

# Exploring Issues in Change Management: Developing a Systems Perspective on the Management of Learning and Teaching Initiatives

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## Keywords

Educational  
Change  
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*This paper seeks to develop a case-based systems perspective on how university-led educational change initiatives to enhance the student experience and student learning interweave with external influences on the development and management of academic programmes. The paper provides an illustration of how a case-based systems approach, systems representational tool and systems perspective may not only provide a platform for a multi-level analysis of factors impacting on the management of learning and teaching initiatives, but also highlight how such initiatives, for example, accreditation and assurance of student learning initiatives, though well-intentioned and effective initially, may have unintended and undesirable consequences. The case-based analysis uses systems notions to conceptualise aspects of change management relating to educational initiatives that provides a complementary or alternative understanding of the underlying processes through which change is affected. Our descriptive schematic systems representations depict different nested 'layers' of events, factors and relationships, which have an attendant face validity in depicting the change process as it may play out in institutions subject to internal and external forces that impact learning and teaching initiatives. In doing so, the paper bridges a perceived gap in the educational change management literature - namely, the lack of reported research involving systems methodologies.*

## 1. Introduction

### 1.1 Background

The *de facto* centrality of the student in the learning and teaching practices of the tertiary education sector is unquestionable. It is evident in a growing emphasis on the student learning experience and student learning manifest in the activities of the funding bodies for higher education; the national surveys of student satisfaction (HEFCE, 2015) and student engagement (AUSSE, 2014); in the espoused importance of the teaching-research nexus, research-informed teaching, research-led teaching and teaching-led research (VUW, 2010a,b); in the prevalence of quality assurance and continuous improvement processes; and in the role of audit and accreditation in the drive towards enhancing quality, projecting quality and gaining recognition for the quality of academic programmes, in general, and the student learning experience, in particular (AACSB, 2015; AMBA, 2015). This paper examines the latter matters, and how responses to such matters may evolve within the tertiary sector. It does so by developing case-based perspectives on matters impacting learning and teaching issues, and does so informed by

exploration of a tertiary institution case, and the case of a single-student's experiences in a master's level course.

The use of case methodology in research, as opposed to the use of the case method in teaching, is now well established, and we may refer to the pioneering work of, for example, Glaser and Strauss (1967) on developing grounded theory from case studies; the work of Yin (1981, 1984, 1989) on research design; and the work of Eisenhardt *et al.* (1989) providing a "roadmap" for developing theory or a "process of inducting theory" from case studies. We refer readers to the work of these and other authors in order to obtain a more complete justification for the case approach (Yin, 1989, 1993, Eisenhardt, 1991; Gummesson, 1991). In this paper, however, we use case material in a different manner, to provide a context for the demonstration of the efficacy of a systems approach in generating useful insights about a case situation, the management of learning and teaching (L&T) initiatives.

Here, we find it sufficient to restate the view of Yin (1993) that a case-based enquiry may be especially appropriate where the complexity of situations and phenomena to be considered would benefit from the examination of the whole phenomenon rather than the descriptive statistical analysis of a cross-sectional sample of the characteristics of multiple examples of the phenomenon; or where the rarity or infrequency of the phenomenon mitigates against a sample survey approach. In addition, whereas Yin suggests that case studies are suitable and appropriate for research of an exploratory, descriptive or interpretative nature, others (Ragin, 1997; Dyer and Wilkins, 1991) have stated that a case study approach can be considered worthwhile if it leads to new insights, perspectives, or theory, or if it can be used to enhance, corroborate or refute existing knowledge and theory (Bonoma, 1985). McKeown (1999) offers a complementary view that, given the suitability of case methodology for descriptive research where little may be known initially about the phenomenon as a unit of study, it is not surprising that case study and case research is used when one needs to develop a deeper understanding of complex social and organisational phenomena, or that the case method can be modified to refined for different purposes (Ragin and Becker, 1992).

Maintaining accord with prior work, we describe a case or a case study not just as a unit of analysis deemed useful in examining a phenomenon in its usual environment, but as one which captures the complexity and dynamics of that environment or setting (Eisenhardt, 1989). As a unit of analysis, the case study is required to be representative of whatever the phenomenon is; and required to characterise the broader environment as an integrated or bounded system (Denzin and Lincoln, 2000). It is such a characteristic that suggests a systems framework may prove fruitful when used to interrogate, investigate and/or interpret case situations.

In most situations, a case study will weave material obtained from primary and secondary sources with a narrative "constructed to be sensitive" to the context in which the phenomenon is set (Bonoma 1985). Of course, the case material developed, as in this paper, needs to be subject to the rigour of checks for accuracy and precision, validity and reliability, and be deemed suitable for analysis. As such, for this study, multiple sources of primary and secondary data were used in developing the case situation used in this paper. Primary data was

obtained from those involved with L&T initiatives within the university setting, including the author(s), and from primary source internal documents and reports. Secondary sources of data for this study included the print and electronic materials of external agencies.

However, the use of a case situation in this paper differs from the particular inductive processes of the grounded theory method in developing 'theory'. Instead, the paper demonstrates how the use of a systems approach, in general, and a systems representational tool, in particular, facilitates the re-interpretation of case material, and the description and re-presentation of that material within a systems framework.

The systems representational tool demonstrated in this paper, is known as a causal loop diagram (CLD), and is more often used within the domain of qualitative system dynamics methodology (Maani & Cavana, 2000; Sterman, 1996) to provide visual representations of cause effect relationships exhibiting high levels of interaction and mutual dependency. Here, we use notions of systems thinking and system dynamics, and the consequential protocols underpinning the development of a CLD, to develop an alternative perspective on the case material, to guide its re-interpretation using systems concepts and to capture and present that interpretation visually by means of the CLD.

In essence, and in brief, systems thinking embraces the notion of elements, events, relationships etc. being interconnected, inter-related, and displaying high levels of mutual- and inter-dependency, that is relationships are causal relationships. CLD protocols are such that causal relationships are depicted as directed arrows - with the cause being presented as a short phrase at the tail of the arrow, and the effect at the point of the arrow. Mutual dependencies between events or groups of relationships are then portrayed as feedback loops. The twin notions of dynamics over time and non-linearity, often expressed simply as immediate or delayed feedback or interdependency, are central to systems thinking, as is the notion of holism expressing sensitivity that the whole is, or properties of the whole are, greater than the sum of its 'parts', its constituent events or behaviours. Individual cause-effect relationships and different levels of mutual dependencies can be displayed in a CLD of directed arcs and related feedback loops.

We should note that the underpinning ontological and epistemological assumptions of system dynamics as a methodology are that causal-effect relationships of an *if-then* sufficiency nature exist, that feedback exists; and that such inter-relationships can be surfaced through observation, interview, narrative etc, and displayed as directed arrows and feedback loops within a CLD. As such, it is not surprising that use of the CLD as a frame (Davies & Mabin, 2003) will highlight or emphasise causal relationships and causal feedback loops, and will draw attention to relationships and feedback/mutual dependencies that play out over time, and that may have immediate or delayed effects. In summary, we may say that the use of a systems approach, using the CLD as a frame, has value in surfacing and portraying the non-linear, time-dependent dynamic causal relationships captured by case material. By contrast, statistical approaches using cross-sectional sample data have a more limited domain of applicability related to the development of descriptive models using static, linear relationships.

This paper, by contrast, provides a base for what may be considered to be a multi-level analysis of factors impacting on the management of change in education, and the managed introduction of such L&T initiatives including, for example, assurance of student learning. As the paper accords with the views of McCormick and McClenney (2012, p329) who have commented on the need to provide “campus decision-makers” with research-based advice that can inform educational change, endorsing Terenzini’s (1996, p8) call to “direct greater research attention to issues confronting practitioners and policymakers”. Terenzini (1996), and later, Braxton (2005) have called on higher education researchers to embrace Boyer’s (1990) scholarship of application, in particular, “for scholarship grounded in the practical problems confronting higher education leaders.” This paper is an initial response to such calls.

The paper unfolds with comment on the systems approach used in this study, before providing a series of systems representations (CLDs) of a case situation illustrative of change initiatives undertaken within higher education. The paper concludes with a discussion of the efficacy of systems approaches in building understanding of change management, and of insights that contribute to more effective change management within higher education.

## 2. The Systems Perspective

### 2.1 Developing a Systems Perspective

As an introduction to how we may employ the notions and frameworks of systems thinking to examine our primary case situation, we first offer a parsimonious CLD representation of a highly simplified version of the theory-practice hermeneutic relationship described by Giddens (1987) (see Figures 2a, b). We then provide an accompanying narrative to clarify the representation being offered and to explain the systemic nature of the theory-practice relationship as a double hermeneutic process.

We note, in our simplified version of Giddens’ exposition, that it is not just that pedagogical theory impacts the practice of teaching, but that theory and practice are intertwined, interdependent or mutually dependent. As such, our illustrative example demonstrates not only the double hermeneutic of Giddens (1987), but also manifests as the reciprocal determinism of Bandura (1987).

### 2.2 A Causal Loop Diagram (CLD) Representations

#### Illustrating the *Theory-Practice* Double Hermeneutic

First, we define our variables as being related to *teaching practice* and *pedagogical theory*, recognising the imprecision of the terms.

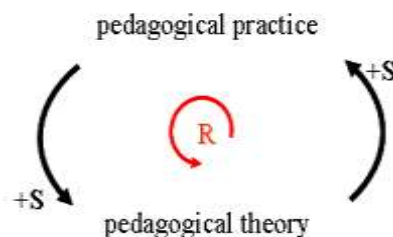


Figure 2a: The Theory/Practice double hermeneutic represented as a CLD

Note that CLD convention requires entities to be described in neutral mode. Positive (+<sup>ve</sup> S) and Negative (-<sup>ve</sup> O) annotations then allow Cause-Effect (C-E) relationships to be described in the context of starting or changing conditions.

The +<sup>ve</sup> S annotation indicates that the *more* we do the action at the tail of the arrow, say X, the *more* the effect at the head of the arrow, say Y. For example, the *more* we have X, the *more* Y is needed.

Additionally, the *less* we do the action at the tail of the arrow, the *less* the effect at the head of the arrow - ie the variables move in the **Same** direction for a Positive (+<sup>ve</sup> S) C-E relationship.

By contrast, a Negative (-<sup>ve</sup> O) annotation indicates that the *more* we do something, say X, the *less* the effect, say Y. For example, the *more* we do X, the *less* we do Y. Similarly, the *less* we do X, the *more* we do Y - ie the variables move in the **Opposite** direction for a Negative (-<sup>ve</sup> O) C-E relationship.

A double bar across an arc signals that the relationship or the outcome of a relationship may be subject to delay.

In this case, the narrative for Figure 2A could be stated as the **more we believe or commit to a pedagogical theory**, the **more** that theory **will inform** and influence *teaching practice*. Then, the **more we engage in teaching practice** informed-by-theory, the **greater the belief** we have in that *pedagogical theory*. We would describe these relationships as constituting a **virtuous reinforcing** loop or cycle. As a corollary, the **less we believe** in a *pedagogical theory*, the **less we make use** of the *teaching practice* informed-by-theory, the **less belief or commitment** we have to that *theory* - which constitutes a **vicious reinforcing** cycle. In systems thinking, we would refer to both cycles as reinforcing cycles, indeed as positive feedback loops, where the behaviours and reactions grow stronger. Negative feedback or balancing loops, by contrast, seemingly self-regulate to bring behaviours and outcomes on target, or bring exaggerated behaviours back into line.

It may be noted that the more parsimonious the presentation of the CLD as in Figure 2A, the more the CLD will require a comprehensive explanatory narrative, thus drawing attention to the importance of concept labelling or the labelling of variables to ensure that the diagrammatic representation is more easily understood, and appropriately conveyed. As an illustration, we may refer to the notion of theory *informing* practice, and practice *informing* theory, as providing an alternative narrative to the CLD. In Figure 2B, we illustrate some minor but effective modification to the labelling, so that the variables are: *acceptance of theory based-on-practice*, and the *use of practice based-on theory*.

So, in Figure 2B, our interpretation would be that the **greater** the *acceptance of pedagogical theory based-on-practice*, the **greater** the *use of teaching practice based-on pedagogical theory*. Similarly, the **greater** the *use of pedagogical practice based-on pedagogical theory*, the **greater** the commitment to *acceptance of pedagogical theory based-on-practice*.

We may note that the reciprocal relationship as expressed would get stronger and stronger, that is be **reinforced** over time - and so our causal loop of reciprocal causes and influences would be labelled as a **virtuous reinforcing** loop.

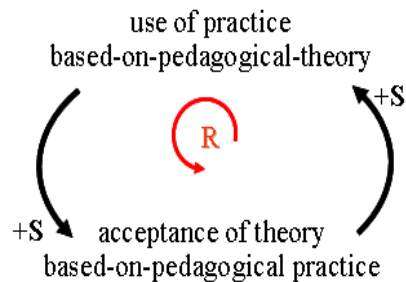


Figure 2b: The Theory/Practice double hermeneutic represented as a CLD

In a similar manner, the notions of practice and evaluation, that is, evaluation in various guises as evaluation of courses and programs, assessment of learning etc, and pedagogical theory and evaluation, can be conceived as similarly intertwined in a double-hermeneutic process.. If so, we may infer that a reductionist approach to understanding individual relationships between, say, X and Y, has greater value when such an understanding of the nature of 'individual' relationships contributes to our understanding of a broader complex of interacting, interdependent relationships making up the whole. That is, when our theory-practice-evaluation situational context is approached with systemic sensibility, in the sense that we appreciate the synthetic whole, see the bigger picture, be holistic; and that we appreciate the role of feedback, interdependent relationships, and patterns of behaviours and outcomes, rather than events.

### 3. Perspectives on the management of change

We now discuss the broader context in which educational units are subject to external scrutiny, audit, evaluation or accreditation. In our case organisation, the academic programmes of the university's schools (cf departments) are subject to external review and audit on a five-year cycle; some of its individual programmes, are subject to accreditation processes, for example the MBA is accredited by AMBA; its tourism programmes are subject to accreditation by the United Nation's World Tourism Organisation via its TedQual certification for quality in tourism education; and its business and accounting programmes are subject to the accreditation processes of AACSB and EQUIS. In addition, individual programmes are expected to be subject to self-review, and to the external moderation and examination of courses and student performance and achievement.

Anecdotal information abounds in many institutions about the resistance to change involving the introduction of many of such evaluation and accreditation processes. However, there is also considerable anecdote not only relating to the value of such initiatives in bringing about change in the mind-set of staff, in academic practice and in beneficial outcomes for the institution, the academic body and students, but also about the 'tick-box' and compliance mentality that can often set in as pressures accumulate and initial commitment subsides over time (Ghoshal, 2005). It is such unintended, unanticipated and unwanted outcomes and how they come about that can also be expressed and communicated through a systems representation.

Indeed, in considering the impact of what may be perceived as an authoritarian approach to engagement in, say, accreditation processes, we may paraphrase Power *et al's* (1989) rhetorical question, supporting Piaget's critique of authoritarian practices, of what encouragement there is for "rational moral judgement if ... the ... organisation or management ... governs unilaterally and is the only court of appeal". Similarly, how can individuals learn to be autonomous and act responsibly and with integrity, "if they are not allowed to make meaningful choices about the rules and practices that govern a good portion of their daily lives?" The implication is that academic staff treated in such fashion may well comply, but reside at Kohlberg's Level 1 (acting only to avoid criticism or retribution) in terms of their moral reasoning when it comes to contributing to effective change in L&T practices (Kohlberg, 1984a,b). Such views have also been echoed by Longstaff (2002), but in the context of effecting compliance with governance protocols. He suggests that "we have put too much faith in systems (sic)" implying that regimes which prevent people from opting out of engagement, in say accreditation initiatives, that is which prevent people from choosing what is 'wrong' according to the institution, may also prevent people from choosing what is 'right' - in the sense that people "do not choose ... to engage fully ... they just tick the boxes, apply the rules" etc. We may compare this view with Professor Sir David Tweedie, in yet another context, who has argued for change to the US accounting system, in particular, its rule-based approach to accounting standards, which has "emerged as a response to the litigious nature of American business". He has argued that "this culture allows companies and their auditors to feel they have done their jobs as long as they can tick off boxes to say that they have complied with certain rules" (Treanor, 2002: 26) - the "tick-box mentality" (Forstmoser, quoted in EIU, 2002, p.6). The implication is that in such circumstances, academics, and even institutions, may be induced to comply in a manner that reflects reasoning at the lower levels of Kohlberg's hierarchical framework. By contrast, Huang (2001) has envisaged positive links between "enforcement" and professionalism. He suggests, for example, that enforcement may "not only act as a continual reminder of those behaviours that are unethical, unacceptable or situationally relative, but also is an essential step in enhancing professionalism."

We may also draw attention to "over-compliance" by academics and academic managers, and refer to another context, and Coakley's view (1994: 134) that "much of the deviance in sports does *not* involve a *rejection* of commonly accepted norms and expectations. Instead it involves *over-conformity*, or *over-acceptance* of norms and expectations." As such, it is suggested that the high value placed on winning, that is, being seen to comply or, in our case, to gain accreditation, makes it almost acceptable for individuals as organisational actors to behave unethically in "the pursuit of victory" (Sage, 1998), that is, to gain the approval of the accreditation agency. Commenting on related issues, Power and Kohlberg (1987) have suggested that "expecting success inadvertently promotes cheating" and that "rigid discipline ... encourages a lack of social responsibility."

Additionally, the seeking of inter-personal or inter-organisational approval and the associated need for conformity may perpetuate the culture that is shared by accredited schools and universities. The views of Coakley (1994), Sage (1998) and Snell (2000) draw attention to the

distinctiveness of socialisation processes, the relationships between academics, academic managers and their particular activities, and the way in which the attitudes, beliefs, values, feelings and behaviours that are acquired are those that are "displayed, admired and rewarded in the social environment" in which their work takes place (Sage, 1998: 16). By contrast, where the "structure of social relations ... introduces hierarchy and authoritarianism ... exemplified in rules and routine, (and in) the academic manager's authority ... it can socialise staff to seemingly accept authoritarian leadership (Sage, 1998: 17), but do so via Ghoshal's *perfunctory compliance*, with a *de facto* limiting of moral reasoning to Kohlberg's Level 2.

Taking such matters into account, Figure 3 provides an illustrative CLD portraying how and why planned actions to bring about desired change in pedagogical practice, and learning and teaching, may also lead to undesirable consequences in the longer term. The CLD demonstrates that the complex of relationships or systemic structure underpinning such behaviours and producing such outcomes, are redolent of the common systemic structure described by Senge (1990, 1994, 1999) as the *Fixes that Fail* archetype. We suggest that the playing out of behaviours and outcomes can be effectively represented by the CLD.

#### 4. A CLD Representation of the Management of L&T Initiatives

To give effect to our constructive illustration of problem representation using a CLD, we begin by drawing attention to a variable defined as the *managerial perception of the effectiveness of learning and teaching (L&T) processes*, and then seek to demonstrate how such *managerial perception* may have impact within the wider system represented by the CLD. Although, the choice of variable is arbitrary, focusing on *managerial perception ...* allows us to explore the role and impact of related variables, in general, and to explore the nature of feedback loops, in particular. Here, the choice of *managerial perception ...* facilitates the highlighting of relationships that play out as the balancing feedback mechanism inherent in the blue Loop B, and also creates the opportunity to provide an appropriate narrative to accompany the CLD in Figure 3.

We begin the exercise by first assuming that there is, say, a **poor** negative *managerial perception of the effectiveness of learning and teaching (L&T) processes*, and then provide the following explanatory narrative:

the **more negative** the *perception of the effectiveness of L&T processes*, the **stronger** will be the *managerial belief that a change in L&T practices would be beneficial*, leading to a **stronger** *managerial commitment to investment in 'accreditation' as an agent of beneficial change*, which, in turn, induces **greater** *managerial commitment to L&T practices and processes required to meet accreditation standards*, and a **greater** *alignment of staff L&T activities to accreditation standards and goals*, thus **boosting** the *extent of accreditation agency approval*, **improving** the **poor** or **negative** *managerial perception of the effectiveness of L&T processes* that we started with!!



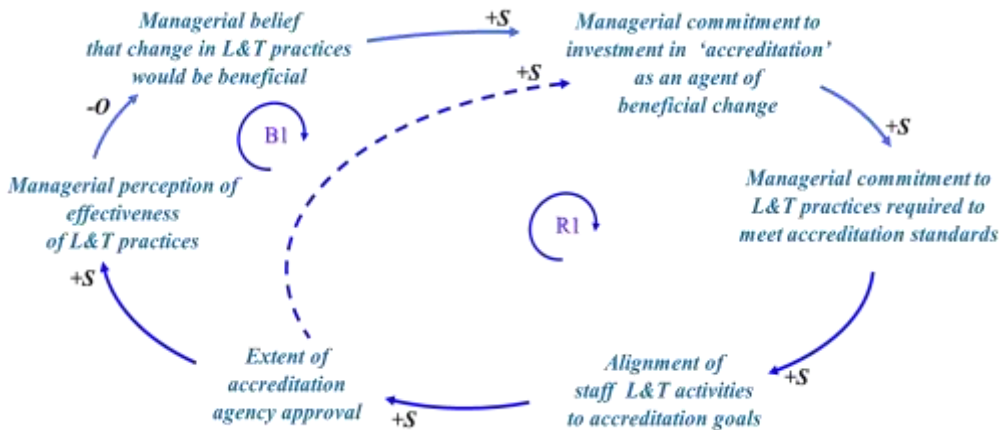


Figure 3a: An Initial CLD representation of Evaluation and Accreditation processes

We again note the parallel between the bolded adjectival phrases of the narrative and the annotated symbols indicating positive or negative relative relationships in the CLD. We should also note that Loop B has just one negative link – and that (without further explanation being given) an odd number of links always gives rise to a balancing loop.

We may also observe constructively from this narrative that the nature of a balancing loop is that it represents how a variable of interest may be kept on track, or brought into line, by action elsewhere in the system/feedback loop that may be considered corrective or regulative. By contrast, as demonstrated below, the nature of a reinforcing loop is that it represents the causal relationships or systemic structure that bring about continued growth or decline in a variable of interest.

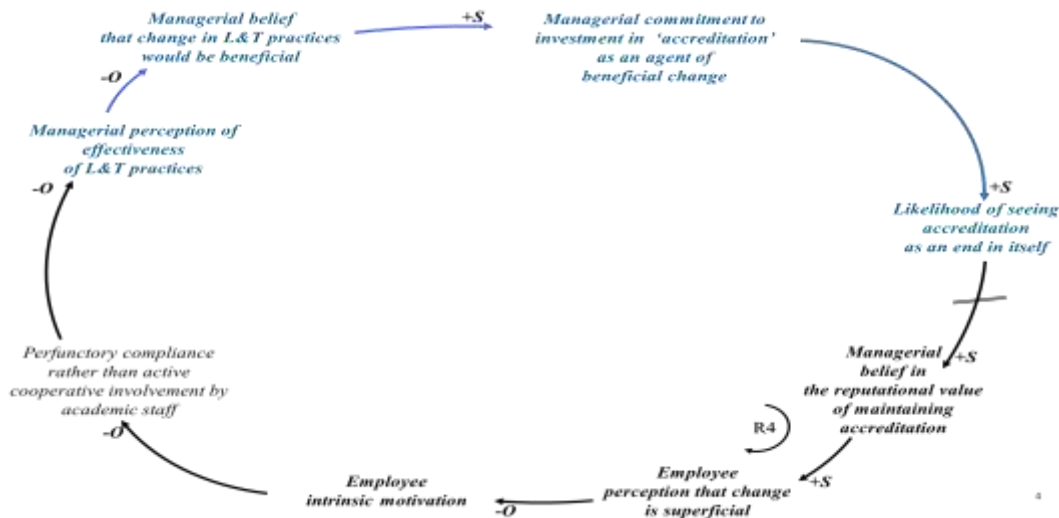


Figure 3b: A Second CLD representation of Evaluation and Accreditation processes

Somewhat paradoxically, as indicated earlier, a reinforcing loop may not only represent what we regard as a virtuous growth cycle or loop, but also what we regard as a vicious cycle.

As such, it gives us useful insight about how virtuous cycles might become or be transformed into vicious cycles and vice versa, and especially, it gives us insight about the inherent dangers of complacent or laissez-faire responses to the 'good times' associated with virtuous reinforcing cycles and loops.

In this case, from our narration and analysis of the CLD shown in Figure 3b, we can gain insights about how academic managers may choose to respond (i) to what may be recognised as the vicious reinforcing cycles of R1, R2 and R3, and (ii) to self-awareness of how managerial beliefs can become increasingly entrenched and negative over time.

For example, and for our narration of the extended outer Loop R4, we note that if we first assume that the *managerial perception of the effectiveness of L&T practices is poor*, then ... there will be to a **stronger** managerial commitment to investment in 'accreditation' as an agent of beneficial change, which, in turn, increases the *likelihood of seeing accreditation as an end in itself*, **heightening** managerial belief in the reputational importance of achieving/maintaining accreditation, **boosting** employee perception that change is superficial, **lowering** employee intrinsic motivation, **increasing** perfunctory compliance rather than active cooperative involvement by employees, which **further strengthens** the already negative managerial perception of the effectiveness of L&T processes as **poor**, ... with which we started the narration - meaning that we have an example of a reinforcing loop R4 - a vicious cycle of increasingly negative managerial perceptions about the effectiveness of L&T practices, a vicious cycle in the commitment of academic managers to external evaluation and accreditation processes, and a vicious cycle of perverse staff behaviour!

Loops R2 and R3 (as in Figure 3c) can be narrated and interpreted in a similar manner. For example, for loop R2, the **greater** the managerial commitment to L&T practices and processes required to meet accreditation standards, the **greater** the perceived threat to academic autonomy, and then **increasing** perfunctory compliance rather than active cooperative involvement by academic staff etc.

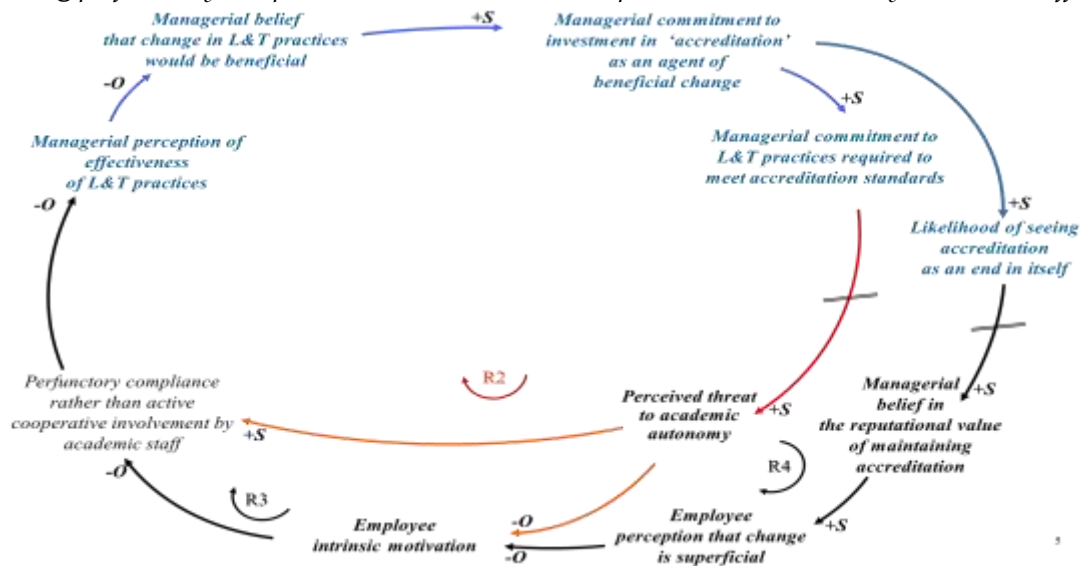


Figure 3c: A Second CLD representation of Evaluation and Accreditation processes

At this point, we note how, in Figure 3a, Loop R1, as a positive reinforcing loop, captures the mutually reinforcing impact that *accreditation agency approval* and *commitment to L&T practices to meet accreditation standards* have on one another – the more we commit, the more approval we gain, the more we commit etc. However, as reflected in Figure 3b, such **growing** *commitment to the achievement of accreditation standards* can then manifest, on the one hand, as authoritarian demands on staff, **amplifying** *perceived threats to academic autonomy*; and on the other hand, as an over-conformity to accreditation ideals that **magnifies** further managerial or institutional *belief in the reputational importance of maintaining accreditation*, so that it seems that the institution is now pursuing ‘accreditation for accreditation’s sake’, thus **fostering** the *employee perception that change is superficial*.

As an aside, it may be noted that none of the reinforcing loops, R2, R3 and R4, are overtly reinforcing loops, in the sense that the loops may have only positive links or relationships as is the case with Loop R. Here, Loops R3 and R4 have four negative links, and R2 has two negative links – the even number making them vicious reinforcing loops. Whilst an even number or zero number of negative links will constitute a reinforcing loop, as seen here, by contrast, an odd number of negative links is characteristic of a balancing loop.

In restating these observations, we note that the CLD in Figure 3a displays two major loops (B1, R1) capturing more immediate or short term effects, and that Figures 3bandc displays three loops (R2, R3, R4) that capture effects that play out over a longer period of time or are delayed – that is, collectively, the loops capture the time-related, dynamic properties of the system. We also note that some variables feature in relationships in Figures 3a, b, c, and consequently we represent the relationships as a more comprehensive CLD in Figure 3d.

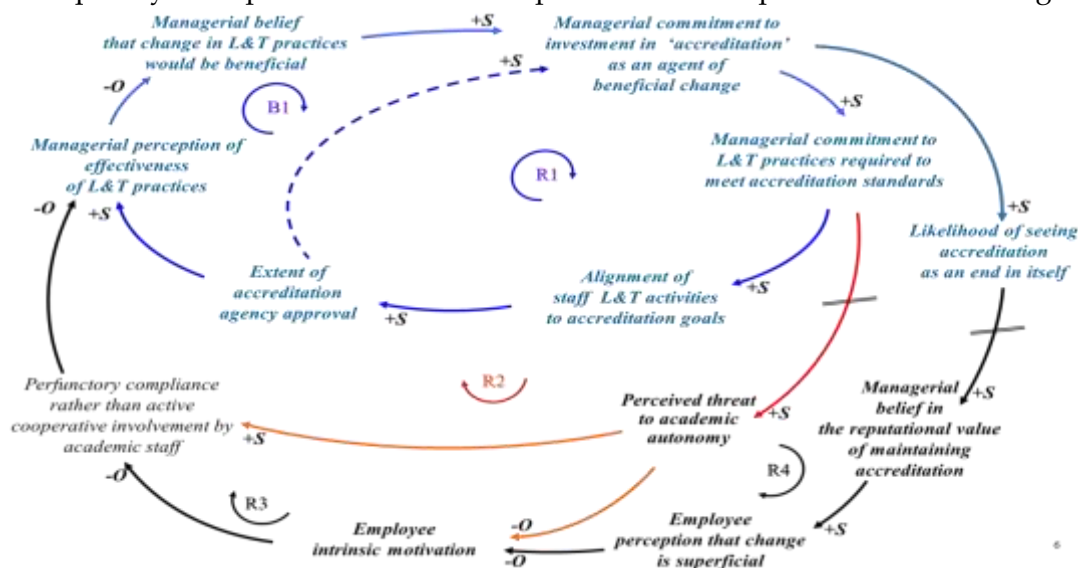


Figure 3d: Final CLD representation of Evaluation and Accreditation processes

We are then able to more easily recognise the dynamic interplay between, for example, the sets of loops that featured in Figures 3a, b, c. We note that the Loop B1 not only plays out in

the short term, but that elements of Loop B1 also belong to the longer term Loops R2, 3 and 4, meaning that the playing out of the causal relationships in Loop B1 in the short term influences the playing out of Loops R2, 3 and 4 in the longer term. In one sense, the presentation suggests that Loop B1 is part of or embedded in Loops R2, 3, 4. In a topological sense, the Loops B1 and R2, 3 and 4 'share' common elements rather than being nested or embedded systems. However, the systems convention is that Loop B1, as a Loop that plays out in the shorter term, is nested within and impact or catalyses Loops R1, 2 and 3 which play out in the longer term.

The consequential understanding that evolves from interpretation of the systemic interplay between variables and loops, can then be used to determine how change can be supported through appropriate intervention. For example, given the possibility that accreditation might be viewed by some as an end in itself, or that management might become overly focused on the *reputational value of accreditation status* as an end, then intervention might take the form of an education process to remind individuals of accreditation and audit processes as beneficial means to improving the effectiveness of L&T practices and enhancing student experiences.

Similarly, if there is an awareness of a growing perception of managerial behaviour becoming a *threat to academic autonomy*, then intervention must address that behaviour, if indeed it exists, or address the misperception of that behaviour. However, if what is first noted is behaviour that would be regarded as *perfunctory compliance*, otherwise known as going through the motions, then an appropriate intervention might be take place further back in the causal chain.

In particular, we note that the systems representation provides insight about appropriate points of intervention, and, as a consequence, the nature of intervention. In addition, the CLD or systems frames provide an alternative perspective on the case situation, a perspective that arises from the notions of systems thinking, and from the use of the CLD protocols, both contributing to a process of enquiry. They also facilitate the development and capture of that alternative perspective in schematic or visual form, that is, as a conceptual or theoretical framework, is, in itself, a variety of the inductive theory development described by Yin (1993) and Eisenhardt (1991).

## 5. Discussion and Conclusions

The case-based analysis presented in this paper was carried out in response to, and with a purpose of bridging a perceived gap in the educational change management literature - namely, the lack of reported research involving systems methodologies or a systems approach. In linking to, and drawing on systems notions and systems approaches, we have demonstrated use of a framework to conceptualise aspects of change management relating to educational initiatives that provides a complementary or alternative understanding of those underlying processes through which change is implemented. Our descriptive schematic CLD models depict different nested 'layers' of events, factors and relationships, which have an attendant face validity in depicting the change process as it may play out in the case organisation and in other institutions subject to internal and external forces that impact learning and teaching initiatives.

Our inductive analysis, summarised in the CLDs shown in Figures 3a, b, c and d provides insights about the relationships within and between the different layers of nestedness or embedded loops in the inductive model. Such insights are consistent with, and complement the contribution made by Senge (1999) on managing change and suggest that future research should seek to understand the relationship between internal and external factors in the management of educational change initiatives. For example, we note that our analysis suggests that internal institutional pressures to improve L&T cannot be decoupled from the external requirements of the accreditation or ranking agencies that nevertheless play a different role and serve a different purpose in building or promoting quality more widely through their members in the global education sector. As such, building an understanding of the interdependent and embedded relationships is a precursor to how academic managers may begin to ascertain how educational change initiatives may be managed more effectively and/or more sustainably.

Additionally, and more particularly, we suggest likely benefits from research that harnesses insights from a study of this nature with insights and findings from other contiguous domains in seeking to build theory that has the potential to provide a more rounded understanding of how educational change initiatives, such as those to improve L&T, may be managed.

In a similar vein, we suggest that by considering alternative modes of inquiry or frameworks used in contiguous domains, that the multiple perspectives developed will also provide a more rounded understanding of change management in the educational domain. Indeed, the alternative mode of enquiry offered by the CLD provides evidence of the value of multiple perspectives and of taking a broader view of the domain of leading and managing educational change.

Indeed, given its complexity, we suggest that the process of managing change is best viewed or described through the use of multiple frameworks which in combination may generate insights about, inform or explain a wider range of situations than may a frame or model informed by a single theory (Gioia and Pitre, 1990). The CLD systems representational model is one such model that offers a different perspective and different insights.

The use of case research, or the use of a case situation as a unit of analysis as in this study, has limitations recognised by several of its proponents, and which are shared with other forms of qualitative research. We acknowledge that whilst the nature of case data may be such that findings arising from such data have limited validity, reliability or generalisability, and that such matters are of concern to those who have been proponents of theory building grounded in case study research (Yin, 1989, 1994; Eisenhardt, 1991; Gummesson, 1991). However, here, our use of a case situation has been different. In this paper, we have sought to use a situational or case context to demonstrate the efficacy of a systems approach in developing insights about managing learning and teaching initiatives.

Here, we recognise, despite the CLD representations (or erstwhile theoretical models) having plausibility and commensurate face validity, the use of a single case cannot lead to generalisability of findings, and critical reassuring comment cannot be offered about reliability of findings. However, data validity has been assessed by confirming the veracity and accuracy

of the information (and also the findings) with others working within the case organisation, and/or who have been active in promoting learning and teaching or in accreditation processes. Whilst, as stated, other authors (Yin, 1989, 1994; etc) have endorsed case research in its many forms, we have demonstrated seemingly less ambitious objectives. We have sought to employ a single case situation to demonstrate the efficacy of using a systems framework to better understand the management of educational change initiatives. Such an approach illustrates perspectives emerging from the case situation that facilitate the development of insights about managing educational change at different layers of “visibility and interpretability” (Homburg and Pflesser, 2000), and in doing so, that also illustrate the systemic communality of the attendant and often unintended consequences of change management practices. In summary, we show that the recognition and conceptualisation of change management as a complex and systemic activity is facilitated through the use of a systems framework acting as an interpretive filter or prism (Espejo and Harnden, 1989).

It is considered that ongoing research related to the management of educational change initiatives should reflect the value of complementary perspectives that can be offered by the CLD systems representation/model, demonstrated in this paper. Indeed, further elaboration of the systems model may be valuable, and ongoing research should include empirical work further examining the nature of embedded relationships. These relationships would include those between individuals, schools, faculties, institutions and the wider environment, including accreditation agencies; between variables at the different levels of nestedness; and the impact of such relationships on the effectiveness of the change management processes.

The latter is especially important when, for example, the UK HEFCE is proposing a further shift from process-driven assurance to analysis of student academic outcomes, to strengthening the existing external examining system, and to an enhanced role for universities’ and colleges’ own assurance systems (HEFCE, 2015b).

The systems representation or model, based as it is on the case material, contributes to knowledge about the change management process by supporting prior theory and research on change (Senge, 1999), and also by providing an alternative perspective and understanding of change. Indeed, we may regard the development of the CLD as an example of theory development based on an inductive approach. We may also regard the inductive approach demonstrated here as providing a constructive illustration of how we may build on existing case-based knowledge and how we may complement existing theory, to better understand a specific phenomenon, that of managing educational change (Cavana *et al.*, 2001; Eisenhardt, 1989).

These views complement those of Saunders *et al* (1996, p.3) who state that an approach that seeks parallels outside the “traditional boundaries” of, say, change management or learning and teaching, “will always be stronger than those that take refuge in a narrowly defined domain”. Such views also parallel those of others who claim that the development of multiple perspectives arising from the use of alternative research methodologies underpinned by different paradigmatic assumptions is necessary to reflect the multifaceted nature of organisational reality and to engage in theory building (Gioia and Pitre, 1990).

Given the integral role of change management in higher education, we suggest that this illustrative study represents one such use of an alternative approach of a multi-methodological nature - linking a systems methodology and the development of a case-based approach to the study of the educational change process. Our simple and parsimonious conceptualisation of the processes manifest in bringing about change in learning and teaching, and accreditation, may provide a useful point of departure for further research.

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