Knowledge Management & E-Learning, Vol.9, No.3. Sep 2017

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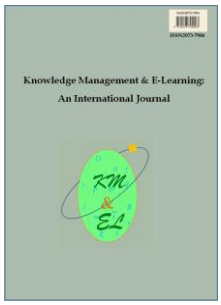

Knowledge Management & E-Learning: An International Journal (KM&EL)
ISSN 2073-7904

Recommended citation:
Kinchin, I. M. (2017). Pedagogic frailty: A concept analysis. *Knowledge Management & E-Learning*, *9*(3), 295–310.

Knowledge Management & E-Learning, 9(3), 295–310

Pedagogic frailty: A concept analysis

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Abstract: This paper adopts the approach of a map-enhanced concept analysis of pedagogic frailty with the intention of increasing clarity of purpose of the model and to promote more explicit discussion on how the term could be used positively within the educational research literature. Examples that are given here show that commonly used expressions such as 'teaching excellence' and 'research-led teaching' contain so much variation in meaning as to be misleading in their use. The maps offered show different perspectives in aspects of pedagogic frailty, such as those that may be perceived by an external examiner to a programme. The recurrence of frailty at varying levels of resolution and at different times within an evolving Higher Education context means that management of frailty and resilience should be embedded as a constant, dynamic activity within an institution, rather than a single-shot intervention.

Keywords: Teacher development; Quality enhancement; Concept mapping; Resilience

Biographical notes: Ian Kinchin is Professor of Higher Education in the Department of Higher Education at the University of Surrey, UK. He is actively engaged in research to enhance the application of concept mapping to improve the quality of teaching at university. His current focus is on the exploration of the pedagogic frailty model as a tool to support faculty development. He is the editor of the Journal of Biological Education and is a member of the Governing Council of the Society for Research into Higher Education.

1. Introduction

Since the introduction of the term 'pedagogic frailty' (Kinchin, 2015), the model has been explored by academics in practice across a range of disciplines as a tool to promote reflection upon teaching (*e.g.* Kinchin et al., 2016; Kinchin & Francis, 2017; Kinchin & Wiley, 2017). The model has shown promise as a tool to initiate dialogue about the interacting elements of the academic context that influence teaching. In addition, the pedagogic frailty has been explored by a range of international academics from a variety of theoretical and research perspectives (Kinchin & Winstone, 2017). This has helped to gauge how the pedagogic frailty model can interact with, and possibly integrate, other perspectives on teaching and learning in higher education. As examination of the concept and the model has developed rapidly, it seems appropriate now to collate these observations, and preliminary data from on-going studies (Kinchin & Winstone, 2018) to offer a more refined analysis of the concept and to facilitate and maintain its continuing

development to support the application of pedagogic frailty to professional development and the enhancement of university teaching.

This conceptual paper employs the overall method of concept analysis as developed by Walker and Avant (2014) as a tool in the development of this work. Concept analysis has been shown to be a valuable approach, particularly in the nursing education literature (e.g. Baldwin, 2008). There the approach has been used to explore various complex concepts in clinical practice (e.g. Bookey-Bassett, Markle-Reid, Mckey, & Akhtar-Danesh, 2017; Chabeli, Malesela, & Nolte, 2017; Garside & Nhemachena, 2013; Liu, Avant, Aungsuroch, Zhang, & Jiang, 2014; Phillips-Salimi, Haase, & Kooken, 2012), as well as concepts in clinical education that have a wider application to higher education theory such as critical thinking (Von Colln-Appling & Giuliano, 2017) and, importantly here, concepts that are of direct relevance to the elements of pedagogic frailty. This includes a concept analysis of stress (Goodnite, 2014), a concept that has a central role in pedagogic frailty. A recent synthesis of concept analyses is offered by Fitzpatrick and McCarthy (2016).

2. Frailty and resilience

Complementary to the idea of pedagogic frailty is the concept of resilience (e.g. Winstone, 2017). The importance of resilience as a factor in professional practice is reflected in the way it has been subjected to concept analysis by a number of authors (e.g. Garcia-Dia, DiNapoli, Garcia-Ona, Jakubowski, & O'flaherty, 2013; Gillespie, Chaboyer, & Wallis, 2007; Hicks & Conner, 2014; Windle, 2011), and this has helped to refine the term and its use in specific professional contexts so that it may be used as a tool in theory development. In their meta-analysis of the concept analyses of resilience, Caldeira and Timmins (2016) conclude that resilience is a fundamental concept that is closely related to health and wellbeing. Bhamra, Dani, and Burnard (2011) have stated that one area that requires greater attention for advancing resilience research is the relationship between human and organizational resilience. This relationship is key to appreciating the implications of pedagogic frailty for a university. Additionally, whilst there is a growing literature on academic resilience among students (e.g. Holdsworth, Turner, & Scott-Young, 2017; Morales, 2008; Milne, Creedy, & West, 2016; Turner, Holdsworth, & Scott-Young, 2017), the literature on academic resilience among university teachers is conspicuous by its absence.

The dynamic relationship between resilience and frailty is one that needs to be managed carefully within an institution and requires appropriate processes of system maintenance that support the alignment of professional values across academic staff, academic developers and academic managers (Kinchin & Winstone, 2017). Frailty and resilience are therefore two sides of the same coin and need to be considered together.

Whilst resilience is a concept that is important in the clinical context, it also has resonance with other disciplines such as ecology (Mori, 2016), linguistics (Goldin-Meadow, 2014) and economics (Bellini, Grillo, Lazzeri, & Pasquinelli, 2017). Whilst this familiarity with the term increases the possibility that colleagues from various disciplines will be able to find a route into engagement with the term, it also increases the possibility that colleagues will develop idiosyncratic, discipline-specific views of the concept as it applies to teaching. It has been suggested that repurposing disciplinary concepts to help engage with the scholarship of teaching may provide a helpful mechanism to support reflection on teaching (Kinchin & Francis, 2017).

I have used the analogy of 'clinical frailty' in the development of the pedagogic frailty model, and just as in the clinical context where frailty has been shown to be a predictor of negative health outcomes (Vermeiren et al., 2016), I argue that pedagogic frailty is a predictor of negative teacher-development outcomes (Kinchin et al., 2016). Though the term frailty has been widely used in the clinical environment for a long time and whilst there is tacit agreement on how it is used within this professional context, it does not have an agreed definition within the clinical literature (Conroy & Elliott, 2017). As an emergent concept driven by analogy with the clinical literature, the more recently coined term *pedagogic frailty* is less well established in its disciplinary literature. This concept analysis is presented with the intention of increasing clarity of purpose and promote more explicit (rather than tacit) agreement on how the term is used within the educational research literature. This is *not* with the intention of trying to close down dialogue and debate. These are essential for the further evolution of the model. Rather, this is to provide a clearer starting point for on-going discussion. Without such clarification, it is possible that the term pedagogic frailty will attract a range of meanings (and a range of associated practices) that might result in researchers talking *past* each other rather than talking *to* each other.

3. Concept mapping and higher order thinking

The concept of pedagogic frailty came into view as part of a wider knowledge structures perspective on teaching and learning at university, facilitated by the application of concept mapping (Kinchin, 2016a). The visualisation of the pedagogic frailty model was therefore dependent upon the use of concept maps, and it was essential that the concept maps that guided the evolution of this model were of the highest possible quality in order to yield rich and informative data. The quality of concept maps has been a focus for discussion in the literature and Cañas, Novak, and Reiska (2015) considered the qualities that contributed to the drawing of 'excellent' maps, rather than maps that are simply 'correct' or 'good'.

Within the literature on concept mapping there has been a tendency among some researchers to reduce the rich complexity of a concept map to a simple numerical score. This is typically for ease of comparison and/or as a way of measuring the effects of certain classroom interventions. I argue here that the higher numerical value that such scoring systems gives to larger maps (that include greater numbers of concepts) is not necessarily indicative of the higher order thinking skills (HOTS) that are associated with meaningful learning, but rather indicate the accumulation of information that is required for rote learning and factual recall - lower order thinking skills (LOTS). When developing expertise in concept mapping it seems that the ability to edit a map, and decide which information to exclude and which technical terms to apply in linking phrases to increase the explanatory power of the map are more indicative of HOTS. These include synthesising, evaluating, creating knowledge that are found in Bloom's Taxonomy. This would explain the observation that expert maps are often smaller than those constructed by disciplinary novices. This is of significance to studies of pedagogic frailty that require participants to produce succinct, excellent maps to act as prompts for their professional narrative.

Within the current work on pedagogic frailty (e.g. Kinchin et al., 2016; Kinchin & Francis, 2017; Kinchin & Wiley, 2017) those who have been interviewed are subject experts but novice mappers. The point of this work was not to develop the interviewees' concept mapping skills, but produce concise, explanatory concept maps that would

represent their perceptions of the dimensions within the frailty model. If the interviewees had been left to produce maps on their own, experience has shown that it is likely they would have produced extensive maps (to include everything that might be of interest) and would have used simple linking phrases to join the concepts together. However, by employing map-mediated interviews (Kandiko and Kinchin, 2012; 2013b) where the interviewer is an experienced concept mapper, the process is able to guide the interviewee to produce better quality concept maps. This is not by suggesting content to add, but by interrogating the map to ask the mapper if they could produce a link with greater explanatory power, and also to let them know that it was O.k., for example, not to include all the prompting concept labels. Some of the mappers also needed confirmation that it was O.k. to stop when the map had expressed everything they felt was important. In this way, the interviews yielded *excellent* maps - analogous to collecting a rich interview transcript. The concept maps were intended to be concise, clear, explanatory, and balanced so that they would be able to act as effective prompts for the interviewee to use them to frame their developing narrative about their teaching. This dependence on an 'expert mapper' represents a potential bottleneck to prevent the wider dissemination of the process that has already been recognised (see Aguiar & Correia, 2017).

It has to be remembered that the map has the function of prompting dialogue and its production is not a central aim of the process of exploring frailty and resilience. The map is the artefact that colleagues will use as a prompt or a frame for their own professional narrative about their teaching. As the participant may be constructing his/her narrative over a period of months after the initial interview, it is crucial that the map has high explanatory power and is not cluttered by a lot of unnecessary material that may obscure the main ideas.

It might be assumed that smaller concept maps take less time to construct than larger maps. This has not been found to be the case. During the map-mediated interviews used to chart the elements of pedagogic frailty, the interviews that have been undertaken to produce these sets of maps have typically each taken about two hours. During the interview the interviewee is often able to identify the concepts they want to include within the map relatively quickly, but then it takes time to arrange and link the concepts in a way that satisfies the interviewee.

This extra time spent on seeking clarity and increasing explanatory power of the maps has not always been explicitly included in published research protocols where subjects have been left to develop their own maps without dialogue or feedback. In such cases, we feel it is likely that mappers never reach the part of the map development curve described by Cañas, Reiska, and Novak (2016), where the content of the map is being refined and edited and the map is being reduced in size. So while extensive maps may include lots of content, this may be indicative of LOTS (Lower Order Thinking Skills). Those maps that have been subject to revision and refinement may be more likely to represent the underpinning HOTS (Higher Order Thinking Skills).

The mapping of academic perceptions of the dimensions of frailty in the manner described by Kinchin et al. (2016) and Kinchin and Francis (2017) is not intended 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, p. 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*'. Indeed, it will be seen that the development of academic reflections upon frailty and resilience will map a path that is entangled, non-linear and iterative as the academic travels in '*irregular ways through the landscapes of*

their experience', and '*bring those landscapes into relation with each other'* (Taylor & Harris-Evans, 2016, p. 3). As such the act of scoring colleagues' concept maps adds nothing positive to the process as each participant will have unique starting points and be heading for unique destinations. I, therefore, suggest that scoring concept maps is inappropriate within studies of pedagogical frailty as it would confer false relative values to the views of participants.

4. The concept analysis

The general format of a concept analysis is applied here as specified by Walker and Avant (2014) to the structure of this paper. This has been developed from the standard concept analysis by including concept maps of key dimension to illustrate the connectivity of concepts and emphasise possible relationships between dimensions of the model. These concept maps offer foci for further discussion. The application of concept mapping (Novak, 2010) to enhance concept analysis methodology has been explored by All and Huycke (2007). Indeed, a number of the concept analyses presented by Fitzpatrick and McCarthy (2016) employ concept maps or similar graphics to summarise the connection between antecedents, attributes and consequences of the concept. The use of visual tools to highlight the dynamic relationships between the attributes of the concept resonates with the origins of pedagogic frailty as part of a wider knowledge structures perspective on teaching and learning (Kinchin, 2016a), and emphasises that the units of analysis within the pedagogic frailty model are the connections between elements that define the concepts (Kinchin, 2016b).

A concept analysis requires a 'determination of the concept' in question. The overall concept of pedagogic frailty has been taken from a clinical analogy as has been stated clearly by Kinchin et al. (2016) and Kinchin and Winstone (2017). The concept has been defined in terms of the quality of interactions between elements of the model (regulative discourse; discipline and pedagogy; research-teaching nexus; locus of control) and the observable outcomes relate to conservative approaches to pedagogy and teacher burn-out (e.g. Bailey, 2014; Howard & Johnston, 2004).

The intended use of the concept is to enable dialogue about teaching so that academics might be able to purposefully reflect on their teaching within a framework that will also allow them to engage in dialogue with colleagues from other disciplines. The defining attributes of the model, as explored by individual academics can be considered on various levels:

- The content of each dimension. Which concepts they include in their maps and which, if any, is seen as the dominant concept. And importantly, which concepts are omitted.
- The structure of each dimension. If concept maps are strongly linear they tend to be indicative of routine expertise, whereas highly integrated networks are more likely to indicate a level of adaptive expertise (Salmon & Kelly, 2015), and more likely to connect with the content of the other dimensions.
- The consistency across dimensions (i.e. whether there is internal conflict within an individual profile – where propositions within one dimension seen to contradict or be in conflict with propositions in other dimensions).
- The level of language that is used – particularly in the linking phrases included in a map.

However, even when an individual academic possesses a profile that exhibits appropriate content, integrated structure, strong consistency and explanatory language, the important aspect is how that profile fits within the network of other profiles. If everyone else in the department holds a conflicting sense of the teaching discourse, the research-teaching nexus and the level of regulation, then there is potential for frailty. This may indicate the need to find a balance between 'agency' (where an individual has a strong self-identity and the ability to direct their own professional activity) and 'frailty' (where that individual's views conflict with other views in the institution, including peers or centralised management).

In trying to identify model cases, the exemplars offered in Table 1 may help the discussion. Both profiles A and B (in Table 1) each exhibit internal consistency (i.e. there is little tension apparent between the four dimensions). Therefore, each of these individuals may exhibit agency if situated in an appropriate context in that they find themselves "*empowered to the extent that they understand the choices they want to make, advocate their own rights, take control of their own destiny and demonstrate the competency necessary for acting in their own best interest*" (O'Hair et al., 2003, p. 198). However, problems would surface where these contrasting profiles are held by academics working alongside each other within the same department, or where these profiles were each dominant in two departments within the same institution. In such instances there is seen to be potential for conflict between these profiles across all the dimensions – this might be seen as a model case of pedagogic frailty (Walker & Avant, 2014). Differences between A and B are apparent in RD (efficiency vs. innovation), D+P (authenticity of teaching approaches), RTN (the degree of integration or separation of research and teaching) and LOC (the proximity of and engagement with the locus of control). Where profiles A and B above are in direct conflict with each other, it might represent an extreme case of frailty. However, in practice, individual profiles are much more variable and idiosyncratic than those portrayed in Table 1. Where everyone within a department was identified as profile A or B, there would be no indications of frailty and the tendency indicated towards resilience.

Table 1
Extreme case, each individual exhibiting internal consistency

	RD	**D+P**	**RTN**	**LOC**
A	Teaching should be undertaken as 'efficiently' as possible to make space for research	Content can be transmitted through lectures and assessed through multiple choice questions	The products of research are available to higher level students	Decisions about teaching can be taken centrally by managers so I can concentrate on academic work.
B	Teaching should engage with students' needs using innovative practices & evaluated through SoTL	Students should experience authentic ways of learning modelled by disciplinary experts	The integration of the processes of teaching and research helps generate a learning community	My participation in decision-making ensures alignment between institutional and individual goals

Note. RD = Regulative Discourse; D+P = Discipline and Pedagogy; RTN = Research-Teaching Nexus; LOC = Locus of Control

The process of concept analysis requires the identification of additional cases that might be seen as borderline, related, contrary or even illegitimate (Walker & Avant, 2014). Borderline cases are those that contain most, but not all of the defining attributes of the concept. This may occur where colleagues with different roles in the university are engaged in only some of the aspects that might be described across the dimensions of the model. So a researcher in a biochemistry department may only have limited interaction with an administrator in the Politics department. Their interactions are not likely to influence the levels of frailty or resilience across the campus.

Contrary or illegitimate cases of pedagogic frailty might be considered where the term is used inappropriately or out of context. For example, if the term 'frailty' were to be applied to a teacher who is struggling to cope because they lack the basic skills of classroom management, this does not lie within the scope of pedagogic frailty because, as stated, the term is not to be used to describe an individual and his or her levels of competence. The term frailty refers to the links within the wider system. However, if a department includes novice teachers who are struggling with the practicalities of classroom teaching, and they are ignored and unsupported by more experienced colleagues who regard them as 'expendable departmental assets' who cover the teaching and allow them to get on with their research, then there is significant potential for pedagogic frailty. However, if a department has robust systems of academic development and peer support already in place, then the inclusion of novice teachers within the team may actually have the opposite effect and increase the level of organisational resilience as the act of mentoring may increase the level of reflective practice among all staff members – novice and expert.

An additional illegitimate case may arise where employees who have no impact upon classroom teaching practice are included in the assessment of an institutional profile. For example, research assistants employed on short term contracts to work on particular research projects, and who have little interaction with the activities on campus (possibly working at remote research stations) and paid for by external funding might have little influence on undergraduate teaching. Their views, as non-participants, might therefore be seen to be of little direct relevance to the student experience.

The following examples show how the each of dimensions of the pedagogic frailty model may be mapped by academics, and illustrate cases to show the linkages that are possible with other dimensions and have the potential to increase the tendency towards pedagogic frailty or resilience.

5. The regulative discourse

The dominance of discussions on short-term aspects of the Instructional Discourse (e.g. the mechanics of teaching that considers timetabling, staffing, budgets, feedback and assessment practices) means that the underpinning aspects of the Regulative Discourse are often presumed to be in alignment within an institution. Clearly, colleagues do not have time to re-assert their teaching philosophy or their beliefs about teaching every time there is a meeting, but if these underpinning aspects are never explored, never shared and never made explicit then the gap will be filled by assumptions that may or may not be correct.

The concept maps of regulative discourse within the pedagogic frailty model that have been published so far have concentrated on individual academics and their personal perspectives. The map in Fig. 1, is produced by an external examiner - someone who has

an overview of a programme without being directly involved in the teaching. This perspective might provide a wider view of the ways in which the academic discourse is conducted in a particular context.

The map in Fig. 1 indicates a clear split between the regulative discourse and the instructional discourse. The focus on the instructional discourse is directed by the institution rather than by the department in which the programme is being taught, with paperwork demanding comments about concrete activities within the programme. This is with the intention of assuring quality of the programme, relative to other programmes in the institution and relative to similar programmes in other institutions. The focus on the instructional discourse makes this process easier as the elements of this discourse are more tangible and 'assessable'. The assumptions about the regulative discourse are carried over into the selection of external examiners, usually from institutions that are considered to be similar – a tacit acknowledgement that there would be overlap in the regulative discourses within these institutions.

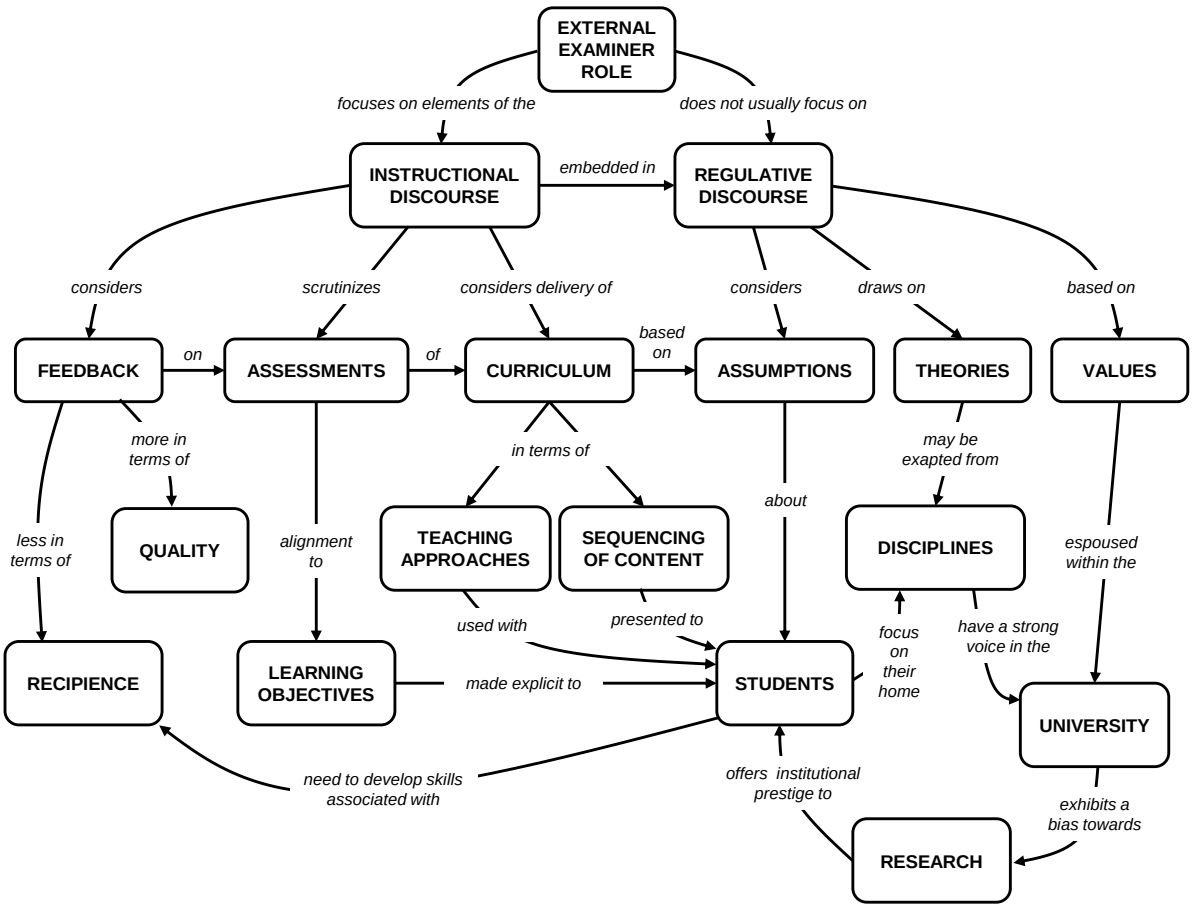

Fig. 1. A concept map of the role of the external examiner in the context of Bernstein's regulative and instructional discourses (adapted from Kinchin, Kingsbury, & Buhmann, 2017)

This, it is anticipated, would be a typical case given that the procedures for external examination in UK universities are similar from one institution to the next.

Indeed, for an institution to step outside the norm for such activities would present problems of equity across the higher education sector. As such, the conservative maintenance of the status quo seems to be one of the aims of the process.

The problem with this approach is that it does nothing to encourage an examination or reassessment of the Regulative Discourse within the institution. In terms of frailty/resilience, the maintenance of the system will be seen as helping to maintain a level of resilience across the sector even though this might also be seen to be promoting a routinization of expertise among individuals within the system, rather than a more questioning level of adaptive expertise. The numerous links between the Instructional Discourse and the students (whose voices carries considerable power in the UK system) also provides elements that students can comment on from their experience as learners. This is another factor that may help to keep the focus on the Instructional Discourse rather than the Regulative Discourse.

6. Pedagogy and discipline

A deep appreciation of the discipline is required of a university teacher in order to be able not just to teach the subject from the textbook, but also to embody the discipline (e.g. Hay, Weller, & Ashton, 2015). This understanding of the subject and its structure allows the teacher to arrange the content in such a way that it can enhance student learning. An example is shown in Fig. 2.

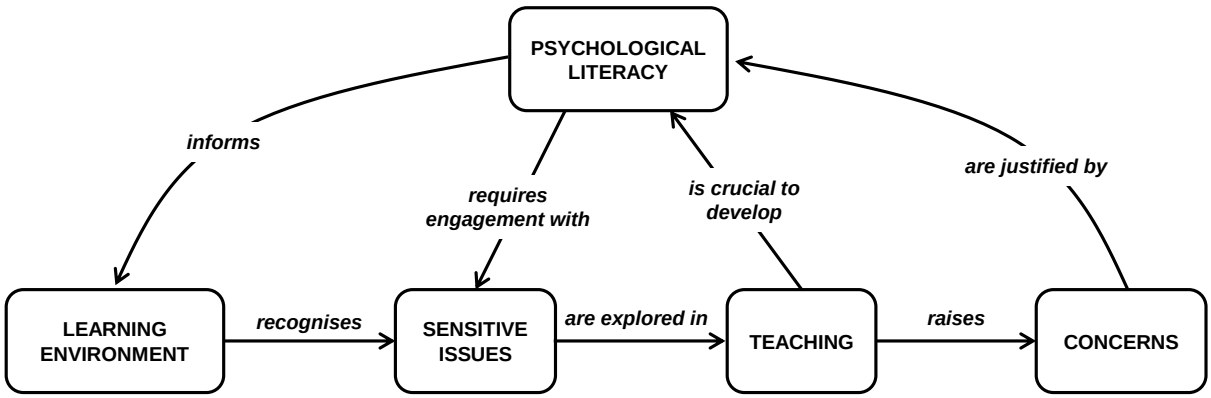

Fig. 2. A concept map to show the role an integrating disciplinary concept (psychological literacy) in making links between a discipline and its pedagogy (adapted from Winstone & Kinchin, 2017)

If we consider the chain within the map in Fig. 2 in isolation (without links to the superordinate concept, 'Psychological Literacy), we are left with a linear structure (often problematic in itself), that ends with the proposition, 'teaching raises concerns'. This makes the teaching of this subject matter problematic – for students and teachers. The inclusion of the integrating concept 'psychological literacy' fundamentally changes the image. Now we can see why engagement with sensitive issues is necessary and why the concerns that are raised are an integral part of the subject.

If some teachers within a department lack the level of understanding of their discipline that others possess to allow them to identify integrating concepts in their teaching, the consequence will be different perceptions of what has to be taught; different perceptions of why it might be difficult for students and probably different perceptions of

how best to teach it. Exploration of the discipline is therefore often a good starting point for teachers who wish to investigate the scholarship of teaching (Kinchin, 2017).

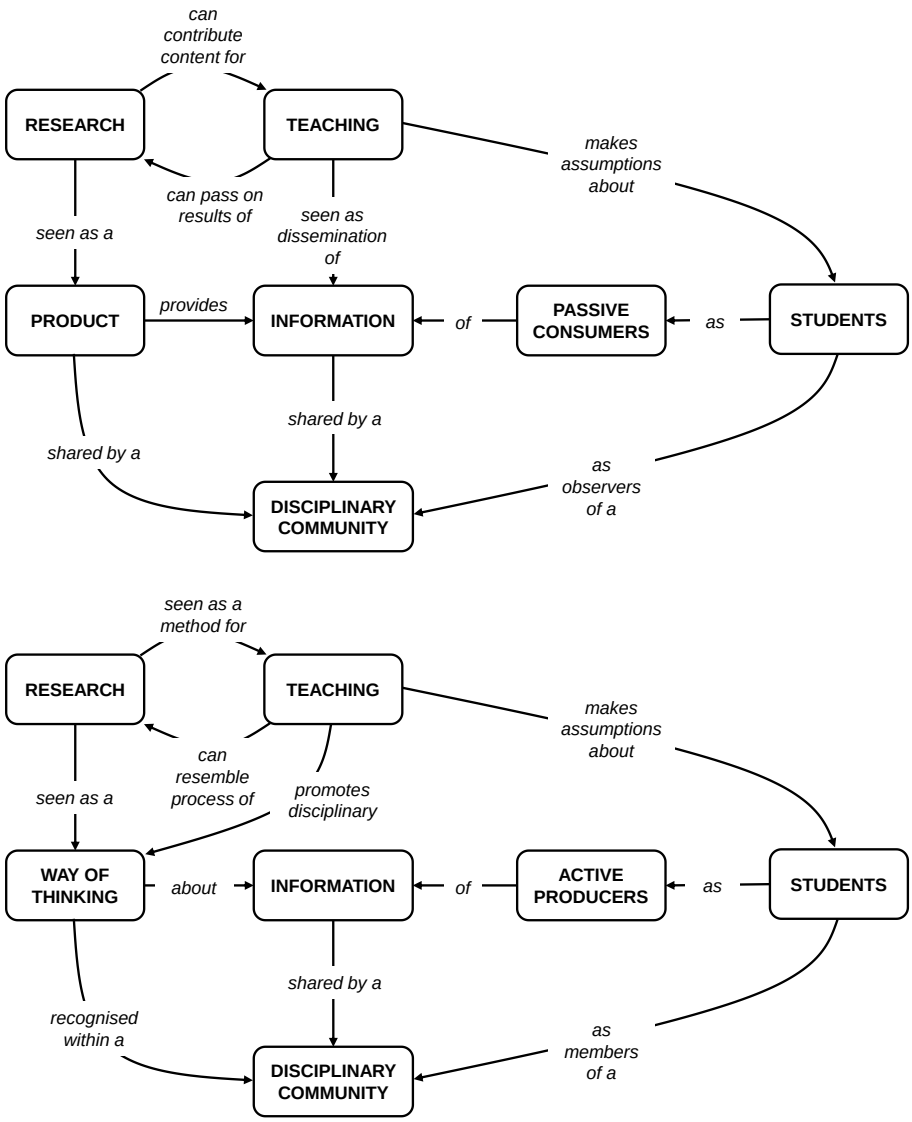

Fig. 3. Contrasting concept maps of research-teaching links showing how similar terms and similar knowledge structures can mask opposing perceptions of the nexus

7. Research-teaching nexus

The research-teaching nexus has been discussed widely in the literature, and has been seen to be an important area to focus on when considering pedagogic frailty (see Hosein, 2017). Terms such as research-led teaching, research-informed teaching and research-rich teaching are to be found within the literature and are terms that are often used by universities on their web sites to describe their own teaching philosophies. The

differences between these terms and the ways in which they are used can mask underlying differences in what is meant, even within a single academic department (Kandiko & Kinchin, 2013a). The concept maps in Fig. 3 emphasize the need to analyze what colleagues really mean when they use the term research-led teaching.

Structurally the two maps in Fig. 3 are almost identical. Only on close examination of the content of the maps do we start to realize that these two academics have completely different conceptions of the research-teaching nexus. The top map shows the author to consider research as a product that can generate content to be taught – passively consumed by students. In contrast, the author of the lower map considers research to be a process in which students can be actively engaged. In pedagogic terms, these two views of the research-teaching nexus are worlds apart, with the students getting very different experiences.

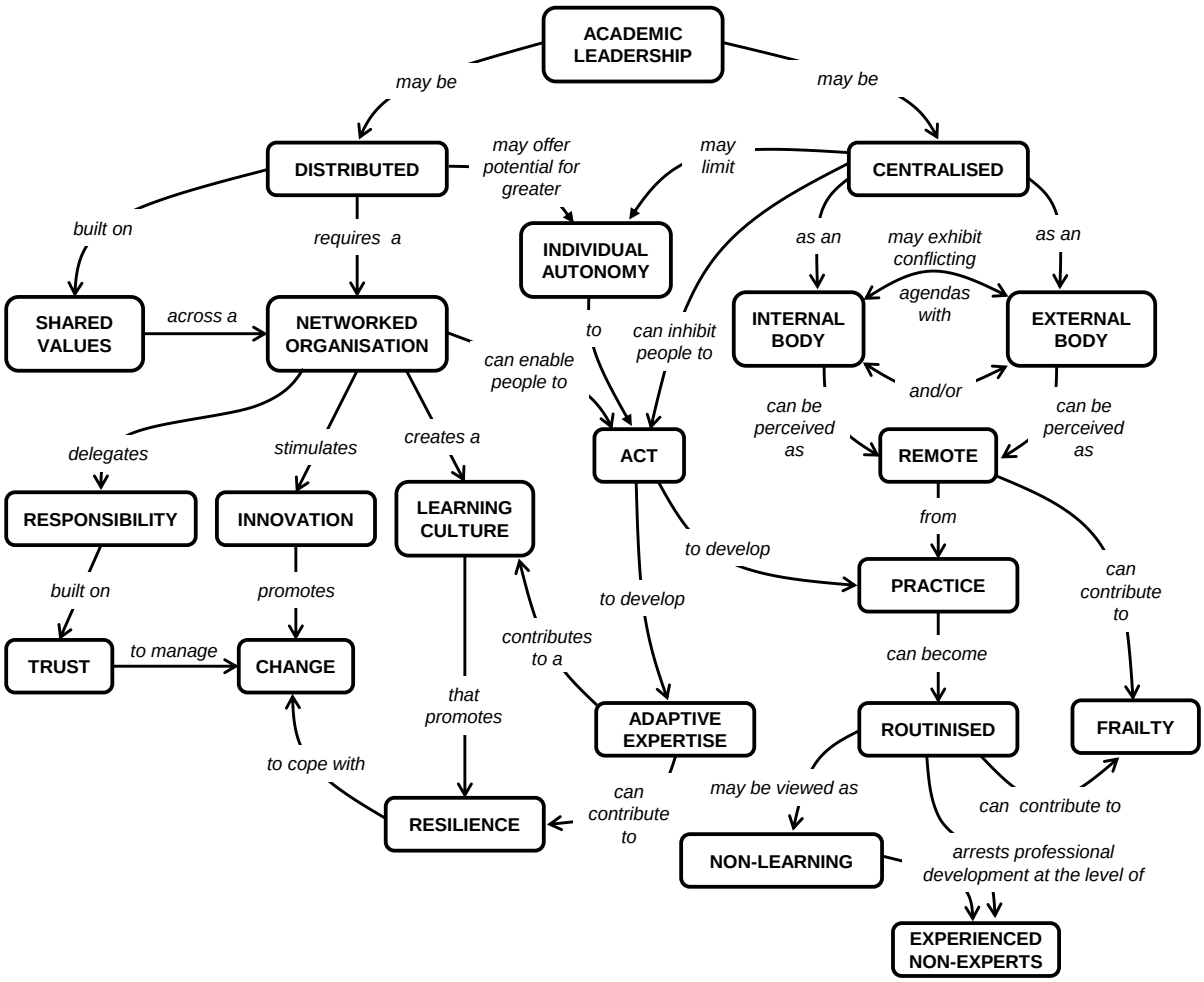

Fig. 4. A concept map of the potential contributions of centralised and distributed leadership models in the context of pedagogic frailty and resilience

8. Locus of control

The locus of control refers to the site where rules and regulations that effect teaching practices are developed. It is clear that whilst some academics consider regulation to provide a strait jacket that restricts their ability to decide how and what to teach, others see regulation as liberating – "*if someone else has to worry about the rules and regulations, I am free to concentrate on my subject*". Similarly, while some academics want to be involved in decision-making, helping to direct the institution, others want to be as far removed as possible from '*bureaucrats and bean-counters*'. The danger of removing oneself from the decision-making bodies in the university is that the university may move in a direction that does not fit with individual academic's aspirations. When institutional goals and individual goals are at odds with each other, there is potential for pedagogic frailty. Where the institutional goals and individual goals are aligned through shared values, there is greater potential for resilience.

In part, this can be related to the perceived distance between decision-making bodies of the university and the individual academic. Where decision-making is undertaken centrally there may be less opportunity for the individual to influence the outcome. The individual is likely to be closest to the point of decision-making when leadership is 'distributed' among the experts that are found across the university, rather than centralised within a team of leadership experts. The various tensions that are associated with the degree of centralisation of academic leadership are summarised in Fig. 4.

Whether academic leadership is centralised or distributed there are still various regulatory bodies that have to be considered when devising structures to support teaching. This is often complicated when in addition to the university management, professional bodies also influence the ways in which programmes are structured and teaching and assessment are organised. Some academics feel that they have two masters so that autonomy or independence is even more of a balancing act. The idea of 'pedagogic independence' has been described as illusory by Brookfield (2017) who goes on to describe how:

> *I am alone while never being alone. By this I mean that I am physically alone in the classroom in the sense that I am usually teaching solo, either face-to-face or online. Yet my actions are always embedded in a web of networks that shape my decisions. So my room is symbolically stacked with holographic images of the multiple stakeholders whose agendas and priorities influence very directly the micro-decisions I constantly make as a teacher.*

This was recently articulated to me by a student whose teaching in the clinical sciences has to meet the standards dictated by the Nursing and Midwifery Council (NMC), Health Care Professionals Council (HCPC), Royal College of Midwives (RCM), Higher Education Academy (HEA) Quality Assurance Agency (QAA). Clearly some colleagues have to navigate a path between the concerns of multiple masters.

9. Antecedents

The antecedents for pedagogic frailty arise from the tensions resulting from conflicting agendas of the numerous stake-holders (individuals and agencies) who are engaged with higher education. These tensions arise from various fundamental questions about the role of the university and, for example, whether it is:

- A critical commentator on society and a site for innovation for a broad 'social good', or an agent in the economic and political machinery of government.
- A preparation for employment or a place to enjoy learning.
- A place for research or a place for teaching.

For these and other questions there is no single response that would be accepted universally. Whilst these questions are expressed here as oppositional binaries, I acknowledge that they are not simple either/or questions and do not typically generate yes/no responses. They are complex issues that often require compromise. Professional role differences and disciplinary differences among staff will increase the diversity of responses that academics give, while the global nature of higher education and academic research mean that no single, short-term national perspective may be seen to provide 'the solution'. These tensions will be seen by some academics as providing excitement, dynamism and challenge to their role. Others will see them as causing problems and upsetting the *status quo*. This fluctuating environment and the various perceptions of its components provides the elements that contribute to pedagogic frailty.

10. Consequences

It is important to note that pedagogic frailty is not something that can be 'cracked' once by an institution and then ignored. The environment in which academics function is dynamic. Elements of higher education are constantly evolving and so the academic (and the institution) has to parallel this evolution within their own professional development. In addition, it is clear that higher education is a global industry and many academics are likely to move across international borders in the course of their careers. The movement of academics and the continuous change experienced by universities means that pedagogic frailty is likely to be a recurring theme within an individual's career (Lygo-Baker, 2017). Frailty is therefore not something to be overcome as much as something to be managed over time.

11. In conclusion

The commonplace use of terms such as 'teaching excellence' and 'research-led teaching' are misleading as they suggest a uniformity of purpose and understanding across the higher education sector that is not justified (e.g. Charles, 2017). Probing beneath these terms to see how ideas interact and how concepts are interconnected reveals an array of understandings that may be conflicting and contradictory (e.g. Hosein, 2017). The result is that different authors are using the same terms to mean different things. As the term pedagogic frailty is still a new addition to the higher education lexicon, it is appropriate at this time to attempt to clarify what is meant to avoid the miss-use of the term and the confusion this can generate. Although I am sure that colleagues will develop their own ideas of pedagogic frailty and will cultivate new methods to consider its effects, I hope that this concept analysis will reduce the likelihood of the term being used in conflicting and contradictory ways that might hinder its application to the development of teaching quality.

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