are framed within this business model of higher education (Buckley, 2014; Cook-Sather et al., 2014; Nixon et al., 2016). Others are reacting to this context and seeking more democratic pedagogic spaces. Many academic staff are driven by a wish to reconnect with their students and to break down existing barriers to make pedagogy more satisfying and engaging for both themselves and for students. In order to do this, staff need to embrace a sense of uncertainty, risk and flexibility in relation to pedagogy, and a willingness to share some responsibility for learning and teaching with students. Bovill (2014: 20) reports that staff have described co-creation as 'nerve-wracking', but that these same staff also talk of co-created learning and teaching being transformatory, with one teacher saying

> It was liberating…we moved from teaching … that just didn't work to … [teaching]…that …was put together in ways that I never even imagined were possible…it's really transformed how I think about teaching and how I teach'.

This teacher

> …wouldn't consider returning to her previous way of teaching, because she has seen what opening up and being more flexible with the teaching process can do. She has witnessed the positive outcomes for students and has experienced the rewards of a new pedagogic approach. (Bovill, 2014: 18)

and by implication, does not wish to return to pedagogic frailty.

It is important to re-iterate that co-created learning and teaching does not imply that 'anything goes'. It does not mean that everything students ask for will necessarily be desirable or possible; rather it implies a more open dialogue and negotiation of why particular approaches are taken, why some suggestions are acted upon and why others might not be possible or desirable to act upon. Co-created learning and teaching does not imply the whole curriculum will be thrown away, there are necessary elements of programmes and courses that may be requirements in order for a graduate to be considered knowledgeable and competent. Nevertheless, there is a great deal of flexibility in how learning goals might be met (Cook-Sather et al., 2014). If a teacher asks students on day one, how a course should be taught and what the content of the curriculum should be, she may be met with blank faces. Starting out to co-create learning and teaching requires a stepped process with some structure as well as some flexibility – often with greater structure at the beginning and relatively less as students and teachers gain confidence in each other as collaborators in learning and teaching. So, drawing on Werder et al.'s (2010) concept of 'structured informality', co-created learning and teaching is about both pedagogic flexibility and pedagogic structure.

This idea of combining structure and flexibility is beautifully illustrated in an example from architecture. James Corazzo (2011) from Sheffield Hallam University, drew my attention to the award-winning Chilean architect, Alejandro Aravena, who has won acclaim for his social housing projects in Latin America. In 2004, his architectural practice 'Elemental' was tasked with re-housing 100 families who were squatting in Iquique in Chile. The government's housing subsidy was simply not sufficient for the project, so Aravena suggested building everyone half a house and inviting each family to finish the rest themselves.

> The terraced houses provided a basic concrete frame, complete with kitchen, bathroom and a roof, allowing families to fill in the gaps, and stamp their own identity on their homes in the process. The result was a far cry from the identikit slabs of nearby social housing blocks. (Wainwright, 2016: 1)

This exciting design concept might offer us a new suggestion for the way we approach the co-creation of learning and teaching. Perhaps we could provide the structure for half a course, programme or curriculum and students and staff could collaborate in designing and creating learning and teaching to fill the space, to create bespoke, relevant and responsive learning and teaching experiences.

CONCLUSIONS: TOWARDS STRUCTURED FLEXIBILITY?

Genuine co-creation can be risky and uncertain, but also rewarding and potentially transformative (Bovill, 2014; Cook-Sather et al., 2014). We are witnessing an exciting time in higher education as the CCLT movement offers new ways for students and staff to interact. I believe, CCLT offers one possible route to overcome pedagogic frailty. CCLT provides new ways in which students and staff can develop shared values and a broader set of pedagogic possibilities that can contribute towards

a growing pedagogic resilience. Kinchin et al. (2016: 2) have identified shared values and resilience as factors that might help to mitigate against pedagogic frailty and 'cultural normalisation towards safe teaching'. I have argued that co-enquiry embedded within CCLT can break down traditional barriers between students and staff as well as between research and teaching, but I would also suggest that student-staff collaboration is powerful across all the domains of the pedagogic frailty model. The changes to student-staff relationships inherent within CCLT can contribute to reframing discourse, disciplinary pedagogies and the locus of control.

Meaningful CCLT is challenging, but Bovill et al. (2011) and Cook-Sather et al. (2014) suggest the following guidance when starting CCLT: start with smaller projects; ensure that student participation is voluntary; ensure that invitations to participate are genuine; and regularly question and critique your own motivations to collaborate. It can also be helpful to share practical examples within and across institutions to enable staff and students to envisage what might be possible and adaptable from other settings. University learning and teaching centres can offer helpful support, advice and guidance that can provide some of the structure needed in new CCLT initiatives. It can be useful to find allies within the CCLT movement to ask for advice and suggestions, or colleagues who are willing to have informal learning and teaching conversations about teaching and specifically about CCLT. Setting up informal conversations about learning and teaching that include both students and staff could have exciting possibilities to create greater significant networks and micro-cultures to support more flexible pedagogies and effective learning. The challenge is to achieve a balance between creating an effective structure alongside enough flexibility to provide intellectual and physical spaces that can lead to significant shifts in thinking and practice. Structured flexible pedagogy through co-created learning and teaching might be a way to simultaneously work within higher education's constraints whilst challenging those very same constraints.

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12. ACADEMIC LEADERSHIP

INTRODUCTION

This chapter is about the importance of distributed leadership in institutions of higher education as a means to enhance pedagogy. It is explained that the emphasis on engagement, participation and collaboration of a distributed leadership approach encourages academics and professional staff to work together to contribute their expertise to jointly determined goals. This differs from the traditional leader-centric approach It will be shown that a distributed leadership approach embraces many people rather than focusing on the individual academic and embraces a more collaborative environment. In so doing, distributed leadership provides a 'strengths-based' approach (Harvey, 2014) to pedagogic enhancement. Strengths-based theory and practice in research:

> Incorporates a multi-disciplinary approach derived from a range of sources including social change theory, motivation theory and positive psychology. The basic tenet of any strengths-based approach (theory and practice) is that every individual, every group and every organization has strengths. Identifying these assets and using them as a starting point for research or practice enables researchers to frame their work within a positive paradigm and build upon these strengths. (Harvey, 2014: 732)

This in in contrast to the 'deficit' approach wherein:

> Professionals, as experts would observe their subjects and identify their deficits so as to then intervene, address the deficit and solve the problem. (Harvey, 2014: 732)

Applied to pedagogy, in this chapter a distributed leadership approach is depicted as providing these strengths by engaging the many experts that contribute to pedagogy enhancement. Identification that the institution in which they are employed adheres to a distributed leadership approach assists the academic to develop pedagogy through a collaborative approach. If, on the other hand, the academic identifies the institution as adhering to a traditional leader-centric approach, then the deficit approach depicted in the 'locus of control concept map' (Chapter 1) may limit such collaboration. A distributed leadership approach recognises the importance of establishing a culture that respects, and places trust in, the expertise of academics and professional staff. In so doing distributed leadership maximises the autonomy

I. M. Kinchin & N. E. Winstone (Eds.), Pedagogic Frailty and Resilience in the University, 163–178.

academics require to be engaged by enabling them to participate by contributing their expertise while encouraging the building of collaborative relationships. As a result decision-making is through a process of consultation, reward and recognition and leadership development. A distributed leadership approach recognises the need to move beyond regulation to a multi-level, multi-functional decision making process framed by policy made at university governing levels but designed by academics and professional staff responsible for its implementation. A distributed leadership approach is founded in a commitment to collaborative relationships that go beyond individual behaviours designed to enhance pedagogy (Jones et al., 2014c). It remains to be seen what potential impact a distributed leadership approach may have on reversing the current concerns about retention of academic staff dissatisfied with the poor mentoring and development they are receiving (Bexley, James, & Arkoudis, 2011).

Implementation of a distributed leadership approach is challenging, particularly given the leader-centric 'heroic' individual leadership theory that has underpinned traditional leadership practice. This is an important, but still challenging, distinction for the higher education sector given the range and diversity of institutions that together form this knowledge sector and the range of experts that contribute to its purpose. This is not to say that distributed leadership is not inclusive of positional leaders, it is, just as it is important for the contribution of experts to leadership to be acknowledged. This was recognised in the work on academic leadership capabilities by Scott, Coates and Anderson (2008: xiv) that acknowledged the role of positional leaders in "engaging people in the process of personal and institutional change and improvement".

Given the deep-seated nature of the challenge several writers have chosen to use metaphors and analogies as a creative way to seek a new understanding. As the author has contend elsewhere (Jones & Harvey, forthcoming) metaphor is an example of a creative mode of reflective practice (Harvey et al., 2016) that enables more challenging change to become explicable. For example this book commenced with Kinchin's (Chapter 1) reference to historic maps and progressed to introduce concept maps as "a vehicle for dialogue and/or personal reflection that can be used to frame an autoethnographic approach to academic development". In this chapter we start with the Bolden et al. (2012: 35, 37) description of academic leadership as either adhering to a 'sinking ship' model – in which confusion results from the mix of traditional academic leadership, management and self-leadership with corporate leadership and management. Or, a 'sailing ship' model – influenced by scholarly esteem that leads to self-leadership. A distributed leadership approach provides the opportunity to incorporate these two into a flotilla that focus on developing relationships between individuals, groups and organisations (Bolden et al., 2016). This is achieved by encouraging academic and professional staff to work together in a collaborative 'third space' (after Whitchurch, 2008) where the influences and pressures upon each can be shared, discussed, negotiated and result in collaborative decisions. (Jones, Harvey, & Lefoe, 2014). Furthermore, in a forthcoming article the

author extends this into the future by using science-fiction analogies that progress the past, mythical, individual hero (leader) of *Superman*, through the more inclusive, but still position-focused leaders that comprise the 'Bridge' of *Starship Enterprise*; towards the futuristic more participative collaborative focus of *the Force inherent in Star Wars* (Jones & Harvey, forthcoming). These metaphors and analogies are thus aimed at assisting a mindset change from traditional leadership theory grounded in the leader rather than the ship – LEADERship – to a distributed leadership approach on the many that contribute to the ship rather than a single leader- leaderSHIP (Jones & Harvey, forthcoming).

In summary the underlying contention in this chapter is that there is a need to move from a deficit approach to pedagogical enhancement to a strengths-based mindset. To explore what this means in practice, the next section first turns to an explanation of distributed leadership.

WHAT IS DISTRIBUTED LEADERSHIP?

Distributed leadership was initially conceptualised by Gronn (2002) as a complex interplay that bridges agency and structure:

> The structural patterns taken by various social and organizational formations are activity-dependent, and an analysis of the activities engaged in by particular sets of time-, place-, space –and culture-bound sets of agents permits an understanding of agential-structural relations through the process of structuring. (Gronn, 2000: 318)

To further explain how a distributed leadership approach functions he related it to activity theory (Engestrom, 1999), to offer distributed leadership a new conception of workplace ecology in which contextual factors are incorporated to identify both a more holistic perspective of organisational work and a focus on emergent approaches. Thus not only would the complex interaction between subjects, objects and instruments be included but also the rules, community and division of labour that impact on activity. He developed two key distinctions to form a taxonomy of distributed leadership – first between *co-performed* work (where those acting are physically co-located) and *collectively performed* work (where those who collaborating are dispersed across one or more worksites); and second, between *two-member* and *multi-member* systems, which may differ in characteristics such as time, place, distance, and culture (Gronn, 2002). In his more recent research (Gronn, 2008, 2009) he suggested that perhaps the term 'hybrid leadership' is more accurate given the mix of positional and expert leadership, however the essence of the focus upon actions and their interchange with structures remains. Based on this description, research in the UK identified use of a distributed leadership approach in the higher education sector (see for example Bolden, Petrov, & Gosling, 2008; Harris, 2008, 2009; Lumby, 2003; Woods et al., 2004).

Moving beyond conceptual discourse to empirical practice, Australian research enabled distributed leadership to be unpacked into its constituent elements – what actions are needed to enable a distributed leadership approach, what support is needed – which together form a conceptual framework of distributed leadership. The next section presents this, with an argument that the conceptual framework aligns with a strength-based rather than deficit model of pedagogy enhancement.

THE 6E CONCEPTUAL FRAMEWORK FOR DISTRIBUTED LEADERSHIP

The 6E Conceptual framework for distributed leadership was developed based on Australian research into synergies between Institution based projects that used a distributed leadership approach to design and implement an issue-based change process. These projects were financed by national learning and teaching grants designed with a dual purpose – to enhance learning and teaching and at the same time build leadership capacity for learning and teaching in Australian Higher Education Institutions (Australian Learning and Teaching Council [ALTC], 2011). Distributed leadership was chosen as appropriate given the dynamic nature of the environment in which higher education found itself:

> In this dynamic, sometimes uncertain and sometimes ambiguous context, the capacity of systems, institutions and individuals to respond appropriately to change and to facilitate further change requires forms of leadership that go beyond conventional models. (ALTC, 2011: 5)

The initial research into these synergies produced a detailed description of distributed leadership and a detailed identification of actions required to enable a distributed leadership approach. First, a detailed description rather than a precise definition of distributed leadership was identified:

> distributed leadership for learning and teaching is a leadership approach in which collaborative working is undertaken between individuals who trust and respect each other's contribution. It occurs as a result of an open culture within and across an institution. It is an approach in which reflective practice is an integral part enabling actions to be critiqued, challenged and developed through cycles of planning, action, reflection and assessment and replanning. It happens most effectively when people at all levels engage in action, accepting leadership in their particular areas of expertise. It requires resources that support and enable collaborative environments together with a flexible approach to space, time and finance which occur as a result of diverse contextual settings in an institution. Through shared and active engagement, distributed leadership can result in the development of leadership capacity to sustain improvements in teaching and learning. (Jones et al., 2012: 21)

Second, an Action Self Enabling Reflective Tool (ASERT) of sixteen actions needed to enable distributed leadership was identified (see Jones et al., 2012; resource

adapted with a shared leadership focus in Bolden et al., 2015). Based on these outputs a second project was funded to identify a means to evaluative the effectiveness of enabling actions taken (Jones et al., 2014a).

An initial outcome of this second project was recognition that distributed leadership is a canopy concept that "embraces a range of people in action that enable the dimensions and values of distributed leadership to be enacted and encouraged through a range of activities which can then be evaluated for evidence of good practice" (Jones et al., 2014a: 28). This canopy was depicted as an umbrella to "symbolise the characteristic of distributed leadership as embracing those in positions of institutional authority (shorthanded as formal leaders), as well as informal leaders, experts, and representatives from all relevant functions, disciplines, groups and levels" (Jones et al., 2014a: 23, see http://www.distributedleadership.com.au.). This canopy was named as the *6E Conceptual model of distributed leadership* as it is underpinned by 6 tenets: *Tenet 1: Engage with*…a broad range of leaders in positions of institutional authority, academics and professional staff respected for their expertise but not in leadership positional from across the institution who contribute to learning and teaching; *Tenet 2: Enable through*…individual contributions — the contextual and cultural dimension of respect for and trust in individual contributions to effect change through the nurturing of collaborative relationships; *Tenet 3: Enact via*…a holistic process in which processes, support and systems are designed to encourage the involvement of people; *Tenet 4: Encourage with*…a range of activities to raise awareness and scaffold learning about a distributed leadership approach, including professional development, mentoring, networks, communities of practice, time, space and finance, and recognition of, and reward for, contribution; *Tenet 5: Evaluate by*…a suitable process designed to provide evidence of increased engagement in learning and teaching, collaboration, and growth in leadership capacity; *Tenet 6: Emergent through…engagement of* staff in continuous cycles of improvement based in a participative action research methodology. Together these tenets meet the strategies proposed for using a strengths-based approach, in this case for pedagogical enhancement.

The next section presents an example of a learning and teaching change process that used a distributed leadership approach to improve the effective use of student feedback to enhance the students' education experiences (henceforth referred to as 'student feedback project'; Barber, Jones, & Novak, 2009a).

AN EXAMPLE OF DL PROCESS

The 'student feedback project' was undertaken in a large and diverse global university of technology, design and business. It is Australia's largest tertiary institution, with a diverse student population of over 70,000 students, enrolled at campuses in Australia and Vietnam and in courses offered in China, Hong Kong, Indonesia and Singapore. While the 'student feedback project' focused on two Melbourne-based campuses, the outcome and impact was universal given the standardised curriculum offered in each location.

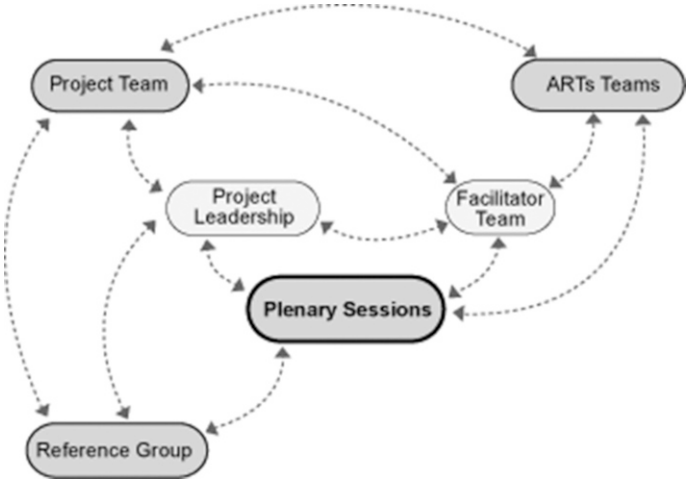

Figure 1. Project Design (reproduced with permission from Barber, Jones, & Novak, 2009a, 2009b)

The project was designed to use a distributed leadership approach to both reflect the multi-level organisational structure based on a positional (leader-centric) leadership culture together with the desire to cultivate and enhance multi-level, collaborative and integrated leadership capacity by enabling staff in non-formal roles to develop leadership capacity (see Figure 1; Barber, Jones, & Novak, 2009a). The project used an action research methodology influenced by a participatory, collaborative and inquiry-based approach (after Kemmis, McTaggart, & Nixon, 2014). This allowed progress through four action research cycles using reflexive inquiry (Barber, Jones, & Novak, 2009b), a process strongly aligned with a strength-based approach given the focus on "action as a goal and on achieving change" (Harvey, 2014: 733). The project included Action Research Teams (ART) in three discipline schools (assisted by a learning and teaching expert as a facilitator), a project team of senior leaders to champion the distributed leadership approach and assist institution-wide changes to support the ARTs, institution-wide plenary sessions to encourage broader interest towards a community of practice, and a reference group of external experts from across the higher education sector. The Pro-Vice Chancellor (Academic) assisted by the university Director of Learning and Teaching Unit, led (and championed) the project.

Teams of academic experts in the discipline content, together with course and programme co-ordinators, were established in three schools (one in each of the three colleges of the university).These teams were established as Action Research Teams (ART) in which members would proceed through the four cycles as follows. First, members of each ART would access and analyse formal student feedback data. Based on shared opinions and views of the causes of adverse student feedback, ART

members would design proposals for change to improve student feedback, with a focus on student learning. Second, the proposals for change would be implemented in the following semester and observations made by ART members of both changes in student learning performance as well as formal and informal student feedback. ART members would reflect on these outcomes and present their findings to an institution-wide plenary, established along the lines of a Community of Practice, to encourage reflection from a wider forum of learning and teaching experts. Finally, ART members would plan further changes, either to adjust the initial change based on feedback and reflection, or to sustain the change.

The three ARTs included:

i. ART1 focus on two courses in mathematics taught as 'service' courses across a broad range of Programs, each with 220 students from mixed disciplines. The issue chosen was service teaching large classes.
ii. ART2 focus on two courses, one a final year course in construction management with 85 students and the other a first year course in Computer Aided Drafting with 212 students. The issue chosen was teaching capabilities in course delivery, including how teaching capabilities were affected by the learning environment.
iii. ART3 was established to focus on four courses from core first year courses in Business Statistics, Marketing Principles, Macroeconomics, Prices and Markets. These courses were common to all of the four undergraduate Business degrees with a total of 1000–1500 students (onshore) per year in lecture cohorts. The issue chosen was courses with large enrolments.

Interestingly, the initial focus of the ARTs was on issues related to the learning environment, particularly classroom space and IT facilities before issues of provision of improved learning materials and additional formative assessment and feedback were introduced. Associated with this were behavioural changes of the ART participants as they developed more confidence in the collaborative process, greater understanding and skills in how to participate in a positive manner and their contributions were recognised and rewarded. This mix of infrastructure and system improvements and curriculum design and learning activity improvements highlighted the need for a whole-of-institutional approach supported, and indeed championed, by formal (positional) leaders. It became clear that academics at the 'coal face' needed to be both given sufficient autonomy, power and authority to make appropriate decisions in regard to curriculum design, supported by senior leaders and experts in learning and teaching (Jones, 2014). Furthermore, resources (time and finance) are needed to support the development of collaborative processes, as well as recognition and reward for the contribution of expertise.

A project team consisting of senior (positional) leaders (the deputy vice chancellor, heads of school, an associate dean learning and teaching and the director of learning and teaching), plus the three ART leaders, was established to provide ARTs with senior level support. The project team held monthly meetings to share merging proposals for change as well as providing formal leadership support for the ARTs.

Interestingly, the project team itself went through changes in response to feedback. These changes included broadening of membership. The first change was to broaden membership to include managers of units that provided a range of professional expertise including: property services (responsible for design of teaching rooms), Information Technology services (responsible for computer support in classrooms), Media and Communications (responsible for AV support) Library, Student Support (responsible for a range of support) and Human Resources (responsible for working conditions of academics and professional staff.

Institute-wide plenary sessions were established to encourage sharing of ideas across departments, disciplines, and functions. A broad invitation was sent out across the university in an attempt to create broader communities of practice. Five plenary sessions were held over the period of the project (three years). Again interestingly, the design of the plenary sessions was also adjusted over time, with opportunities created to encourage all departments and functions to first summarise changes and then engage in meaningful discussion.

The outcome was a new leadership model – identified as the PACED Leadership model (reproduced as Figure 2) – in which five forms of leadership were identified as important: *Participative* leadership that encourages consultation, two-way communication and stakeholder involvement; *Accredited* leadership that recognises, rewards and provides professional development for all contributions of expertise; *Collaborative* leadership that encourages top-down policy making coupled with middle-out support and bottom-up implementation; *Engaged* leadership that supports networking and sharing of 'lessons learnt' together with support for pedagogical development and analysis; *Devolved* leadership that is encouraged by formal leadership support for shared understanding aimed at developing meaning and support from systems and infrastructures and formal (Barber, Jones, & Novak, 2009a, 2009b). Further it was identified that to achieve this PACED leadership model, a change management process was needed This REALISED change management process identified eight elements required to support individual academics as part of the change process: *Recognition* and reward for all contributions (individual and team) is needed. In particular the time and effort spent in pedagogy improvement needs to be treated as equal to that spent on research; *Encouragement* through resources and distribution to support individuals and teams to design and develop innovative approaches to curriculum; *Acknowledgement* through university policy and practice that specifically articulate support for curriculum innovations; *Leadership* support from positional leaders who publicly champion a distributed leadership approach; *Integration* of student support services to encourage active student engagement students in their own learning; *Systems* established to provide cross-functional collaborative systems support from across the university; *Environment* for learning that supports students learning experiences; *Dissemination* of ideas to encourage ongoing collaboration, including opportunities for all parties to have their 'voice' heard (Barber, Jones, & Novak, 2009a, 2009b).

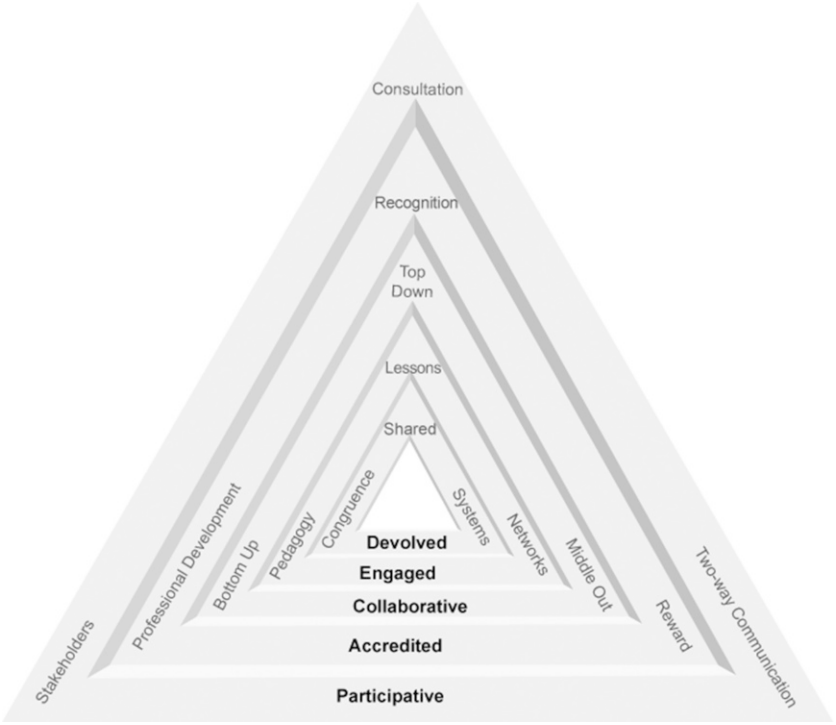

Figure 2. P.A.C.E.D. Leadership model (reproduced with permission from Barber, Jones & Novak, 2009a, 2009b)

This example evidences the need for a distributed leadership approach to move from a deficit model of individual contribution to a strengths-based approach based on collaborative endeavour to ensure pedagogical improvement is appropriately designed, implemented and supported. While actions by individuals to improve curriculum design and delivery did have a positive impact on the student learning experience, there was need for engagement of a cross section of functions and levels, to encourage expertise and ideas to be shared more effectively as a community of practice. There was need for a change in the decision-making process to encourage participation in policy decision making and implementation. There was need to engender a collaborative approach.

A DISTRIBUTED LEADERSHIP APPROACH: REFLECTIONS ON LESSONS LEARNT

As indicated in the above example, a good practice design of a distributed leadership approach needs to emphasise, and build into the enabling factors, together with

an action research philosophy that underpins progress through ongoing cycles of planning, acting, observing and reflecting. A distributed leadership approach is developed by encouraging reflection on previous actions aimed to identify critical success factors and lessons learnt. This is in keeping with the notion that distributed leadership is a dynamic process that is most effective when accompanied by action reflection to scaffold action through cycles of change. In this process emergent issues are able to be discussed and adjustments made as a process of continuous change and improvement. This sets a basis upon which collective engagement in long-term change can be achieved. Reflection enables flexible adjustment as contexts, cultures and change requirements emerge. It also enables an appreciative approach to self-evaluation as an aid to self-improvement.

The lessons from the example of the use of a distributed leadership approach to underpin pedagogy advancement are several. First, education design and delivery is a complex, multi-factored, multi-functional activity; it cannot be seen as the sole responsibility of any one individual. This means that there is need to encourage engagement, sharing of ideas and collaboration. Second, there is need for collaboration to produce an integrated, holistic approach that recognises that curriculum design alone does not satisfy all student needs. Student learning differs from academic teaching and results from a mix of content, learning style, and learning environment. This means that there needs to be flexibility in the regulations that govern pedagogy – including curriculum design and the learning and teaching process. It also means that Institutions need to provide the right places and spaces for learning and teaching. This requires the various functional areas responsible for learning spaces to develop collaborative relationships with academics (for example IT, property services). Third, technology has, and will continue to have, a significant influence on pedagogy. This means that while academics need to be sufficiently conversant with emerging technologies to use them effectively as part of the learning environment, the institution needs to ensure that the IT platforms, digital tools and social media tools and networks are available as part of the institutional infrastructure. There is also need to develop a 'third space' in which experts, academics, IT professionals, educational designers, can network ideas (Jones et al., 2014b). Fourth, learning and teaching is a complex task; there is no single, universal 'best practice' approach that will fit every discipline, every student cohort and every location. This means that rather than have a standard 'one size fits all' best practice approach, model or template, there is need to develop exemplars of 'good practice', some of which will have common implementation; others may fit different cohorts. What is needed is the identification of patterns rather than standards. Fifth, good practice improvements to pedagogy are constantly emerging. This means that there is need to build in opportunities for ongoing cycles of change during which new plans can be developed, acted upon, observed, and reflection for future improvements encouraged. There is no single point-in-time measurement, such as student feedback; while it may add some value, is not sufficient. There is need to develop opportunities to focus on innovations that may, at least in the short

term, result in negative feedback. Finally, all contributions need to be positively recognised and rewarded to encourage ongoing commitment to the design and trial of innovations, experimentation and creativity. This means that time spent on pedagogy advancement needs to be assessed equally to time spent on research, administration and civic contribution (see Chapter 3).

In summary, the challenges facing ongoing pedagogy advancement are complex. They require time, commitment and collaboration. This requires a new approach to leadership that encourages engagement, participation, networking and collaboration. A distributed leadership approach provides the framework upon which this can be realised. Given this conclusion, the next section of this chapter compares distributed leadership to a centralised locus of control approach before presenting some concluding remarks.

DISTRIBUTED LEADERSHIP AND CENTRALISED LOCUS OF CONTROL COMPARISON

A comparison of the elements of the distributed leadership conceptual model and the centralised locus of control concept approach (see Table 1) highlights several key differences. Underpinning these differences is the philosophy from which these two concepts emerge. As discussed earlier, the distributed leadership conceptual model is based on a collective 'canopy' perspective that embraces many people. This differs from the centralised locus of control approach of the individual academic's perceptions of their own context, who may be working within a traditional leader-centric approach. Moving beyond an individual leader – follower performance management concept to a collective leadership concept has a number of implications for academics and professional staff working in a more collaborative environment.

First, a distributed leadership approach encourages positional leaders and experts to *engage* in decision making, while a centralised locus of control approach relies solely upon positional leaders. This means that, decision making is influenced by input from a range of experts – academics from various disciplines and at various levels of academic status, professional staff from a range of functions, departments and levels. While final decision making may still reside with formal positional leaders, the expertise of all influences final decisions.

Second, a distributed leadership approach is *enabled* by a culture in which respect for expertise and trust in the professionalism of all employees is paramount. This recognises individuals' area of expertise by placing emphasis on the tradition of academic autonomy. This differs from the centralised locus of control approach in which increasing reliance is placed in regulations to 'bound', control and monitor activity.

A distributed leadership approach is *enacted* through a focus on holistic, 'top-down' decision making, influenced and implemented by 'bottom-up' input and supported by 'middle-out' (academics and professional) support to design an integrated approach that is appropriate to the diversity of higher education institutions. This

Table 1. 6E Conceptual model and locus of control concept map

Action	*6E Conceptual Model distributed leadership*	*Locus of Control Concept Map (Figure 6, Chapter 1)*
ENGAGE	positional leaders & experts	Decisions by head of department
ENABLE	respect and trust in expertise	regulation
ENACT	holistic, integrated process	best practice
ENCOURAGE	professional development; mentoring and facilitation, finance, reward and recognition	constraints – standards
EVALUATE	Internal – engagement, collaboration and leadership capacity	external – student satisfaction and quality assurance
EMERGENT	cycles of action.	linear, single causal approach
OUTCOME	academic autonomy contributed to collaborative decision making	academic autonomy limited and decision making

differs from a centralised locus of control approach that assumes common contexts and cultures in which problem-solving can rely on the simple application of best practice principles.

A distributed leadership approach is *encouraged* by support in the form of professional development, mentoring, facilitation, and networking and communities of practice opportunities. These activities are designed to provide individuals with the freedom to build collaborative relationships in which knowledge is exchanged in order to identify good practice activities associated with the variety of complex issues facing higher education institutions. A centralised locus of control approach, on the other hand, assumes a constraint-oriented approach in which individuals are monitored for action taken in accord with (often externally set) standards.

A distributed leadership approach encourages a focus on *evidence* of growth in engagement, collaboration and leadership capacity. This is achieved by reflection and self-evaluation against collectively agreed 'good practice', often more reliant on qualitative demonstration of improvements through dialogue and feedback. A centralised locus of control approach uses external quantitative measures of best practice, using numerical scales, at single points in time. This includes Likert scales used to identify levels of student satisfaction and quality assurance.

A distributed leadership approach places emphasis in continuous change sustained by ever emergent cycles of change and improvement. This places emphasis in an action approach through which change is planned, acted upon, and assessed, with a 'lessons learnt' reflective process supporting a next cycle of change. The centralised locus of control approach assumes a linear, static, single causal model of change through which a preconceived aim is achieved.

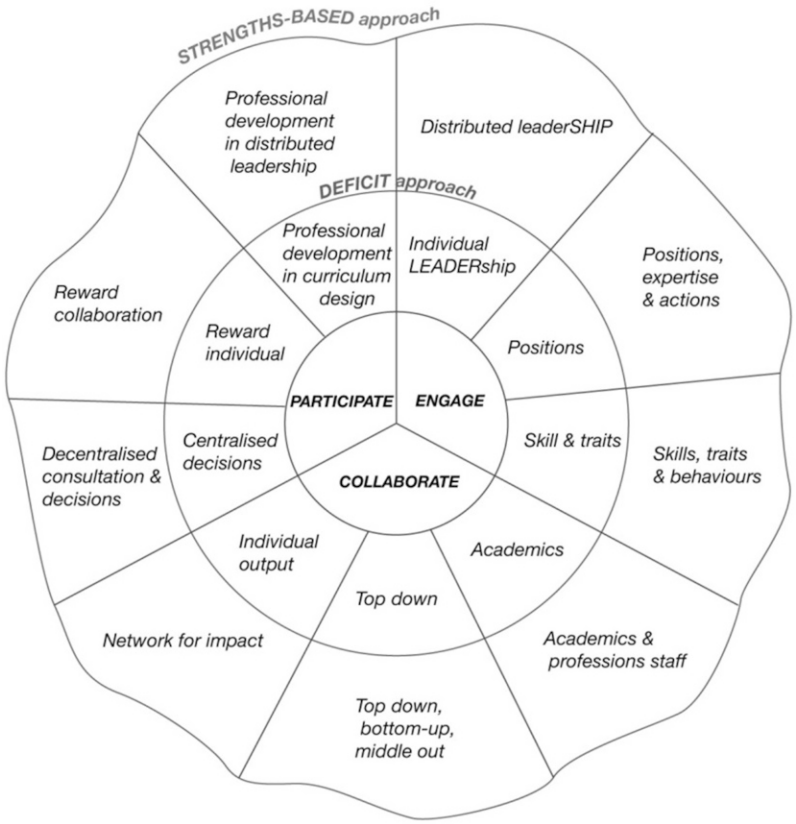

Figure 3. Pedagogy Ecology Mindset Model (PEMM)

The outcome of these differences is that a distributed leadership approach, while acknowledging, encouraging, and supporting academic autonomy, at the same time, establishes a culture and context where change is accepted as the norm and collaborative relationships are encouraged. A centralised locus of control approach limits academic autonomy, encourages conformity to pre-set standards, thus inhibiting opportunity to creatively and innovatively explore possibilities for new approaches to address complex issues.

Based on these findings a *pedagogy ecosystem mindset model (PEMM)* has been designed that is more appropriate to inspire academic pedagogy innovation than to constrain it, as identified in the locus of control concept map (see Figure 3). This PEMM is built on three tenets, each with three associated elements of changes.

First is the tenet of *Engagement*. This requires a mindset change from pedagogy reliant on leader-centric leadership, governed by regulations to distributed leadership in which leadership in pedagogy is recognised as inclusive of those in formal

positions as well as experts, with all contributing to action to enhance pedagogy. It requires a mindset change from simply skills and traits of leaders to skills, traits and behaviours of all with pedagogy-related expertise.

Second is the tenet of *Collaboration*. This requires a mindset change from pedagogy designed solely by academics to pedagogy recognised as influenced by academics and professional staff with various forms of expertise, for example in learning design, IT, student support. It recognises the need for a mindset change from sole reliance on the importance of policy decision making from senior leaders to a combination of top-down policy with bottom-up (discipline and teaching) and middle-out (functional) decision making. Finally, it requires a mindset change from a focus on individual output networking to achieve impact.

Third is the tenet of *Participation.* This requires a mindset change from a centralised to decentralised decision making underpinned by consultation. It identifies the need to move mindsets from rewarding and recognising individual outputs to rewarding and recognising collaboration and it recognises the need for a mindset that recognises pedagogy enhancement not only from professional development in curriculum design, to professional development in leadership skills, traits and behaviours.

CONCLUSION

This chapter has sought to present a strength-based rather than deficit approach to pedagogy enhancement to avoid pedagogical frailty that is associated with a centralised locus of control. In so doing it identifies the need to consider a more engaged leadership approach than traditional leader-centric leadership in which positional leaders make decisions according to institutional rules and regulations themselves dependent on standards. A distributed leadership approach is presented as more appropriate for the design of learning opportunities that encourage a more collaborative, engaged approach to pedagogy enhancement. Distributed leadership is based in an underlying purpose of knowledge development and sharing and is reliant on many experts from a variety of disciplines, functions and levels contributing their expertise. A distributed leadership approach recognises the importance of an integration support from positional leaders, pedagogy built in curriculum standards and regulations and the learning environment. A distributed leadership approach is more in keeping with the academic assumption of the degree of autonomy they need to ensure that knowledge is developed and disseminated in creative and innovative ways.

In order to achieve the degree of change required it was proposed that what is needed is a deep seated mindset change as explained in the PEMM. While the focus of this chapter was on pedagogy, it is clear that further research into, and consideration of, these alternate approaches to academic retention and commitment requires further exploration.

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13. ENHANCING QUALITY TO ADDRESS FRAILTY

How frail the human heart must be—a mirrored pool of thought.
(Sylvia Plath, *Letters Home*)

INTRODUCTION

In preparing to face a globalised society characterised by uncertainty, complexity, risk and speed, academics and their students, it will be argued here, need to encounter a certain strangeness, dealing with knowledge that is uncomfortable, challenging and troublesome. It would be irrational and counter-productive to approach such challenging complexity through curricular designs and quality cultures emphasising only greater linearity, simplicity and 'crystal clarity' (Ecclestone, 2012). This runs counter to what Kinchin et al. (2016: 4) have detected in current higher education practice as '*the cultural normalisation towards safe teaching*'. Kinchin (2015) had earlier coined the term *pedagogic frailty* to encapsulate a situation which pertains:

> when colleagues find the cumulative pressures of academia eventually inhibiting their capacity to change practice in response to an evolving teaching environment, leading them to adopt what they might consider a 'safe' and sustainable pedagogic approach. (Canning, 2007; Kinchin et al., 2016: 3)

What Shulman (2005: 1) characterises as '*pedagogies of uncertainty*' would seem to offer more fruitful directions of travel to address the aetiology of pedagogic frailty. Through one such pedagogy of uncertainty, the discipline-specific analytic framework of Threshold Concepts, this chapter offers an approach that aligns with the grain of academic research practice and disciplinary/professional ontology. Threshold concepts have a necessarily integrative effect in which complex and difficult knowledge is brought into understanding in a more recursive, non-linear fashion. Through encounters with liminality and 'troublesome knowledge' students, as co-enquirers, are encouraged to develop a research-mindedness in tackling complexity which helps them develop resilience and other dimensions of affective robustness (hope, optimism and self-efficacy). However, models of quality enhancement also influence the cultures of our teaching to a considerable extent. Such models of enhancement may or may not encourage students beyond their comfort zones. Where teachers do take their students into unfamiliar, and perhaps uncomfortable territory, the adoption of such approaches requires a sympathetic quality enhancement culture at institutional, and government policy level. In this

I. M. Kinchin & N. E. Winstone (Eds.), Pedagogic Frailty and Resilience in the University, 179–194.

chapter a 'low-fidelity' culture will be advocated, placing high trust in local practice and offering ownership and locus of control, as opposed to high-fidelity, consumerist and managerialist cultures which mistrust local variation and may serve only to exacerbate frailty.

A FRAIL WORLD

All drama begins with human frailty (James Ferman)

The sociologist Anthony Giddens (1991: 65) has depicted our current society as both riven by '*ontological insecurity*' and as unprecedented in terms of new forms of risk, danger, and complexity, as well as innovation and opportunity, that daily beset us.

Figure 1. Adinkra Sankofa symbol (Ghana)

One of the intriguing symbols used in the rich Adinkra symbolic tradition in Ghana is that of Sankofa, a bird which as it flies forward looks back and picks an egg from its back. An appropriate visual representation perhaps of Ausubel's (1968) notion of our taking our prior knowledge into new situations. In the unprecedented present however, we, as teachers, have no egg of accumulated wisdom to pass to our students to aid them in coping with the challenges and insecurities of globalisation, speed and digitalisation, as none of us have been there. However, though we cannot predict the future, we can help our students anticipate and prepare for such uncertainty. It is likely that in this process both students and their tutors will need to *'venture into strange places'* (Barnett, 2007: 147), and deal with knowledge that may be uncomfortable, challenging and 'troublesome'. In both contexts we require people who can demonstrate a capacity for enquiry and 'research-mindedness', the resilience to tolerate periods of uncertainty and an openness to transformation. The purpose is to equip students to deal more effectively with problems and situations that they have not previously experienced. This is a tall order, and one which sits uncomfortably with prevailing neo-managerialist practices in higher education (De Boer et al., 2007; Land & Gordon, 2013) constructing students as consumers of service provision rather than actively and responsibly engaged clients, partners or co-producers. This, clearly, is an approach which goes beyond simplistic consumer satisfaction models and exposes the participant to personal transformation

or 'troublesome work'. As Lee Shulman (2005: 4), speaking of '*pedagogies of uncertainty'*, observed more recently:

> In these settings, the presence of emotion, even a modicum of passion, is quite striking–as is its absence in other settings. I would say that without a certain amount of anxiety and risk, there's a limit to how much learning occurs. One must have something at stake. No emotional investment, no intellectual or formational yield.

KNOWLEDGE FOR A TROUBLED WORLD

What forms of knowledge and understanding will be required to meet such troubled times, and what new dispositions may be required to countenance such challenges? Barnett (2004: 255), discussing learning for an unknown future, calls not just for 'disciplinary wonder', that is, new curricula predicated on knowledge that is provisional, uncertain and open to change, but also for shifts in subjectivity. He distinguishes between the development of *fixed ontologies* as preparation for a more knowable, less risky world, compared with a world of high risk where personal transformation will require what he terms 'open ontologies' for an unknown world. Ministers of education make calls to build the mind of the future, to prepare graduates for an increasingly globalised and interconnected world in which professional standards are converging, to transform knowledge into usefulness, and produce enterprise-minded graduates who can 'question the herd', move industrial economies from being production-based to innovation-intensive and encourage collective direction rather than command and control. Academics meanwhile seek critical understanding and the ability to make connections and formulate problems not noticed by others (Craft, 2005), encourage creative interdisciplinarity to understand the whole picture and seek multiple solutions to complex issues. They encourage informed evaluative judgement, evidence-based solutions, skill in argumentation and in deriving meaning from complexity.

The Confederation for Industry and Higher Education (CIHE), seeking to encourage collaboration between universities and business (and since relaunched as the National Centre for Universities and Business, NCUB) sought to identify the attributes required of graduates as they entered business and industry (Fielden, 2007). They required knowledge of world geography, conditions, issues and events, of the complexity and interdependence of world events and issues, and an understanding of historical forces that have shaped the current world system. Additionally they looked for knowledge of a foreign language, intercultural communication concepts and international business etiquette. In terms of attitudes and dispositions they looked for 'openness to learning and positive orientation to new opportunities, ideas and ways of thinking'. Socially and culturally they expected tolerance for ambiguity and unfamiliarity, sensitivity and respect for cultural differences and empathy, or the ability to take multiple perspectives. Interestingly, in relation to notions of frailty, they expected

'self-awareness and self-esteem about one's own identity and culture'. Similarly, in relation to skills, they saw 'coping and resiliency skills in unfamiliar and challenging situations' to be essential, as well as capacity to 'interact with people from other cultures'. Aligning with academic perspectives they also saw as axiomatic research skills to learn about the world, critical and comparative thinking skills, ability to think creatively and integrate knowledge, and ability to use another language effectively.

ENCOUNTERS WITH TROUBLESOME KNOWLEDGE

Human kind cannot bear very much reality (T. S. Eliot, *Four Quartets*)

A sense of frailty in response to being confronted with troublesome knowledge, or ideas that may be disturbing, has perhaps been one contributory factor, in recent times, to the adoption of certain measures by universities to give a form of protection to students. The 'safe spaces' initiatives being pursued by some universities, or the 'no platforming' policies which prevent certain individuals from being able to give public talks on campus, have proved controversial. Implemented, no doubt, as refuge areas from sexist or racist abuse, to ensure that students and staff of all identities and faiths may work in a tolerant environment, such measures nonetheless have been viewed by critics as threatening the fundamental liberal value of freedom of expression upon which universities, historically, are deemed to be based. The sense of frailty here manifests itself in the notion that particular ideas may be too upsetting to be discussed on campus, or that materials or topics introduced into courses may for various reasons be distressing to individuals. The latter, feeling menaced or offended by this, subsequently need a place of shelter to which to retreat, or at least the use of 'trigger warnings' to help them prepare and stiffen their resolve for such encounters. Trigger warnings were recently proposed at Oxford University for law lecturers discussing cases of sexual assault. Similar warnings were requested on campuses in the USA in literature classes teaching the works of writers as diverse as Ovid and F. Scott Fitzgerald on the grounds that their works include passages referring to violence and suicide. Each year, the American Libraries Association's Office for Intellectual Freedom (OIF) records hundreds of attempts by individuals and groups to have books removed from libraries and classrooms. According to OLF at least 46 of the Radcliffe Publishing Course's 'Top 100 Novels of the 20th Century' have been the target of ban attempts (ALA, 2016). As an example of no-platforming, renowned academic Professor Germaine Greer recently defied a petition signed by more than 3,000 people arguing that she should not be allowed to deliver a lecture at Cardiff University on women in political and social life because of her controversial views on transgender women. The event went ahead under conditions of high security with uniformed police officers standing guard outside the lecture theatre and security officials monitoring doors inside (Morris, 2015). Collins Dictionary listed 'Snowflake Generation' as one of its top 10 popularly used words of 2016. The term allegedly indicates '*young people's growing belief that their feelings should be*

protected at all costs' (Pearson, 2016:4). Considering academic life more broadly, students at Oxford University demanded the removal of a statue of the colonialist Cecil Rhodes from Oriel College, claiming that '*requiring ethnic minority students to walk past the memorial amounted to "violence"*' (ibid.). Imogen Wilson, a student at the University of Edinburgh '*was accused of violating a "safe space" when she raised her arm during a student council meeting to register disagreement*'. She was also warned about '*shaking her head*' (p. 19).

The English philosopher John Gray sees such interventions as '*surely a travesty of perfectly legitimate concerns*' observing that universities have long defined themselves '*as embodying a liberal ideal of untrammelled enquiry*' (Gray, 2016: n.p.). When '*some ephemeral orthodoxy*' is imposed upon universities, which excludes contrary views and the contestation of orthodoxy, such an ideal becomes unattainable. He sees these demands for protection not just as a breach of intellectual and political freedom, significant as that might be, but as something yet more invidious, '*a demand to be sheltered from human reality*'. At the bottom of the demand for safe spaces, he maintains, is '*the refusal to engage with the human world*'.

> You can't study Law, in any rigorous manner, if you are unwilling to be exposed to the darker side of human nature. Law, particularly Criminal Law, exists in order to deal with that side of life. If you hold back from learning about deception and violence you won't understand why we have the laws we do, or any system of law at all. Equally you can't appreciate great works of literature if you resist depictions of the darker side of human life…The power of these works of art comes from their truthfulness, their unswerving fidelity to the enduring features of the human world. Anyone who shrinks from them is in effect refusing to explore what it means to be human. (Gray, 2016: n.p.)

Such retreat leads, moreover, to the inability to make informed evaluative judgements, which is perhaps the hallmark of a university education. Gray, reflecting on traditions of higher education throughout history and across cultural traditions and faiths as diverse as Christian, Jewish, Hindu, Buddhist, Muslim, Sikh, Confucian and Taoist, maintains that despite their deep differences they '*are one in recognising that a good life begins by seeing things as they really are*'. The point of education in his view is '*to learn how to live well in full awareness of the disorder of life*'. Traditionally within educational traditions a retreat from realism, he argues, used to be considered 'not just an intellectual failing but also a moral flaw'.

> How can you decide which is worse if you recoil from any description of them? In order to make an intelligent judgement about any war, you have to be ready to examine closely the evils it's meant to prevent, and those it could unleash. Putting these evils in the balance is a sad business. But unless you're ready to do it, you can't make an informed judgment. (Gray, 2016: n.p.)

This refusal to engage with troublesomeness, with painful reality, may be deemed a modern form of educational frailty, leading perhaps, not just to impaired judgement

but also to paralysis of action, lack of capability. Gray laments a loss of intellectual 'courage and fortitude', or what might be termed, in pedagogical discourse, personal resilience.

> For a time painful conflicts can be shut out by calming music in nursery-like retreats, but they will not be gone for long, they will persist and fester and sooner or later destroy the false peace that is found for a time in the pillow-filled rooms. (Gray, 2016: n.p.)

The novelist Howard Jacobson, in a recent talk, *In Praise of Difficulty*, spoke of modern readers eschewing intellectual or linguistic challenge in favour of more easily digestible fare – the reader becoming, in his view, a protected species. '*There are some issues of the heart and mind*,' he argued, '*some contrarieties of conscience or some intractability of language itself, that cannot be tackled simply*'. (Jacobson, 2016: n.p.). He, too, advocates a countenancing of human reality, but celebrates the wrestling with difficulty as rewarding.

> …there are other joys – grappling with the turbulent indiscipline of our natures, being one of them. Immersing ourselves in tales that track the labyrinths of psychology, where there is no arriving but only discovery, is another. We are an entangled species. We are not to be unknotted easily. When we turn our backs on difficulty in art, we turn our backs on who we are. (Jacobson, 2016: n.p.)

THE THRESHOLD CONCEPTS FRAMEWORK

There is a framework of learning which places such encounters with difficulty, and the need for the resilience that Gray and Jacobson call for, at its centre. The Threshold Concepts Framework (TCF) builds on the notion that there are certain concepts, or certain learning experiences, which are akin to passing through a portal, permitting the learner to enter new conceptual territory in which things formerly not within view come to be perceived. This discipline-based and transformative approach to learning takes as its starting point the notion that knowledge new to the learner needs to be troublesome in order to provoke new ways of seeing – seeing with the eyes of another, as Proust (1900/1987) puts it – and a letting go of a prevailing or prior view. The latter is always troubling, particularly when the new way of seeing, the new knowledge to be integrated, has not yet come fully into view and the learner finds him or herself in an in-between or transitional space which Meyer and Land (2003, 2005) term a state of 'liminality'. This is a suspended state or 'stuck place' in which understanding approximates to a kind of 'mimicry' or lack of authenticity. The learner may be in this space of transformation for considerable time. It may extend beyond the duration of the programme they are studying. This is because the transformation in understanding entails the integration of a new concept, and the integrative nature of the new concept tends to reconfigure the relations of other ideas already held in the learner's conceptual arsenal, their prevailing schemata, their prior

learning. Successful integration results in a reformulation of the learners' frame of meaning. An analogy may be drawn with the integrating effect that the insertion of a specific piece in a jigsaw puzzle may have in rendering other proximal pieces meaningful in a new configuration, bringing a new part of the picture into view.

> The addition of a new concept to a learner's collection can also affect the understanding of other concepts in that collection with the result that over time the whole collection develops and changes… The threshold concept may be in the nature of a conceptual straw that breaks the camel's back – a piece in a jigsaw of concepts that causes them to coalesce and produce a step change in perception. (Land, Rattray, & Vivian, 2014: 208–209).

Successful integration allows the learner to enter new conceptual territory in which things formerly not within view are now perceived and understood. The shift in perspective and ontology, Meyer and Land maintain (2003), is ratchet-like and irreversible. Such integration however, as stated, requires a loosening or abandoning of earlier perspectives. As the American educationist John Dewey (1986: 136) observed, '*The path of least resistance and least trouble is a mental rut already made. It requires troublesome work to undertake the alteration of old beliefs*'. The economist John Maynard Keynes noted, similarly, that new ideas are often less of a difficulty than the jettisoning of '*the old ones, which ramify … into every corner of our minds*' (1973: xxiii). This entails a 'stepping into the unknown, which initiates a rupture in knowing' (Schwartzman, 2010: 38) and one which the more 'frail' learner may turn away from. The challenge may arise from the sheer conceptual difficulty of the new idea, its counter-intuitive nature, its presentation through a somewhat ritualised educational process, or its seemingly alien discourse (Perkins, 2006). Furthermore, it may arise because the learner glimpses the ontological shift that their passing through the portal of transformed understanding will entail and, as Gray described, retreats from what seems a painful prospect. Cousin (2006: 141), emphasising the change that knowledge brings to our subjectivity (the notion that you are what you know) characterises this form of learner frailty and apprehension, as '*the defended learner*'. However Hokstad and Gundrosen (2016: n.p.), researching the practice of medics and architects, found that on occasion it is necessary for the ontological shift to precede the conceptual shift. Moreover, what they termed '*complex threshold concepts*' were found to require confidence to challenge, capacity to live with uncertainty and to deal with complexity. All three requirements were '*intertwined*' and '*nested*'. Learning has to be '*an iterative praxis*'. As Barnett (2000) found earlier, acting, knowing and being – praxis, epistemology and ontology – tend to be inseparable in the learning process.

High quality learning, will of course, seek to provide a holding environment to support the learner through such difficult transitions, to help them develop resilience to navigate liminal spaces and assist them to envisage a transformed version of themselves practising successfully in the changed intellectual and affective landscape – the untravelled world – through the portal.

> Such transformations – which apply as much to habituated practices as to conceptual understandings – may be protracted and are often partial in their achievement, with learners 'getting' certain aspects of it and not others, leaving residual miscomprehension. They can incur resistance on the part of 'defended' learners or may lead to forms of mimicry in the application of new learning or adoption of new practices. In all disciplines such transformations seem to require and provide access to a changed use of discourse. Because of this combined reconfiguring of one's epistemological, ontological and discursive state these transformations are usually irreversible. (Land, 2011)

In terms of quality enhancement the Threshold Concepts Framework can be used as a conceptual tool and an analytical framework to inform course and programme design (Land et al., 2004). Cousin (2008: 269–270) maintains that the search for threshold concepts has the potential to open up discussions and co-inquiry among subject experts, students and educational researchers, creating what she terms 'forms of transactional curriculum inquiry' between these three parties. This holds out for these key actors a 'pursuit of shared understandings of difficulties and shared ways of mastering them.' The Thresholds Framework, as one form of transactional inquiry, offers, she suggests, an approach 'which becomes neither student-centred nor teacher-centred but something more active, dynamic and in-between' (Cousin, 2008: 270). A substantial corpus of empirical evidence relating to threshold concepts, and examples of troublesome threshold concepts illustrated in many hundreds of scholarly papers in some 150 disciplinary contexts and from authors in the higher education sectors of 50 countries, is maintained online by Flanagan (2017).

RESILIENCE

> *But these seemingly fragile people are the strong people really.* (Tennessee Williams)

If high quality learning in the 21st century entails the daunting lists of knowledge skills and attitude demanded by business and industry, as well as the discomforts of troublesome knowledge in the classroom and the exigencies of liminal states, then attention has to be paid to the affective dimensions faced in such repositioning of self. The American educationist bell hooks describes the toll this can take both on students and their teachers:

> Students do not always enjoy studying with me. Often they find my courses challenge them in ways that are deeply unsettling. This was particularly disturbing to me at the beginning of my teaching career because I wanted to be liked and admired. It took time and experience for me to understand that the rewards of engaged pedagogy might not emerge during a course. (hooks, 1994: 206)

The American Buddhust nun Pema Chodron admired and emulated those amongst her teachers '*who stepped outside of the conventional mind and who could actually*

stop my mind and completely open it up and free it, even for a moment, from a conventional, habitual way of looking at things' (Chodron, cited in hooks, 1994: 206). Her take on frailty and resilience is the need for personal preparedness:

> If you are really preparing for groundlessness, preparing for the reality of human existence, you are living on the razor's edge, and you must become used to the fact that things shift and change. Things are not certain and they do not last and you do not know what is going to happen. (Chodron, ibid.: 206)

This resonates with Gray's earlier insistence on acceptance of realities. Whether education was shaped by Christian and Jewish religion, or by the classical philosophies of Greece and Rome, he argues, the aim was 'to nurture resilience and determination'. Realism requires 'courage – the willingness to accept a certain amount of intellectual suffering, as the price that must be paid if you are to understand why the world is as it is'.

> No doubt children need to be sheltered from realising all the hazards of life, but no-one can grow up if they spend their lives avoiding thinking about the dangers that go with being human. The result can only be a perpetual condition of childishness. The true purpose of education is to understand that the world is never going to be a safe space.

In her work on the affective dimensions of liminality, Julie Rattray (2016) has explored emerging evidence on the role that such factors as hope, optimism and 'PsyCap' – psychological capital (Luthans et al., 2007) – may play in the building of resilience.

> Research in the domain of positive psychology and learning has tended to focus on the relationship between psychological states such as hope, optimism or resilience and learners subsequent academic performance. The findings from this research suggest, for example, that hope, which is associated with an individual's belief in their own ability to follow identified pathways as a means of achieving future goals through personal agency, is a good predictor of future academic success (Snyder et al., 2002), whilst Chang (1998) argues that a learner's ability to cope with academically challenging situations and to solve problems effectively is mediated by their level of hope. (Rattray, 2016: 69)

> The LEGACY project, a consortium of UK Russell Group universities led by Cambridge University School of Education, is, at the time of writing, investigating what might constitute critical transformative factors in the nature of 'learning gain' during undergraduate programmes preparing students for the challenges of the 21st century. Their emerging conceptual framework (Vermunt et al., 2016) offers some helpful pointers to the cognitive, meta-cognitive, affective and socio-communicative components that may be required to effect meaningful and purposeful gain (see Figure 2).

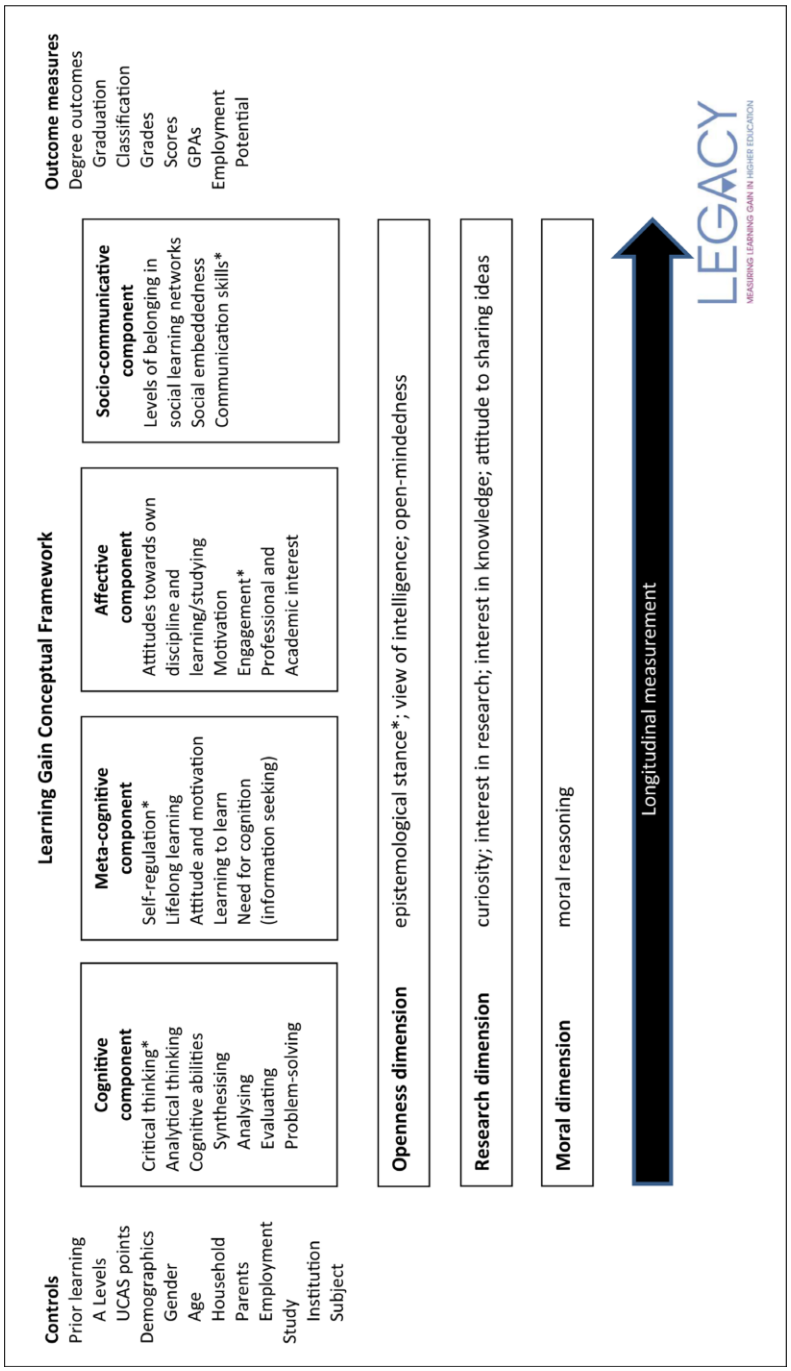

Figure 2. Learning gain conceptual framework (Vermunt et al., 2016)

CONTEXTS OF QUALITY ENHANCEMENT

Our assumptions about how quality might be assured and enhanced will inevitably frame and have consequences for the pedagogies, interactions and content of the programmes we offer. Land and Gordon (2013), in their analytic model of the contexts of enhancement, draw attention to the dominant assumptions concerning quality, gain, risk and trust that are inherent in particular modes of enhancement. If the frailty of students is to be addressed, as indicated earlier, through encouraging them to engage with troublesome ideas and challenging practices, and to traverse transformational thresholds into new conceptual and affective spaces, then these underlying assumptions will need to be taken into account in order to ensure that a system of quality evaluation may not inadvertently penalise academics who push their students into new and often uncomfortable territory. As indicated above in bell hooks' realisation that 'the rewards of engaged pedagogy might not emerge during a course', lecturers, particularly early career academics, may decide to avoid the risk and censure (and, worse, poor prospects of advancement) that may ensue after adopting innovative pedagogies, and the uncertainty which results in low student satisfaction ratings or module evaluation scores.

Land & Gordon's model suggests that quality enhancement in higher education organisations may take one, or a mix of, the following modes: (1) a high fidelity mode (with the priority on consistency to a set of principles and standards); (2) a low fidelity mode (with greater latitude allowed according to local contexts); (3) a consumerist approach (based on student satisfaction) or (4) a managerialist approach (where efficient resourcing is key). These choices might be tabulated in Table 1.

These modes may be considered as competing forms of discourse, each of which renders the experience of learners, and also the pattern of responsibilities and obligations of stakeholders in the learning process, in radically different ways, and for different purposes. For example students may be brought into view as consumers, as clients with obligations or as subjects undergoing transformation.

> discourses can both inspire or undermine the trust of learners, of academics, of employers and of the public at large, and we know from the work of Stensaker and Harvey (2011) how, when the quality of institutions is under scrutiny, trust becomes a critical factor in the establishment of legitimacy, autonomy and accountability. (Land & Gordon, 2013: 264).

There is in this model a strong interplay of internal and external dynamics. For example a significant gain of the consumerist mode might be deemed to be a more student-centred provision and the pursuit of consumer satisfaction, a signalling that 'one size does not fit all' and innovative new forms of provision. However inevitable risks also accompany the advent of a consumerist tendency. Injudicious blanket use of student satisfaction surveys (e.g. National Student Survey (NSS) in the UK, the Course Experience Questionnaire (CEQ) in Australia) can produce the

Table 1. Contexts of enhancement (Land & Gordon, 2013)

Context	*Informing notion*	*Idea of quality*	*Gains*	*Risks*	*Trust*
High Fidelity	convergence, and alignment	consistency, conformity to standard	coherence, consistency and reliability	stifles innovation, insufficiently context-sensitive, tokenism, compliance	low trust of variation
Low Fidelity	importance of context, tolerance of variation	engagement, innovation, variation	taps into how architects prefer to work, fosters motivation, sense of ownership, relevance	restricted to specific pockets, practice fragmented	high trust of local practice
Managerial	effective resource deployment, 'joined-upness'	transformed practice	better matching of resources to strategies, greater efficiencies	resistance, conflict, 'noise', non-compliance, judicious subversion	low trust of local practice
Consumerist	market competitiveness, institutional positioning, strong brand, competition	fitness for purpose, value for money, excellence	student-centred provision, consumer satisfaction, improvement of student learning	distortion by the market, stifling of innovation, reputational damage	high trust of the market

unintended consequences – in terms of quality enhancement – of risk-aversion and the discouragement of innovation.

Similar issues arise with the high fidelity mode, the informing notions of which tend to be those of convergence, alignment and consistency, manifested through, for example, alignment with declared objectives, outputs and standards, and fixed (modular) programme structures. The intended gains of this approach include reassurance to user groups and other stakeholders regarding the coherence, consistency and reliability of provision and practice. The potential risks or weaknesses in the approach are that one size will be deemed to fit all, and too great a concern with prescription might again suppress innovation. This approach often neglects the granularity required for academics to 'listen for understanding' and detect the misconceptions or misunderstandings that may give rise to the perceived frailty of individual students. High fidelity approaches, as with managerial approaches (see model above), can also suffer from the twin disadvantages, in terms of addressing student frailty, of:

i. restricting the possibility of a necessary degree of recursiveness within the curriculum to allow teachers and their students to revisit areas of misunderstanding at later points in the programme and, of crucial importance, in a changed pedagogical mode;
ii. generally operating on the basis of low trust of other stakeholders such as students and academics. In a context of student frailty, trust, as Stensaker and Harvey (2011) emphasised, will be paramount.

Indeed, in delicate contexts of pedagogic and student frailty, where both teachers and students can feel pressured and anxious, insensitive or poorly communicated managerial interventions can easily provoke unintended adverse effects that might manifest discreetly as guarded non-compliance, or more covert judicious subversion, or break out more overtly as open resistance or unhelpful noise within the system.

CONCLUSION

In contexts of learning where a transformative experience for the student is deemed paramount (and where the prospect of personal transformation as we have seen earlier, might be apprehensively viewed as daunting, giving rise to frailty) then conditions of enhancement which acknowledge the individual variability of learners, including their varying levels of educational and cultural experience, in addition to the variation in the specific knowledge sets of different disciplinary cultures, is likely to be required. A low fidelity approach, the informing notion of which is the importance of context and the need for both recognition and tolerance of the variability that arises within and between contexts might be considered the most suitable option in this situation. Potential gains of this approach, as the model indicates, are that it can tap into the grain of situated change and can have substantial impact. As Land (2016: 164) points out:

> It can foster engagement and reach down to the point of action, or street level (Lipsky, 1980). Through genuine engagement of academics and other key staff it can stimulate development and transforming action within communities of practice, such as disciplinary 'tribes' (Becher & Trowler, 2001), whose behaviour is often difficult to influence. However a potential drawback of this approach is that innovative enhancement activity may well remain restricted to the specific pockets or enclaves within departments and that practice may well become diffuse or fragmented.

This approach will require both tolerance of variation and heterogeneity in solutions and approaches. For this reason 'it may be troublesome for policy makers wishing to impose some form of standardisation over practice or a system-wide shift' (Land & Gordon, 2013: 266). Moreover, in terms of the patterns of trust discussed earlier, it will also need to be acknowledged that in this approach a degree of control will necessarily have to be relinquished and this will entail a corresponding degree of trust at the practitioner level and with other stakeholders. Sometimes it might be necessary to relax a little, and just go with it.

> *My teachers have always pushed me over the cliff.* (Pema Chodron; cited in hooks, 1994: 206)

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14. PROFILING PEDAGOGIC FRAILTY USING CONCEPT MAPS

INTRODUCTION

Pedagogic frailty is a valuable model to enhance teaching improvement through the integration of institutional efforts. Its use can be a source of information to foster evaluation processes involving individuals (academics) and teams (departments). Profiling pedagogic frailty can produce relevant outcomes to scaffold academic development, align values and guide decision making in higher education institutions. For this reason, it is plausible to predict rapid dissemination of the model. However, a bottleneck is already foreseen at this current early stage of development.

Concept maps (Cmaps) have been selected as the preferred choice to represent the elicited academics' knowledge during individual interviews. Kinchin argues that concept mapping can be a method in the exploration of pedagogic frailty to gain access to the yet-to-be-known (see Chapter 1). The understanding of Cmaps as dynamic constructs that reveal latent knowledge and beliefs goes beyond the typical applications we find in the educational realm, where Cmaps are seen as static summary diagrams to support the learning process. In the pedagogic frailty context, Cmaps help to frame and organise academics' narratives, making visible subtle conceptual relationships that trigger and sustain the reflective practice. The process of charting the elements of pedagogic frailty attested the value of Cmap-mediated individual interviews (Kinchin et al., 2016).

The dependency of Cmap-mediated individual interviews is a blessing and a curse. Although they support knowledge representation, elicitation and reflective practice, the need of an expert interviewer who must combine a clear understanding of concept mapping and pedagogic frailty hinders the model's broad dissemination and use (Figure 1). Moreover, each interview lasts about two hours without considering the Cmap revision and validation steps. These conditions are indicative of the current early stage of development, marked by theoretical refinements and small-scale pilot studies. The challenge of disseminating the model asks for a more robust solution that allows widespread availability around the clock and large-scale usage by academics around the world.

This chapter discusses the need for developing tasks to prompt Cmap construction to support academics to represent their pedagogic frailty profile without mastering the concept mapping technique. We argue this is the first step toward an on-line

I. M. Kinchin & N. E. Winstone (Eds.), Pedagogic Frailty and Resilience in the University, 195–210.

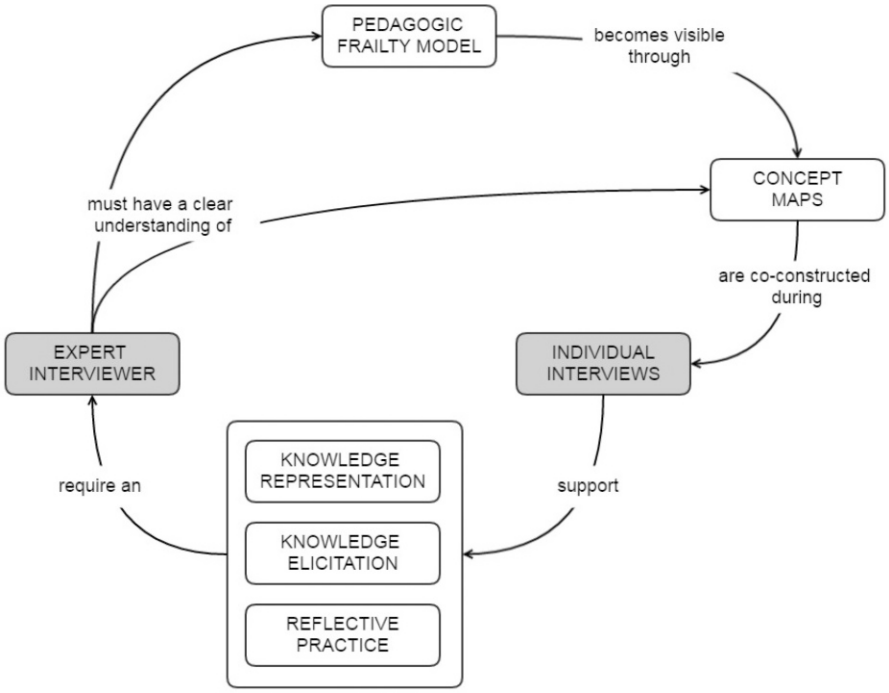

Figure 1. Cmap to answer the focus question "What is the bottleneck to disseminate the pedagogic frailty model?". The grey concepts highlight the answer

computer-based system capable of making the profiling task broadly available to the higher education public.

CONCEPT MAPPING TO ORGANISE, MODEL AND SHARE KNOWLEDGE

Concept mapping is a well-established technique for the graphical representation of knowledge that enables the explicit description of mental models, that is, the explanations of one's thoughts about how something works in the real world. Cmaps have a decades-long background of research and application, dating back to the 1970s when the concept mapping tool was first proposed by Joseph Novak and his colleagues at Cornell University (Moon et al., 2011; Novak, 2010). Ausubel's Assimilation Learning Theory (Ausubel, 2000) informed the development of concept mapping, creating a sound body of theoretical knowledge regarding its use (Novak & Cañas, 2006, 2007). Cmaps have often been explored for educational and corporate purposes and have changed the way we manage knowledge and information (Correia, 2012; Hoffman et al., 2006; Moon et al., 2011; Nesbit & Adesope, 2006; Novak, 2010).

Propositions are the essential component of Cmaps. They are formed using two concepts, linked by an arrow to indicate the reading direction. A linking phrase, that is, a clear explanation of the relationship between these concepts, must be added in the arrow to let the reader identify the precise understanding of the concepts held by the mapper. The absence of a linking phrase hinders the understanding of the conceptual relationship, producing associative node-link diagrams, such as mind maps (Davies, 2011).

The frailty model and its key dimensions can be represented as shown in Figure 2. The associative diagram (Figure 2a) puts together a set of concepts that gives some clues about the hierarchical arrangement. Pedagogic frailty is the source of the connections to the other concepts, and all of them are highly interconnected. The limited semantic content simplifies the diagram, and no further information can be obtained from it. This associative map is only a sketch of pedagogic frailty. The inclusion of linking phrases produces a propositional network (Figure 2b) that reveals the nature of all conceptual relationships. For example, the connection between "pedagogic frailty" and "regulative discourse" is now clearly stated as a proposition (*pedagogic frailty - increases with lack of explicit and shared → regulative discourse*). The expansion of the semantic content produces clear and understandable statements that make Cmaps more useful to externalise, organise and share our mental models. Additional conceptual refinement can easily take place individually (the mapper revises his/her Cmap after a few days) or collaboratively (the mapper presents his/her Cmap to other people) through meaning negotiation.

It is worthy to note that the meaning of propositions can be drastically changed with discrete modifications in linking phrases. Therefore, the mapper must recognise the possibility to select the most appropriate words to express and communicate the messages precisely. Clarity is a precondition to assess the conceptual correctness of any proposition, as illustrated in Table 1. "Higher education" and "economic development" are concepts that can be connected. However, the lack of linking phrase only associates these concepts (see 1 in Table 1). The addition of conjunctions is a common attempt that is not helpful (see 2 in Table 1). In these cases, the semantic meaning is not clear, and it is not possible to understand the conceptual relationship. Therefore, these structures are not classified as propositions.

The inclusion of a verb in the linking phrase is a rule of thumb to create propositions with clear semantic meaning (see 3-7 in Table 1). Variations of the verb *to be* are used to confirm this fact and to highlight that some of the propositions are conceptually unacceptable. *"Higher education - is important to → economic development"* has a clear meaning and it is conceptually acceptable. Changing the verb tense to the past (*Higher education - was important to → economic development*) or future (*Higher education - will be important to → economic development*) keep the messages clear, but they become conceptually inaccurate. Adverbs are useful to fit the propositional meaning with the conceptual relationship perceived by the mapper. The inclusion of "not" add three more letters to the liking phrase and reserve the semantic meaning (*Higher education - is not important to → economic development)*. There is no

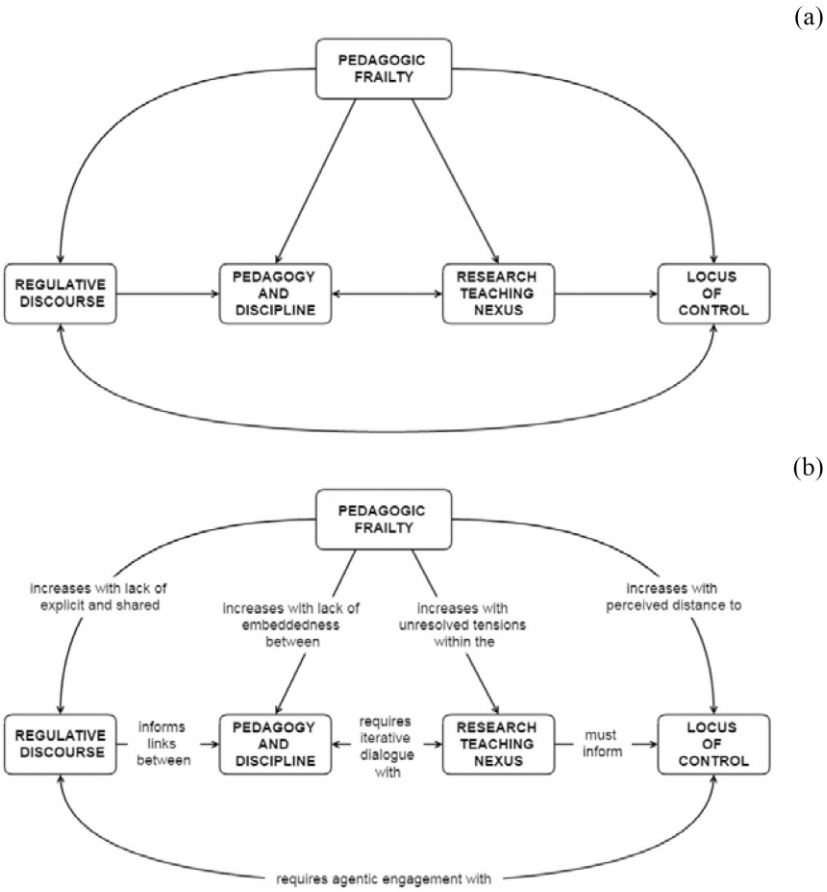

Figure 2. Comparison between (a) an associative diagram about pedagogic frailty and (b) a propositional diagram (Cmap) to answer "How can we summarise the pedagogic frailty conceptual framework?"

impact considering the clarity, but the conceptual correctness is missed. Quantifiers frequently open good discussions to adjust correct propositions. Some readers may prefer *"Higher education - is very important to → economic development"* instead of *"Higher education - is important to → economic development"*. Both propositions have clear semantic meaning and conceptual correctness. The fine-tune adjustment, in this case, will reveal different opinions about the topic.

Good Cmaps always present a focus question to keep our thoughts focused on the subject to be mapped (Figures 1 and 2b). It is the ultimate parameter to select concepts and linking phrases to set up the propositional network. Lastly, the Cmap hierarchical arrangement should consider the most inclusive concepts to start the

Table 1. Small changes cause great impact on the propositional meaning

Proposition	*Is it clear?*	*Is it correct?*	*Comments*
1. Higher education – ??? → economic development	No	I don't know	There is no linking phrase. The concepts are associated, but the conceptual relationship is not revealed. This structure is not a proposition.
2. Higher education – and → economic development	No	I don't know	There is no verb in the linking phrase. The additive association between the concepts generates a new big concept (higher education and economic development) in isolation. This is a poorly formulated proposition.
3. Higher education – is important to → economic development	Yes	Yes	There is a verb in the linking phrase to clarify the semantic meaning. It is possible to check the correctness of the conceptual relationship. The verb in the present tense is adequate.
4. Higher education – was important to → economic development	Yes	No	The verb in the past tense does not impair the semantic clarity. However, the proposition is conceptually wrong because higher education is still important to economic development.
5. Higher education – will be important to → economic development	Yes	No	The verb in the future tense does not impair the semantic clarity. However, the proposition is conceptually wrong because higher education has been important to economic development.
6. Higher education – is not important to → economic development	Yes	No	Adverbs can be added to the linking phrase without impairing the semantic clarity. However, the conceptual relationship can become invalid using few letters (*e.g.* no).
7. Higher education – is very important to → economic development	Yes	Yes	Quantifiers allow a fine-tune adjustment of the semantic meaning. A discussion about how much higher education is important to economic development can take place. Other quantifiers (*e.g.* so, moderately, little) can the used to express precisely the conceptual relationship.

map (at the top of the page), followed by other concepts that progressively detail them (at the bottom of the page). This approach makes easier to process the Cmap content because we can subsume the details (information) knowing the broad topic (starting concepts). The progressive differentiation was proposed by Ausubel (2000) as a mechanism to increase the stability and clarity of anchoring ideas that form our conceptual schemes (mental models).

NOT SO EASY: INDIVIDUAL INTERVIEWS AND THE NEED OF AN EXPERT

One's skills in making Cmaps and the understanding of the task-relevant knowledge are critical aspects to achieve the benefits of organising, modelling and sharing knowledge using concept mapping. When these conditions are met, Cmaps are likely to be helpful to achieve such benefits. A closer look at the Cmap-mediated individual interviews that have been used to chart pedagogic frailty reveals the following concurrent cognitive tasks:

- Knowledge representation (KR), related to the Cmap construction.
- Knowledge elicitation (KE), related to the emergence of task-relevant knowledge from the academics' mental models.
- Reflective practice (RP), related to the critical evaluation of the mapped knowledge for professional development purposes.

These tasks must be handled by the limited cognitive resources available in working memory (you are using this memory system to read, process and understand this text right now). Mapping conceptual relationships about pedagogic frailty can be considered a complex task because the output has a particular format (Cmap) that must be constructed from elicited knowledge to foster a self-reflective process. In such a situation, the task outcome is impaired because the working memory resources are not enough to cope with these concurrent tasks simultaneously. Cognitive load theory (Sweller et al., 2011) offers important inputs to understand and describe why an expert must conduct Cmap-mediated individual interviews. Figure 3 represents the working memory resources (white box) allocation to handle this task with and without an expert.

Most of the academics have little (or no) experience in concept mapping. KR is the first obstacle to be overcome, and they probably will invest their cognitive resources to find out how to set up Cmaps. There will be little working memory resources available to deal appropriately with KE, and the obtained Cmap will be a poor representation of the academics' mental models (Correia & Aguiar, 2014). As a consequence, RP will be hindered due to the quality of the Cmap produced. Cognitive overload occurs when the working memory resources are not enough to execute a high-complexity task, resulting in a poor outcome (Figure 3a). You can feel the cognitive load changing while you are reading this chapter. Processing familiar contents is easier than understanding the passages with new concepts. The

more prior knowledge you have about a subject, the less cognitive load is imposed on working memory. This relationship explains why new contents, such as concept mapping, are burdensome to novices.

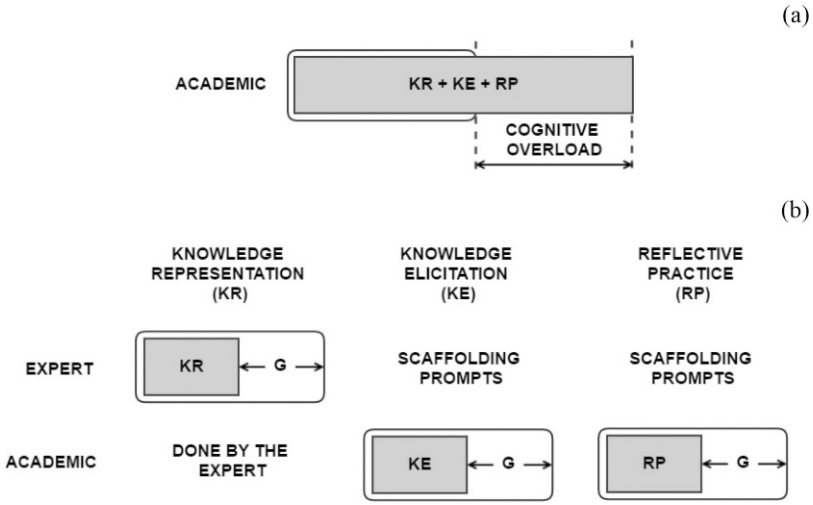

Figure 3. Cmap-mediated individual interviews (a) without the expert (probably causing cognitive overload), and (b) with the expert (G: generative resources allow schema manipulation and construction). White boxes represent the working memory cognitive resources

The expert role during Cmap-mediated individual interviews is critical to avoid cognitive overload for two main reasons. The KR task (Cmap elaboration) is transferred to the expert. Academics can focus only on KE during the Cmap construction. The division of responsibilities decreases the cognitive resources required for both participants, and generative processes (G) can occur during the task (Figure 3b). Such processes involve schema manipulation and construction that are critical to ensuring an in-depth KE. As a consequence, the Cmap obtained after an expert-mediated interview has high-quality features, and it is useful to foster RP.

The expert can also organise the dialogue flow to avoid concurrent tasks (Figure 3b). Oral prompts keep academics focused on the task at hand. KE dominates during the Cmap construction phase, whereas RP is likely to occur mainly when the represented knowledge becomes available. Moreover, the prompts help to organise the content of each key area of pedagogic frailty. A particular Cmap is created of regulative discourse, pedagogy and discipline, research teaching nexus, locus of control, and pedagogic frailty itself. This sequential approach contributes to ensuring generative resources for the academic during the entire interview.

Cmap-mediated individual interviews are useful to represent academics' knowledge related to pedagogic frailty. However, there are a limited number of experts that have a clear understanding of concept mapping and pedagogic frailty. The model dissemination requires a different strategy to make the profiling task broadly accessible.

A CMAP-BASED TOOLKIT TO PROFILE PEDAGOGIC FRAILTY

The near future seems to require an on-line computer-based system capable of scaffolding the construction of Cmaps that are currently obtained during individual interviews mediated by experts. Instructional design can guide the development of tasks to accomplish KR, KE and RP, without face to face interactions with the expert.

For many years, Cmaps were drawn by hand. Creating iterative revisions of a Cmap was cumbersome and time-consuming. Collaborative concept mapping sessions, such as individual interviews, could be facilitated using post-it notes. The possibility of exploring concept mapping online launched an entirely new world of applications and uses for concept mapping as exemplified by the CmapTools software, which was developed by the Institute for Human and Machine Cognition (Cañas et al., 2004). Undoubtedly, CmapTools have enhanced the power and applicability of Cmaps in educational and corporate settings (e.g. Moon et al., 2011; Novak, 2010).

The digital concept mapping approach using CmapTools allows the creation of more than isolated Cmaps. The idea of knowledge models leverages the possibility of mapping information and organising knowledge by constructing a set of hyperlinked Cmaps that include associated resources (any digital file can be linked to any concept) about a particular domain. The resultant hypertext structure is similar to a website and is user-friendly even for first-time users. Knowledge models can be explored by navigation icons (links) that appear below the Cmap concepts (Figure 4).

The knowledge model is a well-structured environment that can be constructed to represent content about complex issues (e.g. pedagogic frailty). Knowledge models allow the implementation of the hierarchical reductionism approach when mappers are faced with a complex set of interconnected information (Correia et al., 2014). Hierarchical reductionism is a safe way to produce acceptable answers to complex problems (Dawkins, 1996). The main idea is to describe complex systems using a hierarchy of organisations, each of which is only expressed regarding objects (concepts) one level down in the hierarchy. This strategy ensures that all explanations about the system are generated by a step-by-step approach and contain a manageable number of elements (concepts) to be processed. In this context, systemic thinking is strengthened because it is possible to connect the parts with the whole system continuously. Therefore, hierarchical reductionism seems to be useful for mapping pedagogic frailty, which attempts to support the simultaneous focus on the main dimensions of the teaching environment (Kinchin, 2016). The latent connectedness among pedagogy frailty and its components (regulative discourse, pedagogy and

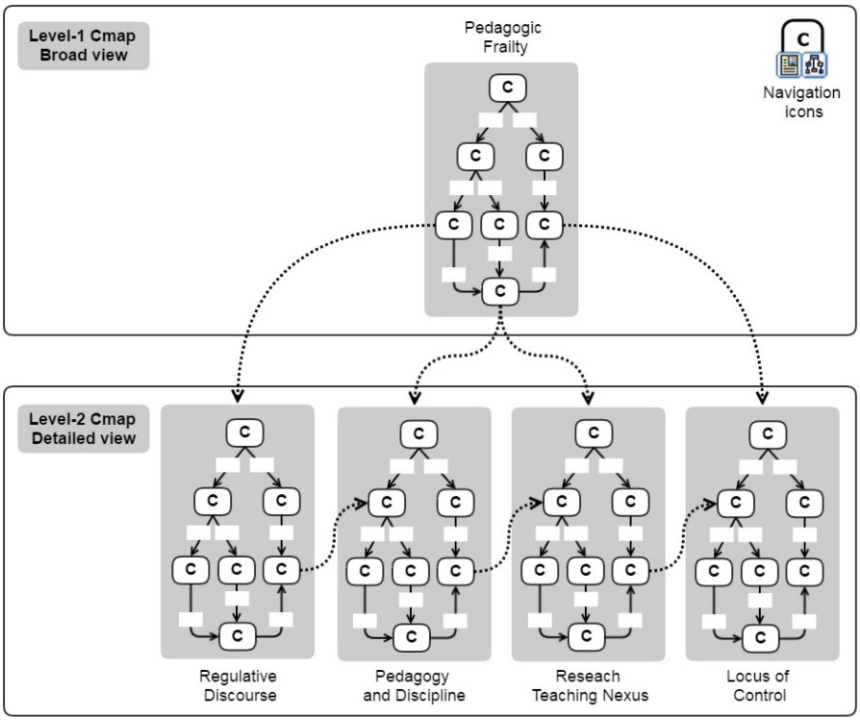

Figure 4. Knowledge model to describe pedagogic frailty and its key areas. CmapTools navigation icons create links to digital resources (LEFT ICON) and between Cmaps (RIGHT ICON). Dotted lines highlight vertical (between level-1 and level-2 Cmaps) and horizontal links (between level-2 Cmaps)

discipline, research teaching nexus and locus of control) can be easily represented and perceived using digital Cmaps to set up a knowledge model.

The possibility to hyperlink Cmaps is an additional advantage associated with the foreseen on-line computer-based system to profile pedagogic frailty. Figure 4 shows the knowledge model structure that can be produced to profile pedagogic frailty. The level-1 Cmap contains unifying concepts that are critical to depict the broad view of the topic. It is the starting point to more focused level-2 Cmaps, which details the four key pedagogic frailty areas. Concepts can be used to create two different hyperlinks among the Cmaps (Correia et al., 2014). Vertical links involve Cmaps from different levels and express the overarching structure of pedagogic frailty. Horizontal links include Cmaps from the same level (level-2), revealing conceptual connections among the pedagogic frailty key areas. These links capture latent knowledge and beliefs that are critical to profile academics, making digital Cmaps more useful than paper-and-pencil counterparts.

SCAFFOLDING TASKS

The on-line computer-based system will be useful to disseminate pedagogic frailty if it facilitates KE and RP to create Cmaps (Figure 3). The scaffolding tasks must mimic the dialogue sequence adopted during the Cmap-based individual interviews. Therefore, the interventions done by the expert interviewer should be useful to devise what, how and when to make specific demands. A prospective exercise involving scaffolding tasks resulted in the diagram presented in Figure 5. The on-line process of making Cmaps can be divided into three different moments that require specific prompts

- KE from a blank screen (KE1).
- KE from the Cmap preliminary version (KE2).
- RP from the Cmap intermediate version.

The difficulty to start writing from a blank sheet also happens when we start to make a Cmap. The blank screen may be challenging even for experienced mappers. The KE1 tasks must probe relevant concepts and conceptual relationships to the topic to be mapped. Academics are not used to the pedagogic frailty model, and concept lists (see 1 in Figure 6) can be useful to establish the boundaries of regulative discourse, pedagogy and discipline, research teaching nexus, and locus of control. The selected concepts can be organised into a hierarchical associative arrangement (see 2 in Figure 6). Other question formats can ask academics to complete statements, judge comments (agree-disagree), and evaluate scenarios. All the tasks gather information to create the Cmap preliminary version, that is, an expanded version of the associative arrangement with linking phrases (see 3-4 in Figure 6). KE2 tasks explore the Cmap preliminary version using prompts to guide academics to review the concepts and linking phrases. Specific questions about the suitability of the selected verbs to express conceptual relationships can promote changes to adjust the propositional meaning to represent the academics' mental model precisely. Missing key concepts can be offered to check if the Cmap can be expanded to convey more meaningful details about the subject. The search for cross-links through the addition of new propositions can be an exciting creative challenge to check the overall conceptual network. Lastly, a tentative focus question can be shown to ask the academic to revise the overall Cmap content. The goal is to define what is the best focus question addressed by the propositional network. The Cmap intermediate version is obtained as a result of KE2. It is worthy to note that each KE steps must be repeated for each one of the five Cmaps that comprise the knowledge model about pedagogic frailty (Figure 4).

RP tasks foster a critical evaluation of the Cmap intermediate version, which acts as the starting point to considerations about the professional identity and experiences. Explanation and exemplification prompts (Figure 5) stimulate an

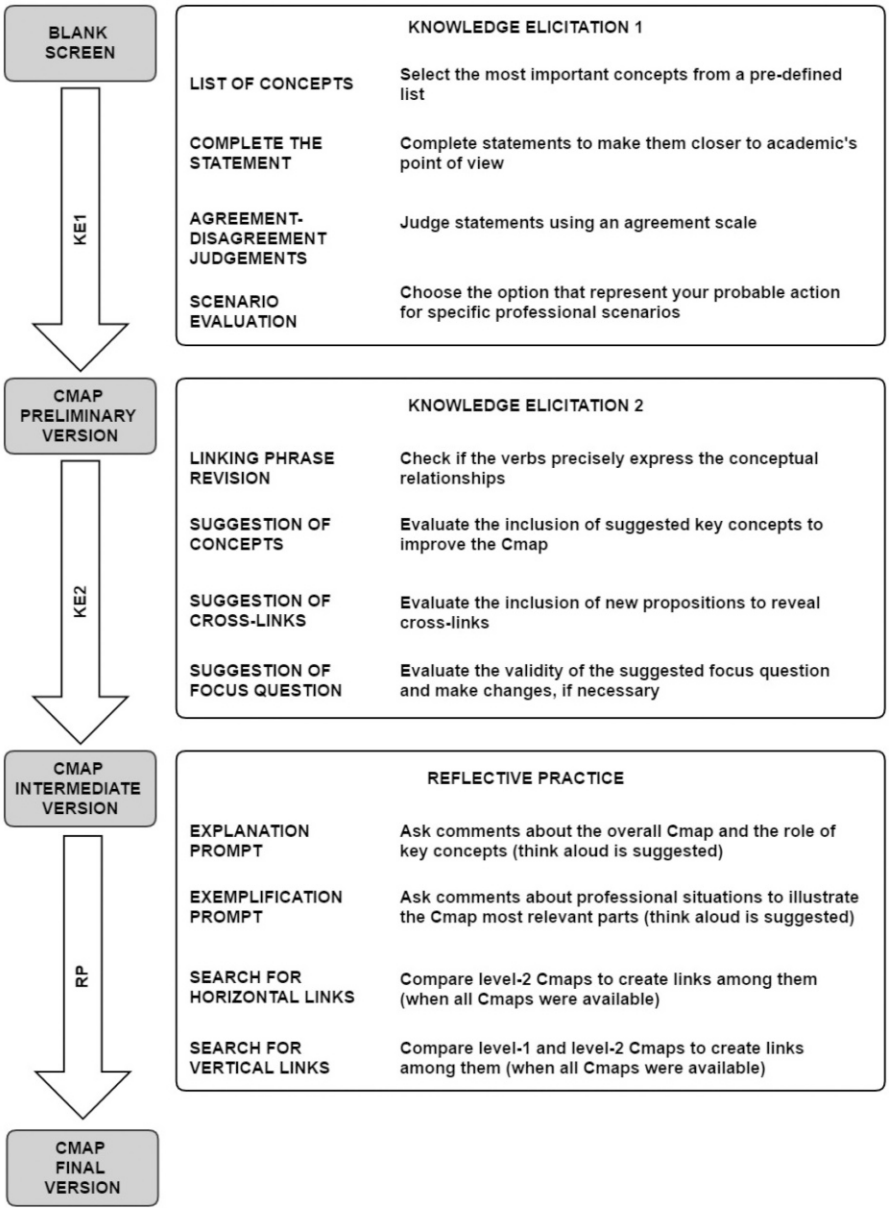

Figure 5. Examples of online scaffolding tasks to support Cmap creation

internal dialogue to delve into to the yet-to-be-known (see Chapter 1). Think-aloud protocols may be useful to register self-discoveries and insights that enlighten the academics' pedagogic frailty profiles. The same objectives are pursued when the search for horizontal (between level-2 Cmaps) and vertical links (between level-1 and level-2 Cmaps) are suggested as scaffolding tasks (Figure 5). The difference here is the focus on the overall structure of the knowledge model (Figure 4) to produce more insights through the examination of pedagogic frailty as a whole. Explanations for each added link between Cmaps can be related to creative leaps that capture latent knowledge and beliefs that deserve to be recorded for future reflection by the academics. All the scaffolding tasks proposed from the Cmap intermediate version apply concept mapping to develop reflective practice while constructing knowledge structures that support the evolution of adaptive expertise (see Chapter 1; Bohle Carbonell et al., 2014; Salmon & Kelly, 2015).

EXAMPLES OF SCAFFOLDING ACTIVITIES

Four scaffolding activities are presented below to illustrate a sequence to promote KE1. The academics' answers are collected to inform the automated Cmap creation. Figure 6 represents the evolving mapping process from the blank screen to the Cmap preliminary version.

1. Choose from the list the most important concepts to represent the features of the professional academic realm.

☒ Ability	☒ Environment	☒ Resilience
☒ Adapt	☐ Evaluation	☒ Stress
☒ Changes	☐ Inability	☒ Students
☐ Complexity	☐ Integrate	☐ Teachers

2. Choose the alternative that is closer to your point of view.
   - Usually, the teaching environment is
     - ☐ Boring
     - ☐ Complex
     - ☐ Defiant
     - ☒ Stressful
   - If the challenges posed by the teaching environment increase we should
     - ☐ Adapt
     - ☒ Change
     - ☐ Give up
     - ☐ Integrate
   - Making changes in the teaching environment involve
     - ☐ Ability to adapt
     - ☐ High levels of stress

- ☐ Take risks
- ☒ Resilience in the process

3. Judge the following statements using an agreement scale.

	Strongly disagree	*Disagree*	*Agree*	*Strongly agree*
Students are one source of stress.	☐	☐	☒	☐
The constant need of change stresses me.	☐	☐	☐	☒
Students are negatively affected by my lack of resilience.	☐	☐	☐	☒
I can quickly adapt from imposed changes.	☒	☐	☐	☐

4. Analyse the following scenario and choose the alternative that represents your behaviour.

   Imagine that the curriculum of the course you are used to teaching was entirely modified by the institution. This happened without your participation and just before the beginning of the semester.

In this case, you probably would be:

- ☐ Calm and confident, because you always can use the same materials, strategies and assessments that you have used to apply in the classroom.
- ☒ Calm and confident, because you know you have the abilities to change whatever it was needed rapidly.
- ☐ Stressed, because you need to work hard to choose new materials, adapt strategies and activities and prepare new assessments.
- ☐ Stressed, because you know that it is impossible to adapt or change all the materials, strategies, activities and assessments in time.
- ☐ Highly stressed, because you decided not to make any modifications due to the lack of institutional discussion and information.

CONCLUSION AND PERSPECTIVES

Concept mapping is the best choice to make knowledge structures visible during the process of profiling academics' pedagogic frailty. Despite being a valuable model to enhance teaching improvement, the expert-mediated individual interviews hinder the broad dissemination of the pedagogic frailty model among the higher education community. This chapter presented a promising pathway to the development of a Cmap-based toolkit as a robust mechanism for rapid model dissemination in the next few years.

An on-line computer-based system can foster knowledge representation, elicitation and reflective practice, mimicking the mediating actions used by the expert during individual interviews. Moreover, the connectedness among pedagogic frailty and its key areas (regulative discourse, pedagogy and discipline, research teaching nexus

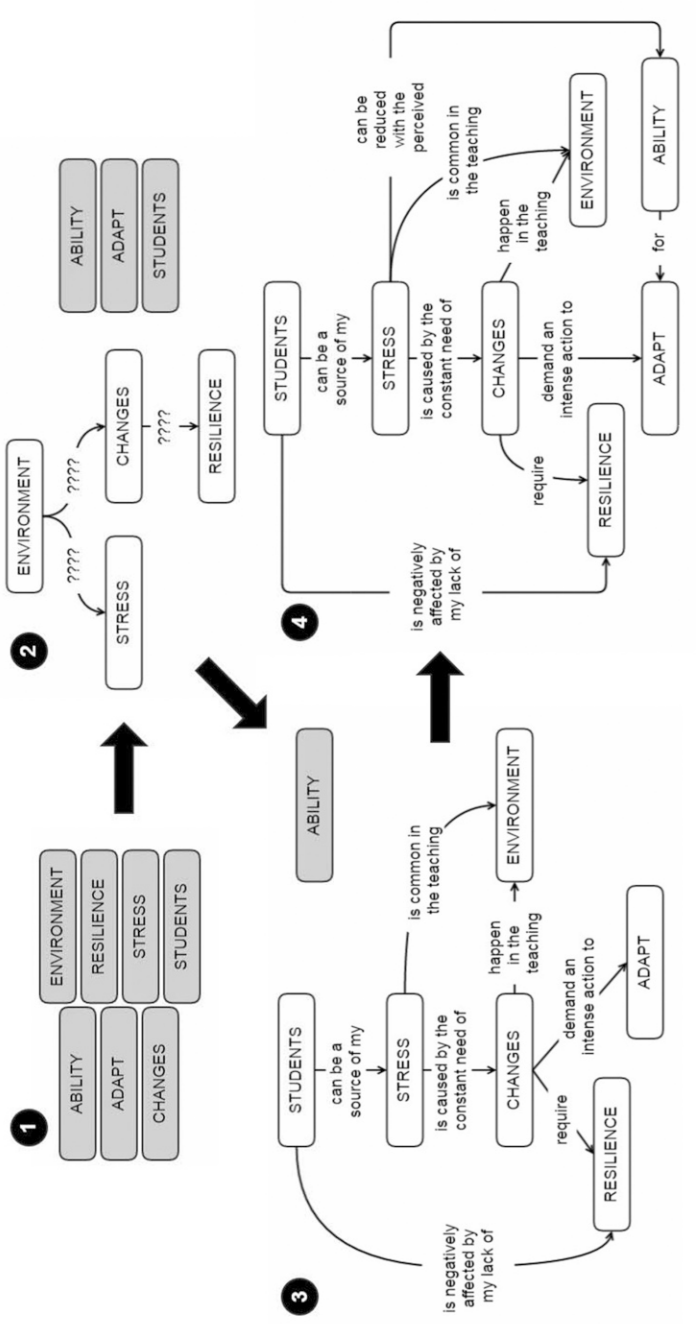

Figure 6. Evolving mapping process from the blank screen to the Cmap intermediate version, considering the academics' answers to the KE scaffolding tasks

and locus of control) can be fully captured using the CmapTools software to create five digital Cmaps to set up a knowledge model.

The toolkit asks academics to respond to simple activities that scaffold the Cmap creation and revision. After obtaining a high-quality representation of your mental models, a set of prompts foster reflective practice to put the academics into an internal dialogue to delve into to the yet-to-be-known about their professional development. The think-aloud approach is recommended to augment this reflective process to support the evolution of adaptive expertise. Considering all these promising features, research efforts to prototype this Cmap-based toolkit seem to be the next step to ensure the widespread availability of the pedagogic frailty model around the clock and around the world.

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15. PEDAGOGIC FRAILTY

Opportunities and Challenges

INTRODUCTION

The Higher Education landscape has experienced seismic shifts over the last decade, with pressure arising from increased accountability (e.g. Olssen, 2016) and a growing metric-driven culture (e.g. Clarke, Knights, & Jarvis, 2012). Indeed, one of the only constants experienced by those working in Higher Education is change (see Chapter 1), which creates a high-stress environment (Murphy, 2011). With change can come opportunity, but consistent shifts in objectives and processes, when combined with an external locus of control, can lead to diminished resilience to weather the storms, and a vulnerability to pedagogic frailty. The nascent model of pedagogic frailty offers potential in complementing and possibly integrating other areas of educational research, such that it may shed additional light onto established areas of scholarship. The previous chapters demonstrate how a consideration of frailty may offer a different way of considering pedagogy and related concepts, and provide insights into how such a concept can not only inform our understanding of the pressures experienced in contemporary Higher Education, but also how to overcome the challenges these pressures create. There are a number of good reasons to explain why a consideration of pedagogic frailty can be helpful:

1. After talking with various colleagues across the disciplines, the idea of frailty appears to resonate. As we are not using the term to refer to an individual's characteristics, but with reference to the quality of connections across the wider 'teaching system', it has not been perceived by them to be a threatening term.
2. The clinical analogy from which we have drawn heavily provides a starting point that colleagues can relate to. Everyone has either been ill, or knows someone who has, and recognises that the clinical professions are dedicated to promoting health rather than illness. Nonetheless, medicine knows more about disease than it does about health. This is the focus of medical studies. In order to promote health, you need to understand the indicators of illness and the consequences of inappropriate treatment. In much the same way, promoting resilience requires a sound grasp of the difficulties experienced by those working in Higher Education. Such difficulties are not necessarily weaknesses, but rather symptoms of a challenging work environment. Furthermore, within clinical models, much effort is directed

I. M. Kinchin & N. E. Winstone (Eds.), Pedagogic Frailty and Resilience in the University, 211–225.

towards preventative medicine and health promotion. Similarly, the concept of frailty reminds us of the importance of proactively working to foster resilience, rather than reactively dealing with difficulty. As we are reminded in Chapter 8, a focus on resilience rather than weakness can be important for social and political, as well as practical, reasons.

3. The promotion of a manageable level of discomfort may be seen as a way of developing new perspectives to move forward. Challenging cherished beliefs about teaching may encourage colleagues to re-evaluate their practice and consider new approaches to existing problems. That does not necessarily mean that change is inevitable. If a consideration of practice confirms that an existing approach is still the best within a given context, then we have an evidence base to argue for maintaining the *status quo*, and not just say 'we've always done it this way'.
4. Teaching at universities is not homogenous. The diversity of disciplines and personal approaches to classroom practice is a strength of the system. Reason (2000: 770) comments that in high reliability organisations that will function consistently within a fluctuating environment, '*it is recognised that human variability in the shape of compensations and adaptations to changing events represents one of the system's most important safeguards. Reliability is 'a dynamic non-event'. It is dynamic because safety is preserved by timely human adjustments; it is a non-event because successful outcomes rarely call attention to themselves'*. Teachers are always adapting to changing events and good teaching often goes unnoticed. We would not advocate teaching all becoming the same, but it may be helpful to have a shared view that underpins teaching; seen as a shared 'mindfulness' by Wieck et al. (1999), and shared values by Barnes (2014). The visualisation of pedagogy within the frailty model helps in the sharing process and works towards the development of resilience.
5. Reason et al. (2001) make an observation about organizations pursuing the 'wrong kind of excellence' when managers adopt a myopic focus on numbers and manipulating specific indicators without appreciating their limitations. According to these authors, the blinkered concentration of isolated elements of the overall system does not readily lead to detection of subtle interactions in the system that could end up as adverse events. The consideration of pedagogic frailty specifically focusses on the interactions between elements of the system and may be considered a tool to address the dominance of non-learning (Kinchin et al., 2008).
6. The model represents an ecological perspective that emphasises the dynamic interactions between elements of the teaching environment rather than employing rather sterile lists of key attributes.

We have no doubt that the emergent model of pedagogic frailty will evolve as it is subject to critical review from different disciplinary and methodological perspectives. We are not naïve enough to think that there will be a sudden acceptance of the concepts of pedagogic frailty as key ideas in the transformation of university teaching, and we appreciate what has long been recognised that:

> there is nothing more difficult to take in hand, more perilous to conduct, or more uncertain in its success, than to take the lead in the introduction of a new order of things. Because the innovator has for enemies all those who have done well under the old conditions, and lukewarm defenders in those who may do well under the new. (Machiavelli, 1515: 24)

However, we feel strongly that the investigation of these concepts offers a powerful mechanism to explore and integrate the various elements of the university context that impact upon teaching. Within this context, we ask if frailty is an inevitable phase in the life cycle of the engaged academic? And for academics who repeatedly put themselves in positions of change (by accepting challenges and opportunities offered by new teaching approaches, new technologies, new subjects or by new contexts such as those experienced by transnational academics), will frailty be a repeated challenge, or even a constant partner in their professional development? In many of the previous chapters, we have been prompted to consider how frailty might fluctuate over the course of an individual's academic career. In Chapter 5, Stevenson, Whelan and Burke indicated how those newer to the profession might feel a stronger sense of accountability to conform to the managerialist demands that they experience, perhaps rendering them more vulnerable to the effects of frailty. However, drawing on his work with Veterinarians, Lygo-Baker (Chapter 6) reminds us that even the most experienced academics are not immune to the symptoms of frailty. Importantly, Lygo-Baker argues that each time an academic enters a new 'habitat', they are likely to experience a challenge to their existing values system which requires a process of accommodation. Entering an academic post for the first time is an obvious example of experiencing a new habitat, but moving to a new institution, being promoted to a new position, or even moving to an unfamiliar Higher Education system in a new country are all illustrations of inhabiting a new environment. Some academics may be more resilient than others, in terms of their adaptive capacity to deal with new habitats, thrive on new and varying challenges, and use discomfort and difficulty as an impetus for development.

It would be naive to think that in some way the pedagogic frailty model could provide 'the answer' to the problems faced by university teachers, but maybe it can provide a portal to facilitate them to ask appropriate questions, promoting reflection to set individuals on their own personal trajectories of professional development.

The power of this approach from a quality enhancement perspective is that it is a 'bottom-up' innovation that may promote diversity of classroom practice, where academics have ownership of the process and the data, rather than a 'top-down' imposition by senior managers that may lead to homogeneity of practice. As such it may contribute to the evolution of a more distributed model of leadership, and to the development of models of academic development aligned with 21st Century challenges. With this in mind, we offer what we see to be the key messages that emerge from the previous chapters, with implications for academic staff, academic developers, and academic managers.

Academic Staff

1. Experiencing discomfort and difficulty is not a sign of weakness. It is a common response to features of the environment, and the very experience of discomfort and tension can be of benefit. In fact, by not experiencing discomfort, the development of resilience is inhibited (Chapter 13).
2. The individual values held by an academic are an important part of their own identity. Changing circumstances can pose a challenge to these values, which may require re-evaluation in the new context (Chapter 6).
3. Pedagogic innovation can feel risky, given the implications of student evaluations and the competing demands of research and teaching (Chapter 3). Co-construction and collaboration with students in teaching practice can foster resilience to push boundaries (Chapter 11).

Academic Developers

4. It is important for academic development programmes to support academics to surface, articulate, and interrogate their own values (Chapter 8).
5. Academic development that is aligned with the development of resilience is likely to support academic staff in adapting to new contexts or 'habitats' (Chapter 3).
6. Challenging circumstances can provide impetus for creativity in pedagogic practices (Chapter 3). Academic developers can support academic staff to see and enact the potential for innovation. It is also important for academic developers to challenge many of the perceived barriers to pedagogic innovation (Chapter 9).

Academic Managers

1. Instances of reward and recognition – even seemingly minor – can build resilience in academic staff and promote a culture of innovation (Chapter 3).
2. A distributed approach to leadership, where staff are engaged in decision making, recognises and builds upon the strengths of individual members of staff (Chapter 12), although we acknowledge the need for more evidence of a causal link between DL and enhanced student outcomes (Harris & DeFlaminis, 2016).
3. It is important to understand how the values of individual academics align with those of the institution, so that efforts can be directed towards the issues of greatest importance to all stakeholders (Chapter 4).

FRAILTY & RESILIENCE AS RHIZOMATIC

The mapping of academic perceptions of the dimensions of frailty in the manner described (e.g. Kinchin et al., 2016; Kinchin & Francis, 2016) is not to *trace* the outcomes against a pre-determined fixed route with which to judge colleagues,

but rather to act experimentally in the manner supported by Deleuze and Guattari (2004: 13) when they suggest:

> The map is open and connectable in all of its dimensions: it is detachable, reversible, susceptible to constant modification. It can be … reworked by an individual, group or social formation.

Wang (2015: 1557) has placed this in the context of higher education, and if we replace 'student' with 'academic' in her text, we can re-contextualise her comments for academic/faculty development so that:

> Mapping in this sense is for mapping an [academic's] subjectivity and for changing their self-identity through exposure to strangeness. If … mapping is dynamic and ensures continual change, then it operates through various learning circumstances, instead of an inert essence. This requires an experimenter who is uncomfortable with current restrictive territory and attempts to stride across and outside it. The cartography is therefore animated and creative.

To explore a more nuanced acceptance of the complexity of teaching, the concept of the rhizome developed by Deleuze and Guattari (2004), has been considered for its utility in higher education by various authors (e.g. Barnett & Guzmán-Valenzuela, 2016; Gale, 2007; Grellier, 2013). Taken from the botanical analogy of the underground stem such as that found in the ginger plant, the application of the 'rhizome' in education refers to systems or structures that are nonlinear, a-centred, non-hierarchical, without a single general organising principle and that are continuously making new connections. Whilst a rhizomatic perspective on knowledge management may present challenges to the traditional university that may be viewed as centralised, linear, hierarchical and singular (Figure 1), it resonates closely with the visual depictions of academics' understanding of the dimensions of pedagogic frailty – as decentralised, non-linear and non-hierarchical. The personal views that academics express of the dimensions within the frailty model offer a multiplicity of views (including life in and out of work), across which there is no single organising principle that might impede the development of connections between any of the constituent elements. In applying Deleuze and Guattari's philosophy to transitions in higher education, Taylor and Harris-Evans (2016: 3) offer a lens that can be adopted to consider academics' perceptions of frailty as it develops through the emergence of their reflective narratives. They claim this lens does not position academics '*as being on a forward-moving conveyor-belt punctuated by critical incidents*.' They go on to explain,

> The approach we elaborate … reconceptualise[s] transition as an entangled, nonlinear, iterative and recursive process, in which [academics] travel in irregular ways through the various landscapes of their experience (university, family, work, social life) and bring those landscapes into relation with each other.

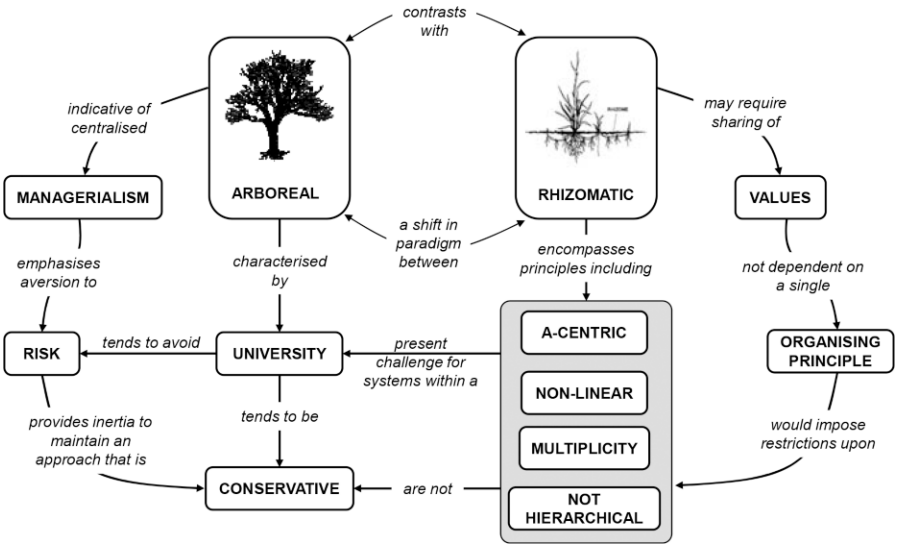

Figure 1. A comparison of arboreal and rhizomatic perspectives of knowledge management in the university

The rhizomatic view contrasts with the traditional view that is sometimes called the 'arboreal view' which uses the counter-posed metaphor of the tree, which:

> Represents the stable structure that changes incrementally, using its resources to grow vertically in order to dominate its surroundings but remaining firmly rooted in its position, Rhizomes on the other hand are characterised by speed and direction and seek to dominate by spreading horizontally into clear spaces where their path is typified by twists and turns and are devoid of a clearly defined centre, point of origin, or culmination. Rhizomes are always in the middle – in the process of becoming, passing between stable structures. (Reardon et al., 2005/2006: 162–163)

LEVELS OF RESOLUTION

Frailty is not an absolute. We cannot therefore measure frailty and give it a score in any meaningful way. In addition, we need to consider the level of resolution when considering whether systems are exhibiting frailty – remembering that it is the connections that represent the unit of analysis (Kinchin, 2016). We can look at the individual academic and construct a profile across the domains in order to identify areas that fail to actively connect. We could look across a department and identify the balance of favour for research vs. teaching and whether this is uniform across the staff, or to see if different conceptions of autonomy and regulation cause tensions across an institution.

Figure 2. Dandelion seed head analogy for frailty and resilience

We contend that a focus on a single level of resolution may give a false impression of frailty and resilience. Taking the dandelion seedhead as an analogy (Figure 2), we can see that the seed head is notoriously fragile. A gentle blow and the pattern of the seeds and the way they attach to the stem is completely lost. However, on the micro-level, the individual seeds are highly resilient and will germinate months later in apparently hostile terrain. The species as a whole is also very resilient, and dandelions persist even when gardeners do their utmost to eradicate them. So of the three levels of resolution suggested here, the seedhead only exhibits frailty at one level, but exhibits resilience at the other two.

FRAILTY & RESILIENCE

Both frailty and resilience are complex and multi-dimensional concepts that offer challenges and opportunities for universities. The challenges include fundamental issues such as adequate description that allows these ideas to be visualised and understood before we can then try to manipulate and exploit this understanding to enhance the teaching experience. Even when we consider a single, and oft-discussed, dimension such as the research-teaching nexus, Hosein (Chapter 10) has shown that universities need to acknowledge that one size cannot fit all, and that we have an enormous diversity of staff roles that feature within the teaching environment – each with different potential strengths and weaknesses. A similar diversity of perspective exists within each of the dimensions of the pedagogic frailty model. Different disciplines will experience differences in the level of autonomy they have, for example, whether they have external professional bodies that dictate content to be taught or competencies to be achieved; differences in the way that

the connections exist between theory and practice and how authentic the teaching is in comparison to the demands of industry; and differences in the way academic disciplinary knowledge prepares academics to engage in reflective practice (an alien term for many, an accepted feature of disciplinary practice for others). Therefore any attempt at homogenisation in order to eliminate pedagogic frailty will be doomed to failure before it starts.

So where should institutions look in order to enagage with the ideas of frailty and resilience? In attempting to visualise the problem (the technique from which the pedagogic frailty model arose), we find that there are two key areas where institutions might profitably focus their attention. Figure 3 suggests that there are two headings under which an institution might focus efforts on development:

1. *Tensions* – between and within the key dimensions of the frailty model.
2. *Dynamic system maintenance* – as a goal for academic development.

The tensions are multiple as outlined in the preceding chapters. But many tensions within institutions arise because of ineffective communication. The visualisation of staff perceptions of the structure and content of the dimensions of the pedagogic frailty model offers a mechanism to identify the origins of tensions – possibly even before they surface. That is not to say they have been 'cured', but fore-warned is fore-armed! The four dimensions of the model also indicate general areas where tensions might arise and so helps to focus the search for potential problems.

Dynamic system maintenance is not the same as maintaining the *status quo*. This would confuse *resilience* with *resistance*. Resistance would be associated more with maintaining routines that value efficiency over innovation to avoid risk-taking. Resistant colleagues are often those who see the past through rose-tinted spectacles and long for the 'old days' when students were brighter and systems were so much simpler. These are colleagues who look forward to a time when change will stop. Of course this time will never arrive, and change will simply occur at a faster rate (e.g. Brosseau, 2014), and this is a major source of stress for resistant colleagues. Resilient colleagues are those who can cope with change, and even see it as the exciting part of the job. These different perspectives may again be related to other aspects of academics' roles. We might assume that those colleagues who see themselves primarily as 'researchers' may engage enthusiastically with change in the research domain, but may also see change in the teaching realm as a mere distraction from established, efficient routines. However, we cannot necessarily generalise here. Many excellent researchers are also excellent teachers, actively engaged with their students and their learning. Academic development has to take this into account, and so a rhizomatic lens (described above) may help to facilitate this.

As indicated in Figure 3, central to much of this discussion of frailty and resilience is the concept of values. The ability to articulate values is key. Unless they are articulated, it is difficult to assume that they are shared. Values are often tacit and taken for granted until an event occurs that exposes dissonance. Whilst institutions

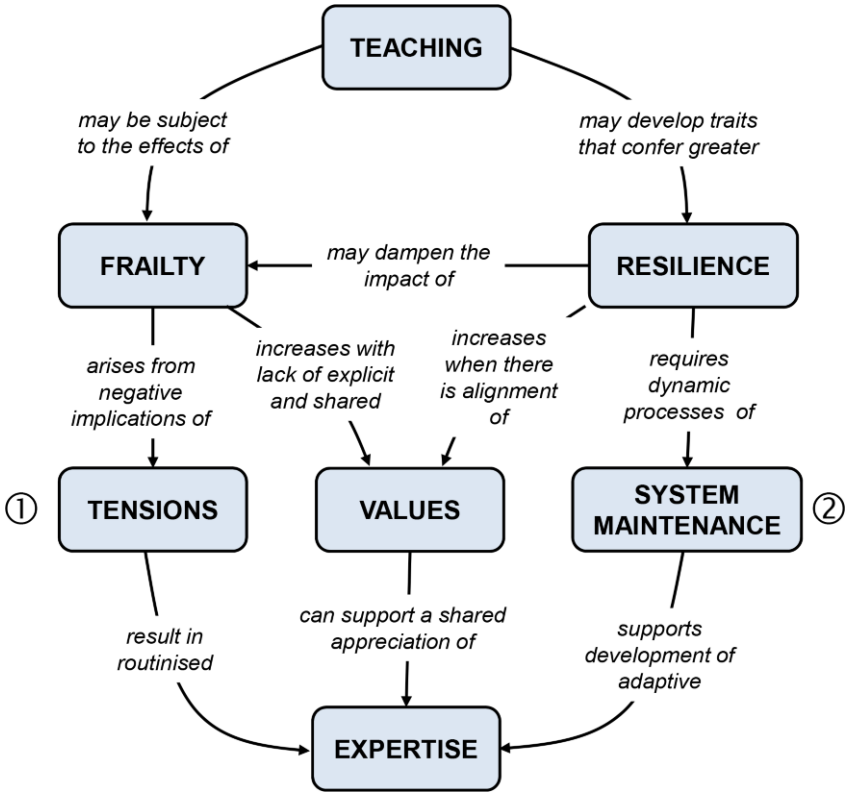

Figure 3. The key relationships between frailty and resilience

may display mission statements on their websites and have a policy document somewhere that expresses a set of values, it is often difficult to see these in action at the programme level – where students might actually be involved. Where programme teams do explore underpinning values at the design stage (e.g. Kinchin et al., 2017) this can help staff to continue to plan in the knowledge that new modules are built on a solid and agreed foundation that directs and aligns teaching and assessment with student expectations. This reduces the potential for tensions within a team and offers a rationale for dynamic system maintenance. Discussion of values is, however, not usually as explicit as this. As has been expressed in a number of different ways in the preceding chapters, where this is the case, there is the increased potential for pedagogic frailty.

Given the unprecedented rate of change experienced by those working in Higher Education, it is impossible for individuals, developers and managers to prepare for every new challenge that might arise. The aim of developing adaptive expertise as the norm for all university teachers is likely to promote innovation as a result of great

diversity and inclusion within the university values system (e.g. Steele & Derven, 2015). This will confer greater resilience upon individuals within the institution and, therefore, upon the institution as a whole. In making analogies between ecological theory and teacher frailty-resilience as a study of complex systems (e.g. Holling, 1973; Kinchin & Francis, 2017), it can be argued that stakeholder participation is fundamental to building organisational resilience and so reduce an institution's vulnerability to changes in the environment (e.g. Aldunce et al., 2016; Berkes, 2007). Resilience is critical (see Chapter 3); such a proactive stance confers the ability to deal with whichever of these challenges (or indeed any other challenges that cannot yet be predicted) should arise.

FUTURE LINES OF RESEARCH

The discussions that have preceded this chapter suggest a range of possible avenues for future research:

Case Studies

The ways in which academics learn about and understand the role of teaching within their own disciplines will be personal and idiosyncratic. Therefore, we need to understand individual cases before we can start to make any generalisations about what university teachers do and know. The detailed examination of case studies of frailty and resilience are a crucial step in developing our understanding of the potential of this model. A rush towards generalisation is likely to miss key relationship between elements of the model. The significance of individual patterns of understanding may have greater significance to the university than their frequency of occurrence may suggest. Different academics have different roles within institutions and so have varying amounts of influence of the working environment. Not until we have a significant bank of case study material does it make sense to seek out generalizable traits that may be transferable across disciplines, institutions or individuals that may be identifiable as *cultural networks* (Sieck, 2010).

Internationalisation

Migrant academics who move between cultures have the potential to encounter strangeness to the extent that coping with frailty might be a repeating feature of their careers. It would be interesting to see if colleagues who choose to work abroad tend towards greater resilience than colleagues who remain in their home country. In addition, as migrant academics acculturate within their new teaching environment, the 'host' academics are provided with opportunity to enrich their professional knowledge – that is, benefit from professional learning gains through international interaction with their migrant counterparts. Whether or not the traits associated with frailty or resilience are transferable is not known. Whether disciplinary cultural

networks transcend geographical or linguistic cultural networks may offer an interesting line of enquiry. However, we are mindful that the terminology used here to describe frailty and resilience may not always be appropriate in different cultural contexts where words already have powerful and possibly conflicting meanings (e.g. Chapter 8).

Dialogic Approaches

Whilst many of our preliminary explorations of the pedagogic frailty model have been undertaken in the relative privacy of one-to-one conversations between the academic developer/interviewer and the teacher/academic (e.g. Kinchin & Francis, 2017), our continuing research is showing that many colleagues find it helpful and illuminating to share their reflections with a colleague as part of the process (see Chapter 2). The discussion of personal perspectives helps to clarify what it is that colleagues are trying to say about their teaching, and as teaching is often a shared activity, it makes sense to explore these ideas together. Indeed, if the individual is to fully explore the ideas of frailty and resilience then communication with colleagues is essential in order to visualise and articulate the differences and similarities between academics and between departments, particularly if the goal is to promote resilience as an institutional characteristic. Colleagues who are involved in team-teaching have found this to be of particular interest to help them to better understand their teaching partner's actions within the classroom. The development of different protocols to promote dialogue with others is, therefore, an important avenue for further research if the process is to have impact.

Frailty in Students

Chapter 13 reminds us that the symptoms of frailty are not unique to academics; frailty is also likely to be experienced by students at different stages of their academic career. Consider, for example, the student who has recorded high levels of academic achievement in their pre-tertiary education. Having been accustomed to receiving marks of 85% or more in their school education, receiving a good Upper Second Class grade (say, 65%) for their first assignment at University is likely to challenge the very core of their academic self-concept. The resilience to interpret this result within context, and see potential for development is likely to be key to academic success. Understanding the key influences on frailty in students, and how they interact, is an important challenge for future research. Students are also a valuable source of information for a university as they have a different picture of the university than that offered to the senior management of an institution. Students can be critical, but also insightful. So when a student comments on the internal organisation of a university that, 'no one is balancing up all the different bits and making sure everything comes together', (Tomlinson, 2016: 7), it may offer a warning about potential triggers for frailty.

The Fluctuations of Frailty over a Career

As discussed in several of the previous chapters, there is unlikely to be a career stage where one becomes immune to the effects of frailty. Lygo-Baker (Chapter 6) reminds us how many positive events in an academic career (e.g. promotion) can lead to the experience of tension within one's own values system. We believe it is important to better understand how frailty changes over the course of an academic career, and how opportunities to build resilience might mediate the impact of a challenging environment on the aetiology of frailty.

Pre-tertiary Teachers

Many of the components of frailty, such as managerialism and a centralised locus of control, and lack of shared regulative discourse, are also likely to be experienced by teachers in pre-tertiary settings. Whilst they may not experience tension in the research-teaching nexus, there are many areas of their professional lives where teachers are likely to experience conflict between competing demands. Work to map the terrain of pedagogic frailty in pre-tertiary educational practitioners may open up dialogue as to how best to support professional development and resilience in teachers.

In undertaking further research into pedagogic frailty, Chapter 2 and Chapter 14 provide a useful toolkit of resources to facilitate the profiling of frailty in different contexts. Correia and Aguiar (Chapter 14) present a useful overview of the concept mapping process, and Wiley and Franklin (Chapter 2) demonstrate the value that can be gained from drawing comparisons between individual concept maps.

IN CONCLUSION

Academics are being inducted into their professional roles against a dynamic backdrop in which universities are described as '*facing a crisis of hegemony, legitimacy, identity and purpose*' (Behari-Leak, 2016: 1). Evidently this is a complex professional environment in which the potential for stress is high. Whilst different academics cope with stress in a variety of ways (some thrive whilst others survive), one of the variables that is seen to help academics cope is a workplace that provides a sense of coherence – in that it is comprehensible, manageable and meaningful (Darabi et al., 2016). Adding structure to the role, and visualising the elements that jostle for position in our workplace can, we have argued here, help to provide this sense of coherence and my support colleagues in developing a sense of coherence. The pedagogic frailty model is proposed as a tool that may help to guide the professional development of university teachers, and may therefore also be an instrument for institutional change (e.g. Kinchin et al., 2016). The rhizomatic lens may help make sense of organisational activities through the analysis of academics' personal perspectives of the various dimensions of the frailty model. As explained by Reardon et al. (2005/6: 163):

> Rather than taking the dominant or outwardly obvious objectives of the organisation as the focal point, the driver of actions of individuals and subgroups need to be explored. The points of internal inconsistency, contradiction and conflict that individuals and groups seem oblivious to, need to be surfaced – not to be 'fixed' as if they amount to some form of error, but to understand the 'flows' that lead to revolutionary change.

Academics who teach at university are appointed because they are subject experts, often with multiple degrees in the subject they are going to teach. Not only do they know many things about a given subject, but their knowledge is also well-organised in a way that allows them to be active members of an academic community that develops the field of knowledge as well as teaches it. However, whilst new university academics have a degree of expert subject knowledge, they are often novices when it comes to teaching, or to displaying a level of pedagogical content knowledge (e.g. Shulman, 1987). Many of those new to university teaching act as disciplinary experts in terms of their research in which they expect their own understanding to grow incrementally, building on prior knowledge. However, these colleagues can simultaneously act as novice teachers and revert to 'teaching how I was taught' as a defence mechanism. These new academics will also be working alongside other colleagues (both junior and senior) to deliver degree programmes that are expected to be coherent and consistent. This teaching takes place in a changing environment where new technology is impacting upon classroom practice, and new management procedures will be constantly evolving in response to demands from an increasingly vocal student body. Therefore, it is important that teaching teams composed of experts are able to act as 'expert teams'. The hallmark of expert teams is their propensity to be adaptive, allowing them to 'perform as more than the sum of their parts' (Burke et al., 2004: i101). The development of an expert team requires the development of a shared understanding, good communication and mutual trust (Burke et al., 2004), that may be summarized as 'shared mental models' and 'team chemistry' (Gershgoren et al., 2016), or a shared 'values literacy' (Barnes, 2014). The exploration of frailty and resilience using map-mediated narratives provides a mechanism to share mental models and to develop a better understanding of colleagues' values as a starting point on a trajectory towards greater resilience.

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