

Researching e-Mature Institutional Themes in English Colleges

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1 This Submission

This document has been prepared to meet IoE's requirements for an MPhil/PhD Upgrade Submission, as stated in the current MPhil/PhD Student Handbook (IoE, 2010), by providing:-

- a record of the research training undertaken to date
- a timetable for carrying out the planned research and completion of a doctoral thesis
- an outline of the context and scope of the planned research
- a critical literature review covering theoretical and practical issues that have emerged so far from reading and fieldwork
- a methodological proposal for the work planned to be done prior to submission of a PhD thesis by the end of 2012

In the document:

- Citations of items in the list of works cited are shown in round brackets (...)
- Citations and list of works cited use the IoE-recommended EndNote styles
- Places where material has been omitted from a direct quotation are marked (...)
- First time use of each abbreviation is shown in square brackets [...]: all abbreviations are subsequently included in the Index & Glossary starting on page 37.
- Direct quotations and titles of works are formatted "*quoted text*"
- Other emphasis is formatted *emphasised text*
- Subject to the definitions provided on page 9, and except where qualified by a specific alternative meaning, the term college(s) will be used throughout to refer to the public sector General Further Education [GFE] college(s) of England
- the term ILT is used throughout as a blanket term which includes other terms often used synonymously – IT, ICT, e-learning etc. – unless specifically over-ridden by neighbouring text

The document, including index and references list, is 23349 words in length.

1.1 My Research Training

The planned project revisits an area in which I first took a research interest 30 years ago as the theme of a dissertation submitted for my MA Educational Management (Gray, 1981) at the University of Lancaster.

Before starting my MA work I had previously completed the Open University E341 Methods of Educational Enquiry post-experience programme, which proved to be a demanding introduction to educational research method and the use of descriptive and inferential statistics. Sometime later, after receiving my MA, I went on to complete the Open University E324 Management in Post-Compulsory Education post-experience programme.

During the ensuing 20+ years I had a series of senior management jobs in further education colleges, whilst simultaneously holding voluntary national and European expert and advisory roles in developing the use of Information & Communications Technology [ICT] in education. During this time I undertook no formal training.

As part of my plans to retire at the end of the year, in 2006 I registered as an MPhil/PhD student in the International Institute for Educational Leadership [IIEL] at the University of Lincoln. During 2006/7 I attended IIEL educational research theory and information-seeking skills sessions.

Following registration at IoE for MPhil/PhD in September 2007 I was granted exemption from the Information and Literature Searching module. Since then I have:-

- completed Conceptualising and Designing Research [CDR] online Jan-April 2008
- completed Collecting and Analysing Data [CAD] face-to-face Oct-Dec 2008
- completed Qualitative Data Analysis [QDA] online Oct-Dec 2010
- completed the Educate Review, Edit & Write online modules May 2011

During the period 2006-2010 I worked as a part-time adviser to Microsoft, whilst carrying out initial reading and pilot fieldwork for the ReMIT research at the same time. This work allowed me to maintain my network of contacts in English further education colleges and to keep up-to-date with further education developments.

Since summer 2010 I have been fully retired and I have been concentrating on my MPhil/PhD work. In addition to wide reading I have spent much of this period acquiring skills with the tools needed to support the research proposed in this document.

1.2 Thesis Title

My proposed thesis title is:-

| |
|---|
| <i>ReMIT for FE : Researching e-Mature Institutional Themes in English Colleges</i> |
|---|

The planned research sets out to explore the questions proposed on page 5.

1.3 Research Timetable

If my upgrade submission is accepted I plan to:-

- complete literature review and survey instruments by September 2011
- complete main data collection phase by July 2012
- submit completed thesis by December 2012

Prior to undertaking exploratory work in colleges I made a submission to the Ethics Approval for Doctoral Student Research panel in November 2007 (Gray, 2007b) and an updated submission will be made at the point this upgrade process is satisfactorily completed.

2 Research Outline

The planned research concerns itself with the adoption of Information and Learning Technology [ILT] by colleges. It will use interview, survey and documentary evidence to explore the factors associated with colleges' development of e-maturity which Becta defined in 2006 as:-

"... the capacity of a college to make strategic and effective use of technology to improve educational outcomes." (Becta, 2006b, p.3)

The aims of the research are to extend our theoretical knowledge about how, when and why Further Education [FE] colleges adopt ILT to help them do business, and to develop this knowledge to contribute to improving practice in FE.

2.1 Questions

The planned research sets out to answer the question:

*If our colleges' mission requires them to become e-mature ...
... then what is it about a college that influences how it will adopt ILT?
... and have colleges, 15 years after Higginson, yet been successful in becoming e-mature?*

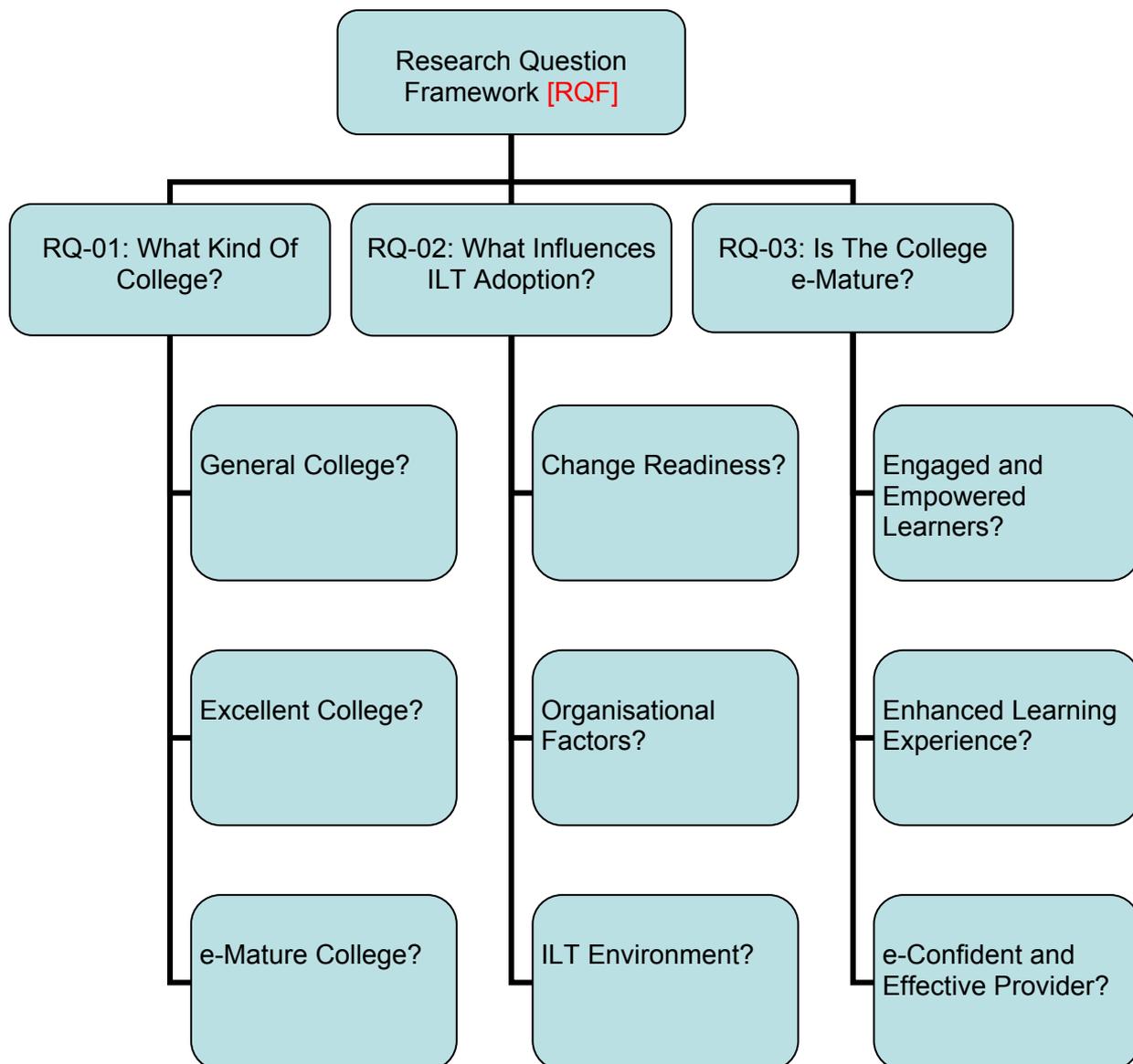


Figure 1: ReMIT Research Question Framework

2.2 Context

Commenting on English FE's recent history, Coffield states:-

"The landscape is not only complex because it is the result of 8 years of constant government intervention and tinkering, it changes frequently as new organizations are created and others are disbanded ..." (Coffield et al, 2005, p.640)

The chaotic nature of change in FE has been well documented by Coffield and his colleagues in a series of publications during 2004-7, and reinforced by James in his account of the Teaching and Learning Research Programme [TLRP]:-

"... if there is one thing that our research has made visible, it is the extraordinary high pace of change in the Further Education sector." (James and Biesta, 2007, p.5)

On 1st April 1993 implementation of the Further and Higher Education Act 1992 (HM Government, 1992) created, for the first time, a unified English FE sector. It did so by taking English FE colleges out of the ownership and control of local government, placing them in the hands of college corporations and arranging to fund them through a new body called the Further Education Funding Council [FEFC]. This process of incorporation had a huge impact on the FE sector as a whole, on the individual colleges within it and on every college employee. It was arguably the biggest single planned change ever experienced in colleges.

FE college incorporation took place just as the business world's adoption of the newly affordable computing really began to gather momentum. The implications of the rapid emergence of an Information Society had been identified in influential European documents (European Commission, 1993; 1996) and the "*Superhighways for Education*" concept was being promoted by UK government (DfE, 1995). It was inevitably seen as important for the new FEFC to have a view on how the new sector would develop its use of information technology [IT].

Soon after its creation the FEFC established a Learning and Technology Committee [LTC] under the chairmanship of Sir Gordon Higginson. Important contributions to the work of the LTC were made by research and advisory staff from the National Council for Educational Technology [NCET], the Further Education Development Agency [FEDA] and the Further Education Staff College [FESC]. I was the GFE college principal member of the committee. The LTC's 1996 report (FEFC, 1996) was to become widely known across FE as the *Higginson Report*. It introduced the term ILT to FE and its recommendations influenced the sector's ILT development thereafter.

In 2000 further legislation (HM Government, 2000) dissolved the FEFC (and its 10 regional councils) and established, from 2001, the Learning and Skills Council [LSC] with an extended mandate. The new national LSC, through its 47 local councils, was tasked to fund and plan provision across a much larger Learning & Skills sector [LSS], consisting of colleges, work-based learning [WBL] and adult and community learning [ACL] providers. Colleges retained their corporate body status, as they still do.

By 2001 a perceived need for government intervention in the technology area formed part of the Labour government's "*education, education, education*" ambitions (BBC, 2007). In 2001 the LSC established its Distributed and Electronic Learning Group [DELG], whose subsequent DELG Report (LSC, 2002) largely endorsed the FEFC's actions on ILT, and took steps to embed a number of sector initiatives that had been launched during the FEFC years. Despite the LSC's extended "fund and plan" mandate and the early LSC enthusiasm for the work of DELG, there were few LSC ILT initiatives once the FEFC-launched programmes had run their course.

NCET, now renamed as the British Educational Communications and Technology Agency [Becta], became grant-funded to work in FE '*in consultation with the Department, the FEFC, and FEDA*' (Howells, 1998). Becta became responsible for delivery of the LSS components of the national Harnessing Technology e-strategy (DfES).

The Apprenticeships, Skills, Children and Learning Act (HM Government, 2009) has, with effect from September 2010, now broken up the unified sector set up in 1993 and put in place a complex mix of so-called "*Machinery of Government*" funding arrangements to replace the LSC.

The Young People's Learning Agency [YPLA] and the Skills Funding Agency [SfA] have been created, *funding-only* roles for 16-19 and 19+ learners respectively. Funds for 16-19 learners pass to colleges via local government, and pass direct from SfA to all providers for 19+ learners. There is now an expectation that future planning will be steered more directly by institutions (Fletcher and 157 Group Principals, 2010). Becta, whose profile as a source of support and advice in FE colleges grew during the LSC years, was closed down early in 2011, and neither YPLA nor SfA presently appear to have any public policy position on ILT.

For most of this period the Joint Information Systems Committee [JISC], though primarily an HE organisation, has supported FE – not least by providing Joint Academic Network [JANET] access.

Amidst all this churn, has ILT's potential to "... *transform the relationship between teacher and student as well as the location of that learning.*" (FEFC, 1996, p.72) been realised? Is FE yet e-ready for an educational context dominated by socio-technical change (Facer, 2011)?

2.3 Scope

The Researching e-Mature Institutional Themes [ReMIT] project revisits and substantially extends my earlier MA work (Gray, 1981). My MA work was carried out when educational computing (Rushby, 1979) was only just starting to impact on college life. when ICT's impact on globalisation (chronicled later by Friedman, 2006) was not yet widely recognised, and when only the earliest innovators were active in FE adoption of technology (Shuker, 2010, p.111).

Since retiring at the end of 1996 I have maintained an academic and professional interest in the way colleges use ILT. I'm curious to know just what impact it has had, to better understand how it has (or hasn't) transformed FE in the way the LTC projected that it might, and to get a sense of how socio-technical change is likely to change FE colleges in future. I have already observed that my questions prompt college interviewees to reflect more on the approach they take to the ReMIT issues and I hope the completed research will make a wider contribution to FE's development.

ReMIT sets out to extend our theoretical knowledge about the character of ILT's impact on the way FE colleges do their business, and in turn provide help in improving practice.

"Theories are statements about how things are connected. Their purpose is to explain why things happen as they do. They help us sort out our world, make sense of it, guide us how to behave in it, and predict what might happen next."
(quoted in Henning, van Rensburg and Smit, 2004, p. 18; LeCompte et al, 1993)

ReMIT's focus is explicitly confined to the GFE colleges of England, rather than any broader population of colleges. A broader population that might have been chosen could have included colleges in other areas of the UK, 6th Form colleges and specialist colleges.

Whilst colleges across the United Kingdom (and indeed abroad) share very many characteristics with each other, variable factors such as those imposed by government funding and quality assurance systems affect their operation in many different ways. Focussing on English GFEs is expected to help operationalize the ReMIT research and strengthen the usefulness of its outcomes.

Whatever the outcomes, they will need to be communicated carefully if their potential usefulness is to be realised. The gap between theory and practice so commonly identified in organisations (Van de Ven and Johnson, 2005), combined with the lack of a well-developed research tradition across FE (Crowther, 2005; Elliott, 1996), means that I should maintain realistic expectations of the degree to which any lessons learned are likely to influence developments, even within the confined GFE population.

3 Literature Review

This review aims to present examples from the literature that help us to better understand the issues subsumed in the ReMIT RQF. The review draws on:

- *both* sector-specific literature concerned with the mission and practice of the work done in English FE colleges *and* cross-sector e-technology literature, to provide a starting point for answering the questions stated in and implied by RQ-01
- generic OCI (see page 12 for definition) literature to help illuminate the way that FE colleges, like other organisations, pursue their goals as referenced in RQ-02
- methodological literature to help critically evaluate such evidence as is available to answer RQ-03's questions *and* to help plan how best to collect additional relevant evidence from the FE sector

In the next sections the literature review is presented as a commentary, aligned to the ReMIT RQF structure shown above. There is additional reference to the literature in the proposals section (starting on page 25) which addresses ReMIT's plans and methodology.

Whilst a considerable number of works are cited, the works cited list is far from exhaustive. The selection is intended to be indicative of the issues the ReMIT enquiry is likely to encounter.

3.1 RQ-01: What Kind Of College?

This is *not* a technology-specific question. The question *is* about the nature of FE's mission and how the use of technology is enabled and encouraged, or not, by political and strategic influences applied at national or organisational level (BIS, 2010; DfES, 2006a).

During the period following publication of the Higginson Report (FEFC, 1996), documentation from the FEFC presented a picture of emerging expectations of ILT as the Higginson recommendations – the nascent strategy for ILT in FE - became widely disseminated, championed by the National Information and Learning Technologies Association [NILTA] (1997).

The national survey carried out by the FEFC Inspectorate (1998) provided a health check across the FE sector in all the areas that Higginson had addressed. A few months later (after a consultation exercise across the sector) FEFC published an ILT Strategy which included plans to invest £74 million (FEFC, 1999, p.6) to support the Higginson agenda, guaranteed by government as part of the Learning Age initiative (DfEE, 1997; Johnston, 1999).

All these early documents adopted a similar approach, exhorting FE colleges and their staff and managers to get involved. Tessa Blackstone, the minister responsible for FE at the time of the 1999 funding allocation, is quoted in a Times Educational Supplement [TES] article:-

"Colleges will not be able to help learners make really effective use of information and learning technology (ILT) as a new learning and conceptual tool unless the fluent use of ILT is seen as an essential element of their own development."

"There are still too many principals and senior managers unaware of the full potential of really good management information systems at both strategic and operational levels."

"Fear of computers and a reluctance to use them is repeatedly identified in college surveys as a reason for poor lessons and in-adequate administration." (Johnston, 1999)

Ten years later, in its last annual survey of the Learning & Skills sector before its own closure, Becta (2010d) was saying that:-

"FE colleges have continued to progress, with around one third now being classed as mature in their use of technology ..." (p.4)

but that

"... across much of further education and skills we are at a stage where there are significant opportunities to realise further benefits from this maturity. The opportunity to achieve considerable service improvement and efficiency benefits is there for the taking. What is required is informed and focused leadership to make it happen." (p.7)

The use of the term "colleges" can risk implying a high degree of uniformity across the sector. Such uniformity does not exist! Indeed the FE sector (in respect of both its component colleges and the millions of FE students) is extraordinarily diverse (LSC, 2003, p.43).

3.1.1 General College?

The FE sector was created in 1993 and substantially retained its separate identity even as a sub-sector within the larger LSS sector created in 2001. Not long after its inception the FE sector began to collect staff data annually using the Staff Individualised Record [SIR] survey. Following the FEFC's demise Lifelong Learning UK [LLUK] was, until 2011, charged with carrying out the annual SIR. Figure 2 provides data for the most recent published period (LLUK, 2010). LLUK closed on 31 March 2011 (LLUK, 2011) and its responsibilities have been split between the Learning and Skills Improvement Service [LSIS] and the Institute of Learning [IfL].

This section sets out the boundaries of the ReMIT research by identifying which organisations, and therefore which people, are within scope for the planned research.

The ReMIT research will focus exclusively on the GFE colleges shown in the leftmost data column of Figure 2. One reason for this focus on the GFE colleges of England is purely practical – my own experience and contacts (as well as many of the quasi-governmental support networks) are primarily within the GFE community.

| LLUK FE Workforce Data 2008/9 | General Further Education | National Specialist College | Sixth Form College | Land Based College | Art Design & Performing Arts College | Special Designated College | Total |
|---|---------------------------|-----------------------------|--------------------|--------------------|--------------------------------------|----------------------------|----------------|
| Number of Colleges | 235 | 6 | 95 | 16 | 4 | 8 | 364 |
| Senior managers | 709 | 20 | 112 | 21 | 6 | 11 | 879 |
| Other managers | 14,323 | 268 | 1,286 | 517 | 63 | 67 | 16,524 |
| Administrative and professional staff | 16,217 | 190 | 1,514 | 1,470 | 47 | 93 | 19,531 |
| Technical staff | 13,809 | 60 | 1,662 | 1,081 | 121 | 54 | 16,787 |
| Word processing, clerical and secretarial staff | 22,740 | 134 | 2,835 | 519 | 108 | 172 | 26,508 |
| Service staff | 33,111 | 1,528 | 3,934 | 1,931 | 85 | 202 | 40,791 |
| Assessors and verifiers | 5,292 | 8 | 78 | 183 | 2 | 0 | 5,563 |
| Teaching staff | 119,266 | 620 | 13,164 | 2,897 | 574 | 1,685 | 138,206 |
| Not known / not provided | 3,341 | 2 | 100 | 62 | 0 | 0 | 3,505 |
| Total | 228,808 | 2,830 | 24,685 | 8,681 | 1,006 | 2,284 | 268,294 |

Figure 2: FE Workforce Data Table 2008/9, LLUK

There are other reasons for this focus as well. The ReMIT population will not include the few specialist colleges that now remain, nor the Sixth Form Colleges with their rather different culture and mission, as documented by Jacky Lumby (2002; 2003). The Office of National Statistics [ONS]

has announced (DfE, 2010) that it has reclassified sixth-form colleges as local government public sector entities and GFEs as central government public sector entities, both changes with effect from April 1993, so re-writing the official history of the English FE sector. Neither will ReMIT's population include, except where it makes sense because of the work they do in direct partnership with colleges, the numerous WBL and ACL provider organisations that have emerged since the LSC was created in 2001. These providers have a quite different context and mission to colleges.

This still leaves 235 colleges, with 228,808 staff (many of these part-time employees), as the population from which samples might be drawn for ReMIT survey work. This population itself contains quite sufficient diversity to present substantial research challenges, whilst having sufficient common features to offer at least the prospect of meaningful comparisons between its members as the survey data emerges.

Whilst colleges across the United Kingdom (and indeed abroad) share very many characteristics with each other, external factors such as those imposed by government funding and quality assurance systems affect their operation in many ways. ReMIT will not have direct involvement with colleges in Wales, Scotland or Ireland. Somewhat paradoxically a significant minority of GFEs now provide substantial amounts of work funded by the Higher Education Funding Council for England [HEFCE]. All the work done directly by a GFE college, irrespective of academic level or source of funding, will be considered as in scope for ReMIT.

3.1.2 *Excellent College?*

This theme is based on the sector's Framework for Excellence [FfE], (LSC, 2007a; LSC, 2007b) which was introduced to provide a unified performance monitoring framework across the English LSS, and has subsequently been extended to other sectors of education.

The term *excellence* is now thoroughly politicised, part of the "*rise of a politics of excellence and choice in education*" referred to by Boyd (1998). "*Excellence*" and "*outstanding*" are the new norms in government rhetoric. The term excellence is used here to link to the contemporary official view of what FE colleges should be/do and therefore to give a starting point from which to consider what ILT's role should be in those colleges. As part of setting the benchmarks for excellence in its "*Pursuing Excellence*" strategy document the Quality Improvement Agency [QIA] states that:-

"... most colleges and providers have a mission that is demand-led and driven by the needs of learners and employers; they have effective leaders who are enterprising and make good use of resources, including ICT, to enable effective teaching, learning, support and management" (Quality Improvement Agency, 2007, p.6)

FESC helped shape today's FE leadership and management orthodoxy, and in an early exploration of the nature of FE leadership FESC's Derek Marsh (1992) observed (at a time when the 'leadership' term had not yet become widely used in education) that:-

"The recent focus in education management has been on the three Es of Economy, Efficiency, and Effectiveness, measured by sets of performance indicators. However, there are another three: Excellence, to which some attention is paid in in terms of 'quality', Envisioning, and Ethos. The first three are primarily concerned with management and administration; the last three are the concern of leadership." (p.1)

Fifteen years later, in 2007, FfE was launched (LSC, 2007b) jointly endorsed by LSC, Department for Education and Skills [DfES], QIA and the Office for Standards in Education [OFSTED] following the Foster Report on the future of colleges (Foster, 2005)).

The adoption of the term "*excellence*" in FfE's title displays its rhetorical nature. In "*Framework for Excellence, How The Framework Will Work*" (LSC, 2007a) there are almost 50 instances of the term (invariably by repetition of the FfE title) without any definition of what it means for FE.

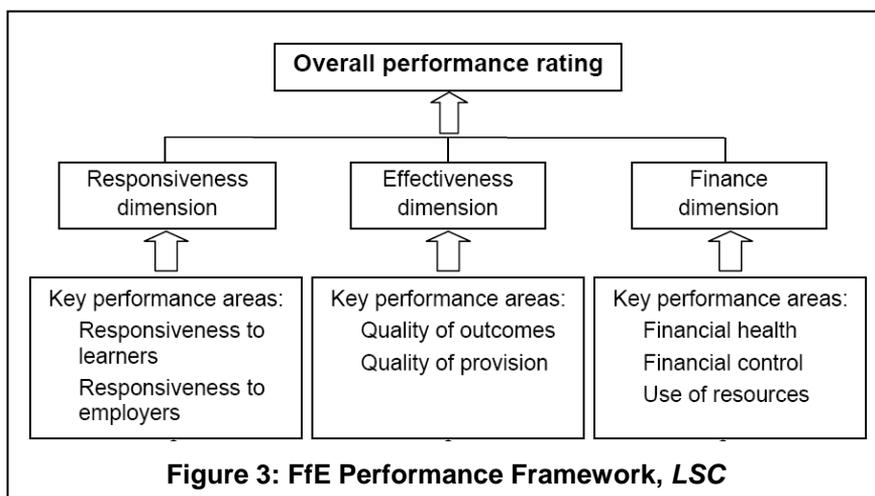
Mirroring FfE's structure QIA's outline improvement strategy states (QIA, 2006, p.9) that:-

“... excellence means developing, maintaining and delivering to the highest standards of responsiveness, effectiveness and efficiency.”

In a way this lack of specificity is no surprise, FE is such a complicated and diverse sector. Whilst there are many relatively uniform areas of college activity, the mission of any individual FE college will often reflect specialisms based on past local economic activities (types of manufacturing, engineering etc), inherited by the institution from its technical college ancestor.

In order to cope with such diversity FfE builds on generic concepts that are familiar to the sector and to its managers. FfE's structure (LSC, 2007a, p.10) requires that FE colleges should demonstrate excellence by being:-

- Responsive
- Effective
- Efficient (Finance)



In “*Framework for Excellence, How The Framework Will Work*” (LSC, 2007a) the word *efficient* occurs only once, but the key performance indicators [KPIs] for FfE's Finance dimension specify the same *value for money* criteria that have dominated FE management culture since the sector became exposed to the early local management influences (exemplified by Birch, 1988), and to the pre-incorporation exhortations to be efficient and effective that came from the then-shadow FEFC (Touche-Ross, 1992, pp.30-32).

Effectiveness in FfE is closely related to colleges' OFSTED inspection performance and to their learner “success rates”. A great deal could be said about the pros and cons of this relationship, but it does have the merit of being well understood – and relatively constant – and does, undeniably, have great direct influence on what colleges do.

Responsiveness has long been a central element in FE's view of itself. It became a formally identified performance objective as a result of the Leitch Report (Leitch, 2006) which sought, in particular, to enhance the support employers get from colleges. Responsiveness to learners is nowadays often considered via the concepts of *personalisation* and *learner voice* which have been explored extensively in the schools context (Collinson, 2008; 2007), and to a lesser degree in FE (AoC NILTA, 2007; DfES, 2006b).

3.1.3 e-Mature College?

Becoming e-mature is a relatively new concept, and the term e-maturity itself seems to presume that merit exists in the very application of e-technology.

Having been introduced into the ICT industry some time earlier, the term e-maturity appears in the UK government consultation document (DfES, 2003, p.12) which preceded publication of its Harnessing Technology strategy (DfES, 2005). Whilst there have been some attempts to apply the term to individuals' e-skills development (Becta, 2010a, p.54), it is overwhelmingly applied to organisations and/or parts of organisations.

There are 2 main sources of literature available to inform our understanding of the e-maturity concept and its significance for FE.

- Becta and quasi-Becta documents, initially based on the MIT 90s Transformational Model (NCET, 1995) and, from 2009 onwards, the Generator conceptual framework (Becta, 2009)

- HE sector literature detailing the benchmarking studies carried out for HEFCE and/or JISC, overseen and summarised by Bacsich (Bacsich, 2008; Bacsich, 2009). The HE work of Stephen Marshall (Marshall and Mitchell, 2004) has been adopted in FE, at least partially, by SERO for surveys in Scotland and England (Marshall *et al*, 2007; SERO, 2008b)

In 2006, in choosing to adopt the e-maturity as a focal point for my planned ReMIT research project, I was taking advantage of its growing visibility. My choice was reinforced by the term's very public adoption by Becta when they launched the Harnessing Technology Delivery Plan (Becta, 2006a) in the same year:-

“Institutional e-maturity (sometimes described as ‘e-enablement’) is the capacity of a college to make strategic and effective use of technology to improve educational outcomes.” (Becta, 2006b, p.3)

Reflecting the MIT-90s based approaches used originally (NCET, 1995), the e-Maturity Framework for FE (Garnett and Bacsich, 2007) was initially adopted as the basis for a college e-maturity self-assessment tool. However, following work done by external consultants during 2007/8, Becta abandoned this in favour of its Generator online *“technology improvement tool”* which, according to its companion guide,

“... assesses your organisation's level of e-maturity, helping you to identify your technological capacity, drawing out your technology strengths and identifying areas for improvement.” (Becta, 2009, p.1:4)

At various stages I have considered using the term *e-readiness* rather than e-maturity as a way of emphasising the widely held principle that the fitness for purpose of a college's ILT - its hardware, software and skills - is more important than its conformance with some ideal notion of e-maturity.

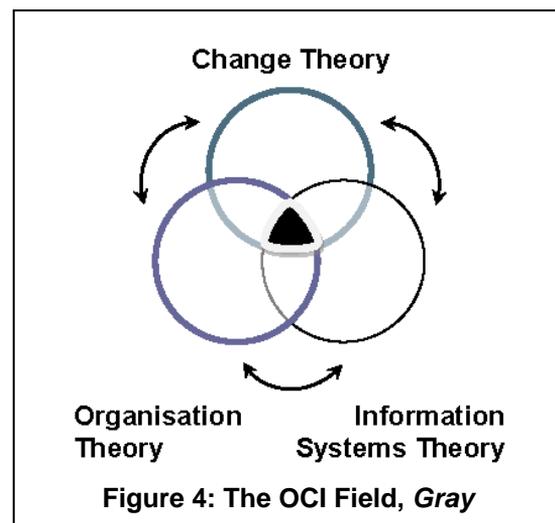
In 2008 I was a member of the SERO team put together a study for Becta assessing the feasibility of adopting an e-readiness perspective (SERO, 2008a). However, and notwithstanding my own belief that e-readiness is a more meaningful term, ‘e-maturity’ has become more widely used than ever. It is central to the vocabulary of Generator (Becta, 2009, p.1:4) and so, even with its flaws, it offers the most useful platform for conversations in ReMIT.

Whilst there is no perfect e-maturity assessment tool, the continuing presence of Generator in English FE makes it a *de facto* frame of reference for ReMIT's survey and analysis. Following Becta's demise in March 2011 LSIS announced (LSIS, 2011b) their intention to continue support for Generator across FE. Accordingly, I have adopted Generator's outcomes typology (see Figure 9 on page 21) structure for use in the 3rd RQF dimension, “RQ-03: Is The College e-Mature?”.

3.2 RQ-02: What Influences ILT Adoption?

Change is clearly a significant focus of the ReMIT research, set in the context of the wider relationship between the change & change management, organisations & organisational culture and information systems theory provided by the literature.

The Organisation Theory, Change Theory & Information Systems Theory [OCI] zones in the diagram are notional since many similar or derived terms are also used in the literature. Moreover, the diagram gives the impression of sharp boundaries and clear areas of overlap. The opposite is, of course, true.



However, the diagram serves to position the ReMIT research at the intersection of three main areas of enquiry which, together, reflect a complex socio-technical reality which is the backdrop to the enquiry. The generic OCI field provides a multitude of conceptual frameworks and research studies, mostly drawn from the business and management literature rather than from education, or even educational management, sources.

Whilst FE colleges are educational institutions, their character is widely regarded as having become quite managerial since incorporation of colleges in the early 1990s (Holloway, 1999). Incorporation placed considerable emphasis on the business aspects of colleges' operation. For this reason the OCI literature's strong management focus and character are probably more directly applicable to the FE college context than they are in schools, or indeed in HE.

3.2.1 Change Readiness?

The change literature is extensive, with numerous books and a variety of journals dedicated exclusively to change issues. Amongst the many books, Burnes (2004) has comprehensive coverage of the whole field; Wallace et al (2007) provide a public sector focus on change management; Fullan and Scott (2009) and Hargreaves (2005) address change in an educational context; whilst Bates (2000) looks at the specifics of managing technological change.

Indicating its expectation that technology-led change would impact on the new FE sector, one of the FEFC's early actions following incorporation in 1993 was to create the Learning & Technology Committee [LTC], widely known across the sector as the Higginson Committee (FEFC, 1996):-

"The learning and technology committee was established by the Council in July 1993, to advise on measures it might take to promote the use of technology to enhance the provision of further education." (p.3)

Fifteen years later, at the 2008 Becta Research Conference Vanessa Pittard, Becta's Director of Strategy, presented an overview of FE's progress in the implementation of Harnessing Technology, which had by then become UK government's e-strategy for education (DfES, 2005). Her summary included reference to the "*patchy progress*" which Becta had observed across FE.

Whilst claiming significant improvements in the number of FE colleges that could be described as e-mature (Becta, 2008, p.4) Pittard spoke of considerable variation between colleges (and, indeed, within colleges), and asserted that FE has "*a considerable change management challenge*" (personal notes taken from speech by Pittard, 2008).

The change management challenge Pittard referred to does indeed exist in colleges, as it does in many other organisations, both commercial and public sector.

"In the six years since 2001 when the Learning and Skills Council (LSC) was established and given responsibility for all forms of publicly funded post-16 learning opportunities outside higher education, the learning and skills sector (LSS) has been in a constant process of organisational change." (Hodgson, Spours and Steer, 2008, p.115)

There has been relatively little academic literature written on the organisational change with technology intersection which lies at the centre of the OCI diagram in Figure 4. Less still has been written on FE's particular relationship with this intersection of issues – though, even in the early days, ILT was being positively positioned as an agent of transformational change:-

"The business transformation model describes complex processes of change. However, the basis of the model could not be more straightforward - the more profound the IT-related change that takes place in an organisation, the greater are the benefits that arise." (Lincoln, 1998, p.6)

Writing of the relationship between ICT and Organizational Change, Barrett et al (2006) state that:-

"If one issue has come to dominate management and organizational thinking over the past two decades it has been that of change and the need for it." (p.6)

The Higginson Committee, reporting in 1996 (FEFC, 1996, p.55), was already clear that there was scope for ICT-led change across the full breadth of college activity:-

'The committee commissioned The Staff College (...) to carry out a series of visits to 22 colleges in 1994. The aim of the project was to focus on recent changes in provision and to identify the following trends:

- *organisational, arising out of the implementation of college-wide policies*
- *technological, focusing on the provision and application of technological resources*
- *pedagogical, examining ways in which teaching and learning are being influenced*
- *the development of learner support services”*

Reviewing the literature for her case study (firmly grounded in the newly-corporate world of FE in the early 1990s) Monica Ralph (1995, pp.736-738) reflects the OCI diagram’s scope (bearing in mind that much FE innovation has had an IT dimension since 1996):-

'Within the literature models of change are inextricably linked with models of organisation.' *'Change models convey explicit and implicit messages regarding leadership style and role'.*

'Creative management processes and innovation are usually linked in the literature on organisational culture and structure'.

The term change is widely, and often quite indiscriminately, used. Clearly, there are many types of change. In a recent review of organisational change management research, synthesising the thinking from numerous studies, the confusingly-named Rune Todnem By (By, 2005) categorises the different criteria that are used to characterise change (my emphasis): -

- *Change Characterised By How It Comes About:*
'Planned; Emergent; Contingency; Choice'
- *Change Characterised by the Rate of Occurrence:*
'Discontinuous change; Incremental change; Bumpy incremental change; Continuous change; Bumpy continuous change'
- *Change Characterised by Scale:*
'fine-tuning; incremental adjustment; modular transformation; corporate transformation'

Scale: Perhaps the most politically visible type of change over recent years, frequently associated with high-visibility educational change gurus like Fullan (2007), is transformational change. This term is used rhetorically in government documents as a euphemism for quality improvement. Burke & Litwin (1992) contrast this with transactional change, observing that:-

"transformational change is therefore associated more with leadership, whereas transactional change is more within the purview of management" (p.531)

Macreadie et al (1998) categorise change management perspectives.

The planned change perspective is based on the assertion that it is possible, desirable and necessary to deliberately set out to create change.

In the planned change model a need for change is identified; management or government take ownership of planning the change’s implementation from the top, so overcoming anticipated resistance to change from below which can block progress. If change is successful, the organisation moves from one fixed state to another (Macreadie, Sandom and Paul, 1998).

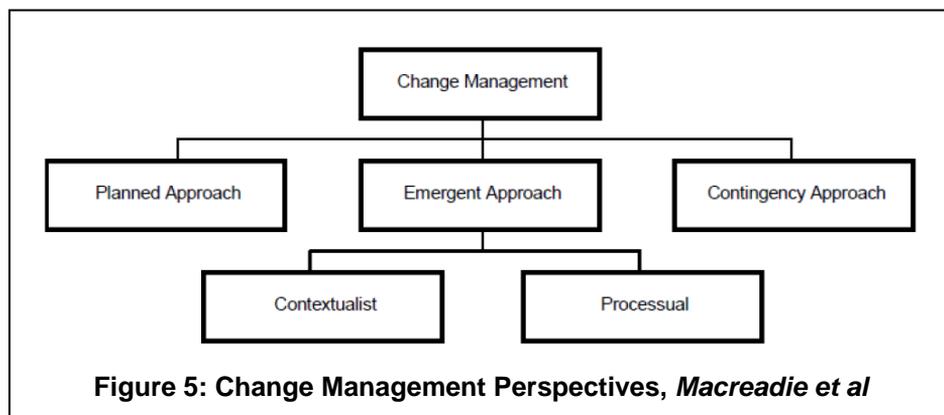


Figure 5: Change Management Perspectives, Macreadie et al

The work of Lewin (see Cartwright (1952)) has embedded two concepts deep in popular change management thinking. First, Lewin argues (1947, p.228) that it's invariably possible to discern a pattern of unfreeze <> change <> refreeze in change situations. Second, the force field concept that Lewin wrote about frequently (for example Lewin (1942)) has been adopted widely as an aid to thinking about the complex web of positive and negative factors which might combine to influence the outcome of some planned change initiative.

An amalgam of Lewin's ideas with the rhetoric of transformation has been adopted in much of the extensive pop-management coverage of change management – exemplified by the “*Change Management Action Kit*” (Rye, 1996); contemporaries like “*Better Change*” (Price Waterhouse, 1995), and many others since. Despite the popularity of this planned change orthodoxy, it seems unlikely that it matches much of the change on-the-ground in FE. Change is often more localised and messy.

Pettigrew (1987) was an early champion of the contextualist approach which emphasises the nature of the environment within which emergent change is taking place. In a very FE-centric document (Bailey, Smith and Vickers, 2006, p.5) situates the processual approach. Sometimes known as the “*it all depends*” school of thought about organisational change, the contingency approach is, according to Macreadie (1998, p.9)

"a rejection of the 'one best way' approach taken by the majority of change management protagonists (...) an organisation is 'contingent' on the situational variables it faces"

The emergent change perspective is proposed by those believe that “*change cannot and should not be frozen*” (Macreadie, Sandom and Paul, 1998, p.7) – and that change is best managed in organisations that have taken steps to build their capacity to respond to changes as they arise. By (2007) talks of organisations needing to be “*change ready*” in order to deal with messy emergent change and observes that:-

"Change is unavoidable whether organizations are ready for it or not (...) it is vital for an organization to be change ready before attempting to implement and manage any kind of change" (p.4)

By sees all these popular change management models as emphasising that

"Factors such as creating a vision and a sense of urgency, empowering broad based action, communicating the change vision, and mobilizing energy and commitment are all perceived as essential to change readiness." (p.4)

It is anticipated that ReMIT fieldwork will reveal indications that many of these different perspectives reflect some aspect(s) of change on the ground in colleges. Equally it is anticipated that no single change model will prove to be of universal applicability.

3.2.2 Organisational Factors?

Burnes et al (2003) use a number of simple diagrams (Ibid., pp.458-460), summarised in Figure 6, to chart the dimensions of the complex reality that exists in most organisations which correlate an organisation's characteristics with its stability:-

| Organisational ... | Stable Environment | | Unpredictable Environment |
|--------------------|-------------------------|---|---------------------------|
| ... Structure | Bureaucratic Structures | ↔ | Network Structures |
| ... Culture | Role Cultures | ↔ | Task Culture |
| ... Change | Planned Change | ↔ | Emergent Change |
| ... Learning | Traditional Learning | ↔ | Organisational Learning |

Figure 6: Organisational Characteristics, Burnes

Change: Organisational change is the primary focus of interest for ReMIT. In his widely cited book *"Images of Organization"* Morgan (1997, p.150) observes that:-

'Since organization ultimately resides in the heads of the people involved, effective organizational change always implies cultural change. Changes in technology, rules, systems, procedures, and policies are just not enough.'

In the 1980s Eric Hewton observed that:-

"The idea that there are different 'styles' of organization (...) is far from new, and there is a growing body of literature on this theme. Although much of the writing is concerned with industrial organizations it is relevant to educational institutions." (Hewton, 1982, p.258)

A few years later the Further and Higher Education Act 1992 (HM Government, 1992) led to FE college incorporation which deliberately sought to cultivate a particular style by imposing a business culture on colleges in the new FE sector. The culture was to be accompanied by:-

"...the introduction of the strategic management process (...) as a key managerialist concept from the Incorporation of FE in 1993" (Watson and Crossley, 2001)

From 1st April 1993 colleges underwent what Lewis (1994, p.262)), then principal of one of the 400+ organisations affected, described as *"... a significant event for those seeking to change the culture of colleges"*. Observing the effects of incorporation some years later, Lumby remarked (2003) that:-

"The debate on further education suggests a profound change in culture has taken place, both reflected in and impelled by leadership and management practice" (p. 159);

Principals and their governing bodies were required to *"Get Your College Ready"* (Touche-Ross, 1992) as part of an overt move to radically change the culture of colleges, hurried along by the new Further Education Funding Council (FEFC). The FEFC, as illustrated by the Touche-Ross *"Handbook of Guidance"*, anticipated that its colleges would operate in the very different business environment which it intended to put in place across the brand new further education sector. Eager for change, according to Gorringer (1994, p.185):-

"... there are many principals who have taken the lessons of contemporary management theory, and are consciously setting out to change college culture (...) Culture management has long been recognised in the private sector as the key to survival and growth."

Organisations are typically complex and when traditional systems theory approaches have been applied to them, even a systems advocate like Checkland (1993) observed that:-

“... the management situations we worked in were always too complex for straightforward application of the systems engineering approach” (p.A6)

At the same time Business Process Re-engineering [BPR] was becoming much in vogue with management theorists as a way of rationalising how organisations operate, usually catalysed by the introduction of new IT systems. The usefulness of BPR approaches was explicitly examined in HE (Allen and Fifield, 1999) and radical BPR-like strategies for change in HE suggested (Ford et al, 1996). Efforts were also made to alert FE managers to their potential value in FE (King, 1996). However, BPR ultimately became discredited because, with the benefit of hindsight, it had neglected the true complexity of organisational change.

Culture: Organisational structure has been seen as of importance for many years but, according to Hatch (2006, p.179), the concept of organisational culture has only become mainstream in academic discourse since the 1980s.

In parallel with a rash of pop-management books on company culture from, amongst others, Handy (1993 original edition 1973) and Peters (1988)), Schein's more academic approach (1988) emerged. Responding to these variations in approach, Hatch observes that:-

“The most popular books described organizational culture as something to be managed and used to enhance organizational effectiveness and competitiveness. (...) Most academic culture researchers were pessimistic about the ease with which organizational cultures might be manipulated to managerial ends” (Hatch, p.180)

The great variety of research approaches taken in exploring organisational culture has recently been reviewed by Jung et al (2009). Hatch quotes (p.177) definitions of organisational culture, including one from Schein:-

“The pattern of basic assumptions that a given group has invented, discovered, or developed in learning to cope with its problems of external adaptation and internal integration, and that have worked well enough to be considered valid, and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to these problems.”

The phrase college culture is very widely used in the semi-formal documentation which circulates around the FE sector but is less frequently defined empirically. Ralph (1995, p.583) describes how she used the Likert's *Profile of Organisational Characteristics* (Likert, 1961) to profile the college organisational culture and to provide insights into:-

“... leadership style and communication, decision-making and control processes”

Ralph's recommendations (p.668) for the managers of the college in which the study took place were dominated by the need to improve communications and motivation in order to cope with the stresses induced by incorporation.

Learning: Closely related to knowledge management theory, the idea of organisational learning – and, in the ultimate, the creation of a learning organisation – has been a popular focus for thinking since the notion of organisational learning was popularised in the 1990s. The idea became widely known from books by Senge (1990) and others during the 'managerial 90s', underpinned by academic work, done notably by Chris Argyris (e.g., Argyris, 1999).

During the period of organisational learning's rise to popularity, the FE college community – staff, managers and their governing bodies (who had been given a quite unprecedented level of responsibility at incorporation in 1993) - were adjusting to the many unexpected changes that emerged, all demanding a great deal from them both as individuals and as members of their organisational community. Consciously or otherwise, all were coming to terms with the realities of whatever organisational learning capacity our colleges had.

Sometime after Ralph’s illuminating account of research done soon after college incorporation, *“Developing the college as a learning organisation”* (1995), Laurillard (1999) sought to assess whether, in the world of lifelong learning her highly regarded learning conversation thinking had a role for the learning organisation.

Burnes (2003, p.454) observes that:-

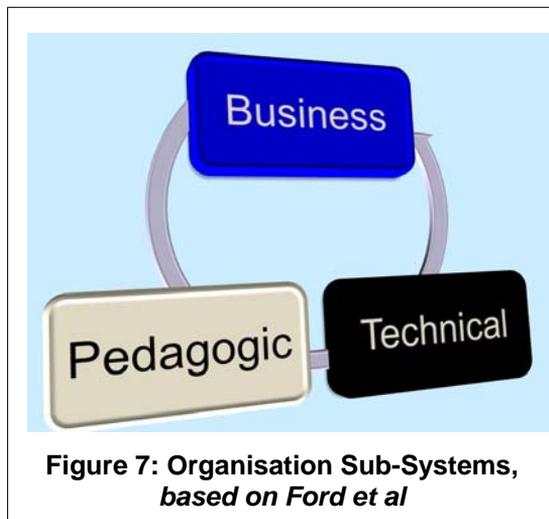
“In fact the term ‘learning organisation’ is used much less now (...) This appears to be because very few organisations, if any, seem to have achieved this status.”

He clearly distinguishes between two camps with interests in organisational learning – the camp *“concerned with telling organisations what they should do”* and the analytical camp *“concerned with understanding how organisations do learn rather than telling them how they should learn”*.

In a seminal paper on organizational learning Schein identified *“three cultures of management”* and claimed (1996, p.9) that

“... in most organizations, there are three different major occupational cultures that do not really understand each other very well and that often work at cross-purposes.”

Mirroring this, the *“Managing Change in HE”* model created by Ford et al (1996) viewed the university as having interlocked business, social (contextualised for FE in Figure 7 *pedagogic*) and technical systems, each likely to have its own community of individuals sharing an identity and worldview.



In a college which of these communities most influences ILT-related organisational change? The unrealised potential of colleges to optimise their use of technology is often anecdotally linked to a lack of shared understanding between the FE college versions of these groups.

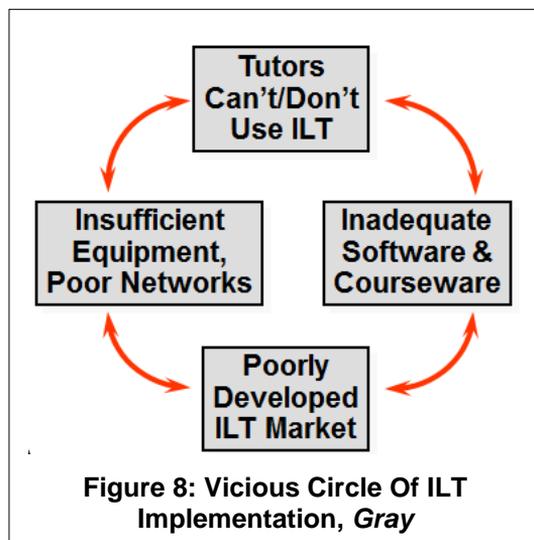
3.2.3 ILT Environment?

In conference presentations during the immediate post-Higginson period I often used the graphic shown in Figure 8 to communicate simply the complex Catch-22 situation that ILT advocates were faced with in colleges at that time.

The expert evidence presented to the Higginson committee – summarised later by FESC researchers (Gray and Warrender, 1996) – argued powerfully for FEFC action to break this vicious circle.

A substantial FEFC investment programme (FEFC, 1999) soon remedied many of the equipment and network inadequacies.

A vital staff development initiative for FE, the Quality in Information and Learning Technology [QUILT] programme, began at the same time (Donovan and Atwere, 2000). The National Learning Network [NLN] and FE Resources for Learning [FERL] programmes began to address the courseware and organisational development needs soon after.



The situation by the end of this early infrastructure-building phase is well summarised in a report produced by Becta for the LSC (Becta, 2003) which stated that:-

"... there is a robust ILT (...) infrastructure across the further education (FE) sector. Targets for student access to computers and the internet have been met in the vast majority of colleges, and the targets for staff access are also close to being met in most colleges. College networks are increasingly capable of meeting the demands placed on them."

but that

"... the large investment in colleges' technology infrastructure since 1999 has been slow to have a widespread impact on teaching and learning practice." (Becta, 2003, p.5)

Was it just a matter of time before this would change? Apparently not, given that even much later Becta's Chief Executive Officer Stephen Crowne was still saying (2009) that:-

"... as Becta's research shows, there is a widespread of effectiveness across colleges. Only one in four is able to deploy technology to full effectiveness, with excellent teaching and learning and very effective business support."

and that

"The big issue is not just a matter of getting computers deployed and working; it concerns initial teacher training, staff and student induction and continuing professional development for all staff - - not just lecturers in outmoded computer suites."

Writing about universities in an Association for Learning Technology [ALT] special issue on 'The Transformational Impact of Learning Technology', Stephen Marshall (2010) states that:-

"As educational technologists we share a common belief that technology can significantly improve the experience of learners and teachers. That belief has seen the field of educational technology progress from an initial naivety that simply introducing technology would improve the learning experience." (p.179) [... but ...] for the immediate future, the change resulting from new technologies depends on the change culture and leadership decisions of the individual universities." (p.188)

Much of the quasi-governmental literature (and all of the widely circulated vendor marketing collateral) actively promotes the idea that ILT-led change is a good and necessary thing, and that change is inevitable. Marshall's position, derived from the extensive evidence base he has acquired from e-maturity studies in tertiary environments around the world, reflects a growing recognition of the complexity of technology-led change in colleges. It exemplifies an emerging scepticism of the capacity of technology to deliver the transformational outcomes sometimes claimed. It leads us, disappointed, to ask the question: What has ILT achieved?

What might be the cause of this emerging disappointment? According to Barrett (2006)

'... change initiatives often fail. This may be of particular significance to the study of ICT-related change. One estimate is that less than one third of large-scale IT projects are successful, whereas more than two thirds fail or are "challenged" (p.9)

According to Barrett (Ibid) there is a real need for much more research into the role of ICT in contemporary organisational change, with both organisation theorists and information system theorists shifting their positions on the relationship between ICT and change:-

'... it is surprising that organizational studies scholars interested in change have not addressed these technologies in a more explicit and systematic fashion (... there is a tendency to ...) reduce technology to an abstract and material determinant of work and organizational structure and to ignore or downplay the role of human agency.' (p.7)

And what do we understand of the particular role ICT plays in change, transformative or otherwise? In their paper *“The Magic Bullet Theory in IT-Enabled Transformation”* Markus and Benjamin (1997, p.55) ask the questions:-

‘Why, then, do so many organizations fail at IT-enabled transformation? What can line executives and IT specialists do to increase the odds of success?’

and answer by pointing to a gulf observed between organisations’ IT users and IT specialists.

‘In order to successfully implement change, both line managers and IT specialists must give up their belief in the magical power of IT. The hard reality of IT-enabled transformation is that change is everyone’s job.’

This gulf of understanding and shared perspective can, explaining the ‘Magic Bullet’ epithet,

‘... lead IT specialists [to] erroneously believe in the magic power of IT to create organisational transformation’ Macreadie (1998, p.9)

Laurillard (2008, p.34) argues that *“education has not had the spectacular and costly IT failures of the other big public sector department”* However she asks the question, echoing the mostly unwritten worries shared amongst many of us closely involved in UK ILT initiatives over the years, *“Why has there been so little transformation?”* (p.14). Given the scale of public investment, and the aspirations for IT-led educational transformation, this represents something of a serious failure.

Perhaps educational innovators haven’t had sufficient clarity about just what they wanted to achieve with ICT. Setting out its principles of institutional transformation with technology, the Task Force on Institutional Readiness (Twigg, 2000) provides a checklist of questions about the potential for technology-led institutional transformation. Across the UK expectations of institutions adopting IT/ICT/ILT/e-Learning have increasingly been influenced by Becta’s promotion of the government’s Harnessing Technology e-strategy (Becta, 2008).

Until relatively recently information system [IS] theorists tended to adopt a determinist approach, failing to recognise the full significance of contextual/social factors, whilst users (and non-IS researchers) have underestimated the unique role of ICTs. Orlikowski (2007; 1991) has, over 20 years, called on constructivist concepts of structuration theory and materiality to describe this uniqueness, whilst Volkoff et al (2007, p.832) reject such approaches, preferring:-

“... the lens of critical realism because (...) common constructivist perspectives such as structuration theory or actor network theory have limited our understanding of technology as a mediator of organizational change. Using a critical realist perspective, our theory explains the process of change as a three-stage cycle in which the ostensive, performative, and material aspects of organizational elements interact differently in each stage.”

ReMIT issues are fundamentally social in nature. ILT adoption in FE colleges, as in other organisations, is less about what technology is than what people in the organisation believe it could be. And in colleges, as in society at large, fashion – what everyone else is doing - plays an important role in influencing decisions (Wang and Ramiller, 2009).

3.3 RQ-03: Is The College e-Mature?

I share Stephen Marshall’s acknowledgement (2010, p.179) of the role that the belief element has played a role in the introduction and promotion of ILT use:-

“As educational technologists we share a common belief that technology can significantly improve the experience of learners and teachers”

I began my ReMIT research journey in 2006 with that belief largely unshaken. However, my exploratory fieldwork (Gray, 2008a) and the signs of emerging scepticism in the literature (exemplified by Kirkup and Kirkwood, 2005; Selwyn, 2007; Selwyn, Gorard and Furlong, 2006; Zemsky and Massy, 2004), made me feel less convinced by Becta’s assertion that:-

“Nationally, there is steady movement towards e-maturity in further education

so that by mid-2007 I was already writing (Gray, 2007c) quizzically:-

"Much has been said, written and done in pursuit of an e-transformation that could, it is argued, benefit all involved - and their organisations. Has it happened anywhere yet? Will it? Should it? What does the future hold?"

Has it? How would we know? What counts as evidence? The Generator framework, '... *the technology improvement leadership tool for further education and skills*' (Becta, 2009, p.1:1), focuses on the 3 groups of outcomes illustrated in Figure 9, which are said to indicate a provider's level of e-maturity. Generator also explores the 7 *technology enabler* inputs - Strategy & Leadership, People & Culture, Expertise & Skills, Technology, Learning Content, Information & Data and Processes - that underpin a college's capacity to deliver the outcomes.

Generator is based on the distinctly *user-centred* approach to public service policy and implementation embedded in the System Reform Model [SRM] (Meek *et al*, 2008).

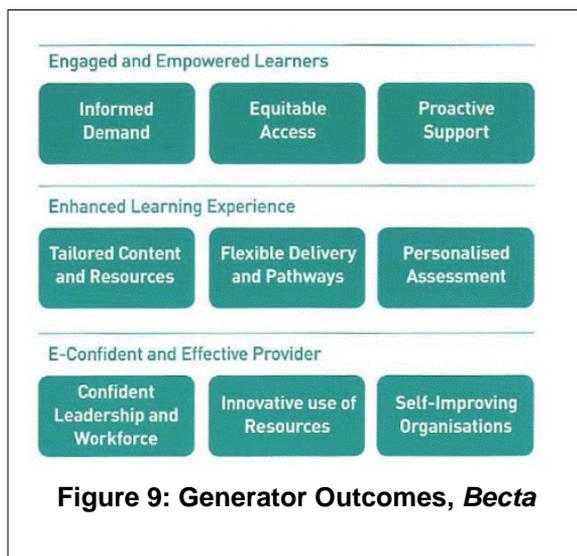


Figure 9: Generator Outcomes, Becta

PA Consulting adopted the SRM approach when contracted by Becta to develop a replacement for earlier e-maturity self-assessment tools. The System Reform Model:-

"... concentrates on the user experience, the point of interaction between supply and demand, as the focal point of policy (...) influencing both the supply and demand sides of the equation, seeking ways to empower providers and users to work together effectively to produce the best possible educational outcomes." (Meek *et al*, 2008, p.5)

The model has been extensively used in other UK education sectors as well as the National Health Service [NHS] (Hopkins, 2006) and its use as the basis for Becta developments can be dated to mid-2006 when Stephen Crowne left the DfES to lead Becta, bringing the contemporary DfES thinking with him. As a Becta Board member at the time, I personally observed the early exposure of this thinking, listening to presentations made at the Becta Board Residential in October 2006 (Crowne *et al*, 2006).

System Reform thinking was well embedded in Becta's development of Generator by the time PA Consulting presented their ideas to the first meeting of the Generator Design Authority (2008a) illustrated in Figure 10.

The SRM has been customised to suit the DfES view of FE's role, and 9 Key System Attributes [KSAs] have been developed to

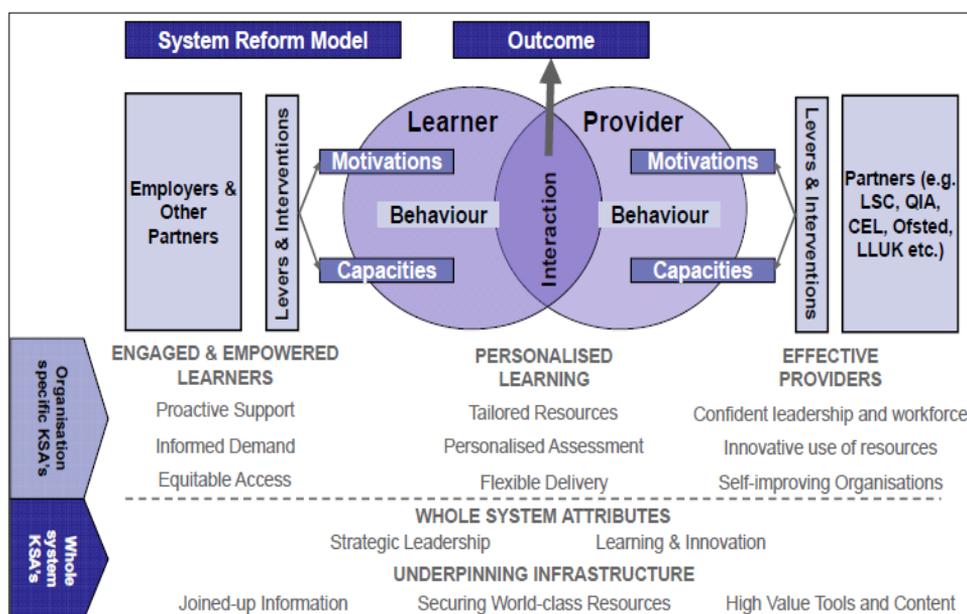


Figure 10: System Reform Model & Generator, PA Consulting

match the 3 zones in the diagram's centre.

Although Figure 10 claims that the KSAs are aligned to the Harnessing Technology e-strategy (DfES, 2005), none of Generator's 9 KSAs are specifically mentioned in the e-strategy. The groups of questions presents to college users by the online Generator tool (Becta (compiled by John Gray from the Generator online tool), 2009) visibly reflect the SRM ideology.

The next sections of this paper explore the Generator outcome areas' role in the ReMIT RQF.

3.3.1 Engaged and Empowered Learners?

Presumably seeking to emphasise a learner-centred approach, the online Generator survey tool starts each data collection session by presenting questions in groups related to the *Informed Demand*, *Equitable Access* and *Proactive Support* KSAs mapped to the Learner domain of the SRM.

Unfortunately only one of the 3 terms, Equitable Access, has any grounding in the literature (other than in documents specifically created for, or derived from, the Generator initiative itself). Even this term's use is also, predictably, mostly prevalent in documents from public service sectors where the SRM approach has been extensively used, notably the NHS.

A substantial investigation of the immediate impact of the use of e-learning on students in FE was carried out for the DfES RR739 (Finlayson *et al*, 2006) in 6 colleges. The study, which claimed to have identified positive impacts on intermediate and end-point outcomes from the use of ILT, exposed many of the factors associated with students' engagement with learning and sense of empowerment. The long term cross-sector *ICT Test Bed project* (Somekh *et al*, 2007) summarised its FE-relevant results and recommendations in a separate *Key Findings for Further Education Colleges* report (Becta, 2007) which claimed positive effects on all parts of FE, including learner motivation.

In the Higher Education sector (but substantially relevant to the FE sector as well) there are many examples of studies exploring student expectations and experiences (including Ipsos Mori, 2008; JISC, 2007a; JISC, 2007b; Melville, 2009). A great deal has also been written about the impact of the alleged generational singularity of the *digital native* (Bennett, Maton and Kervin, 2008; now increasingly challenged, for example by Jones and Czerniewicz, 2010; as postulated by Prensky, 2001) on what is needed by way of response in all sectors of education. There has also been a good deal of attention given to the specific possibilities that could emerge from the advent of so-called Web 2.0 tools (Mason and Rennie, 2008).

In more or less all studies carried out student expectations of their technology experience *in school* are strong but not extreme, and they invariably form part of a mix of expectations in which access to, and the quality of, tutors is stronger. Though it has its detractors, the term *blended learning* has become very extensively used to describe what emerges when a productive balance between conventional and e-learning support is achieved

3.3.2 Enhanced Learning Experience?

The second bank of questions in Generator aims to capture evidence on *Tailored Content and Resources*, *Flexible Delivery and Pathways* and *Personalised Assessment* which are seen as outcomes of importance to FE users – and map to the area of interaction between Learners and Providers in the DfES variant of System Reform Model shown in Figure 10.

The source of the KSAs here can be found in the FE White Paper of 2006 (DfES, 2006a) and Becta's response to it which focuses on the White Paper's references to 'personalisation', a term that had become widely used following David Miliband's speech to the North of England Conference in 2004 (Miliband, 2004).

An indicator of how ephemeral politically-derived vocabulary can be is provided within the documents I obtained from Becta under FOI 164 (Gray, 2010). References to personalisation had a high profile in documents produced early in Generator's design (EMFES Design Authority and

PA Consulting, 2008b). However, by the time the online tool and its paper-based guide (Becta, 2009) had arrived, “*Personalised Learning*” had disappeared, and had been replaced by the bland and unspecific (but presumably politically safer) “*Enhanced Learning Experience*” phrase.

Perhaps, with varying opinions emerging around the true significance of personal learning styles (Coffield *et al*, 2004; Lloyd, 2005) and questions being asked about the practicability of its implementation (Johnson, 2004; Leung, 2009), political sensitivities had been awakened.

The first 2 KSAs in this group – “*Tailored Content and Resources*” and “*Flexible Delivery and Pathways*” – have been extensively researched and documented in both the academic and the grey literature. Whilst the range of topics covered in this literature is vast, arguably the areas of activity that most obviously reflect the SRM-specified “*interaction between Learners and Providers*” nature of this group of issues are the matters relating to the provision and use of Virtual Learning Environments [VLE].

It is in this area that the gap between “*state-of-the-art*” and “*state-of-the-actual*” highlighted by Neil Selwyn (2008) is perhaps most evident. Selwyn observes that:-

“... education technology research is overpopulated by in-depth case studies of ‘model’ schools and classrooms, with enthusiastic teachers and well-resourced students basking in the glow of the ‘Hawthorne effect’ of research attention.” (Selwyn, 2008, p.83)

whilst OFSTED (2009) state, reporting on a study involving 23 FE colleges, that:-

“We found that the exploitation of VLEs at curriculum level resembled more of a cottage industry than a national technological revolution. In most cases, at subject level, the VLE remained one small aspect of learning, supported by enthusiastic staff and learners.” (OFSTED, 2009, p.4)

3.3.3 e-Confident and Effective Provider?

In this branch of Generator’s structure the KSAs address the provider side of the e-maturity assessments being made by its users. Unfortunately, despite stating that

“Generator assesses your organisation's level of e-maturity, helping you to identify your technological capacity, drawing out your technology strengths and identifying areas for improvement.” (Becta, 2009, p.1:4)

Generator proceeds to muddy the water for users by introducing, as another late nomenclature change, the term *e-confidence*. No doubt a section of the community will begin, confusingly, to use this in place of the reasonably familiar and understood 'e-maturity' term. e-Confidence is an unfortunate term to use – it has scarcely any presence in either the academic literature or in FE discourse, and was introduced into Generator at a late stage, without any real justification.

FE staff and managers, to whom the questions on *Confident Leadership and Workforce*, *Innovative Use of Resources* and *Self-Improving Organisations* are addressed in this strand of Generator, work in large and (often) complex widely-dispersed organisations characterised as managerial and hierarchical.

The management culture in FE – with its particularities of leadership and management function and style - is well explored by Jameson & McNay (2007) and the significant role occupied by middle managers in these internally diverse organisations has been detailed by Briggs (2005).

The library of material produced for the Centre for Educational Leadership [CEL], the QIA and LSIS by Collinson and colleagues (2010) has recently provided a range of FE management perspectives on current issues. One of these deals with “*Leading E-Learning During Organisational Transformation*” (Borrett, 2007, p.63) and advocates a particular combination of “*managerial leadership*” as appropriate for the tasks encountered.

Tutorial staff in FE are now expected, as part of their membership of the IfL (2009, p.18), to acquire and demonstrate adequate ICT skills, but the gap between aspirational rhetoric and

practice in FE tutors' skill development is often substantial (Lucas and Unwin, 2009). Do FE tutors really have appropriate skills and do they operate in an environment where their ICT skills can make much difference anyway?

Failure to optimise the benefits of ILT in colleges is often anecdotally attributed to the failure of senior management to provide sufficient leadership in the area. Managers' inability to appreciate the potential of technology is often cited as the cause for their omission. Commenting on concerns from ILT practitioners about lack of management support, an April 2011 [anonymised] user group observation captures the concerns thus:-

"Blame lays firmly with Senior Management I'm afraid. If there's one thing clearly evidenced over the last 10 years is that e-Learning prospers in an environment that is led and supported by SMT."

The Learning and Skills Network [LSN] survey, which was carried out as a precursor to the launch of the Generator programme, concluded that:-

"Technology has a significant role to play in delivering FE (...) progress is being made towards e-maturity. Overall, there is some evidence that technology is being increasingly integrated in to delivery of teaching and learning. Typically, providers that have 'embedded' ICT and e-learning are those that have historically been 'high users' and/or have strong commitment from senior management to use of technology." (LSN, 2008, p.50)

In other words much of the identified good practice in colleges remains centred around the high profile activities of early ILT adopters (Rogers, 1983, p.22) and there remain many 'laggards' and colleges where senior management commitment may not be sufficient to achieve e-maturity.

At a 2010 LSIS conference Laurillard, making reference to both the New National Improvement Strategy for the LSS (National Improvement Partnership Board, 2009) and Coffield (2007, p.18) to frame her argument, promoted a renewed focus on tutors and learning (2011).

Higginson had been clear that *"A New Role for Teachers"* (FEFC, 1996, p.13) would be at the centre of any ILT-led transformation, but reflecting on the priorities adopted by the sector after Higginson's publication I was soon reflecting that:-

"The most important objective identified by the Higginson Report was not the 'managed network' that the FE world of 1996 chose to focus on, but rather its recognition of the need to create 'a new role for the FE tutor'." (Gray, 1998)

Laurillard has been active over recent years in promoting the idea of a Learning Design Support Environment [LDSE] to enhance the prospects of our seeing real change in the way educational institutions do business through the use of Technology Enhanced Learning [TEL]. In her IoE Inaugural Lecture she argued that:-

"... using digital technologies to capture and share learning designs turns teaching into the reflective, iterative, adaptive and collaborative design process it needs to be if we are to meet our educational ambitions." (Laurillard, 2008, p.33)

In addition to the handover of Generator itself from Becta to LSIS in early-2011, a planned online module for FE leadership of technology adoption in FE is to be implemented (LSIS, 2011a) despite LSIS budget cuts, and Generator is to have *"a newly written set of questions to generate an informal report on your organisation's efficient use of resources"* - to better engage with SMT?

Meanwhile, the influential [157 Group] of colleges is adopting a relatively high leadership role for ILT in its recent publications (157 Group, 2011, p.29; Becta and 157 Group, 2009).

4 Plans

My proposals for next steps in the ReMIT research are based on an assessment of the practical possibilities available to me as a retired college principal with an active interest and involvement in the field that ReMIT addresses.

The original ReMIT plans were made at the time I retired from full-time work (end-2006) and have inevitably evolved as my appreciation of what it makes sense to do, and what my diminishing active contacts in the FE world will allow me to do, have come to bear.

An additional, and unanticipated, factor forcing change in my plans came in the form of a period of illness which caused me to lose most of 2009/10 for research. Although now much recovered, I am not able to do face-to-face interviews to the extent I had originally planned.

Whilst there remains a significant element of case study fieldwork in my plan, I will need to do as much work as possible through home-based, telephone and internet-mediated research. I aim to turn that need into a strength of the project methodology.

4.1 Activities

Over the period 2011/12 I propose to:-

- continue a programme of interviews with case study managers and staff, and in particular with college ILT Champions who act as intermediaries between management and classroom practitioners in most FE colleges;
- complete construction, testing and administering of a survey across the FE sector's colleges, starting in late-2011 – the 'data collector' questionnaires will be hosted online at a Survey Monkey site that I have committed resources to for the next 2 years;
- carry out a final round of interviews with practitioners from non-case study colleges, selected on the basis of the survey response evidence;
- carry out an analysis of related documents;
- establish the feasibility of generalising messages from the combination of the above elements

Based on the evidence derived from the above actions, I expect to test the core hypothesis that:-

The investment in, and use of, e-technology in English FE colleges over the past 15 years has not yet led to substantial transformation in pedagogical and organisational practice.

This hypothesis offers the prospect of "*symmetry of potential outcomes*" (Saunders, Lewis and Thornhill, 2003, p.15) in that when it is tested, useful insights will be gained about the adoption of ILT by colleges, whether the research leads to the hypothesis's acceptance or to rejection.

Bearing in mind the peculiar features of FE colleges (as distinct from schools and universities), this primary hypothesis can be unpacked into at least 2 subsidiary hypotheses:

The capacity of technology to transform the work of our colleges has been, and still is, substantially constrained by the inherent characteristics of colleges as organisations.

and

Adoption is also limited by the role and responsibilities ascribed to colleges by government and the agencies that influence the practice across the FE sector and in individual colleges.

4.2 Real World Perspectives

In the previous section I quite deliberately used the language of *hypothesis testing* that is usually associated with quantitative research (as, for example, in Cohen, Manion and Morrison, 2007, p.519). However, I foresee my *testing* adopting a less deterministic approach than is associated with such research, and as seeking *interpretation* rather than *proof*.

Returning to educational research in 2006 after many years, I was initially bemused by, and then felt a need to understand and come to terms with, the paradigm wars debate that had raged meanwhile (Gage, 1989; Gorard, 2002). Rejecting what I saw as the false duality of that debate, in a piece of work for my supervisor which critiqued his then recent paper on the Quantitative-Qualitative Dilemma (Scott, 2007), I declared pragmatically that I expected to embark on a PhD study that would, in mixed-methods fashion (Tashakkori and Creswell, 2007), use:-

“... whatever methods are appropriate to answering my research questions – questions that reflect a belief in the existence of a ‘real world’ out there in colleges ...” (Gray, 2007a, p.1)

However, my exposure to the paradigm wars epistemological debate had made me very aware that our underlying attitudes to reality and objectivity are inescapably built on our various individual worldviews (Morgan, 2007). My professional background – and perhaps my character – would, left unmodified, probably lead me toward unhealthily positivist approaches to ILT in FE issues.

In fact the exposure cured me of any temptation to look for simple cause and effect relationships between organisations and their adoption of ILT. It seems that, quite apart from the inherent complexity of such relationships (as illustrated by the OCI literature reviewed in the section starting on page 12), any exploration of them must have a degree of epistemological uncertainty associated with it as well. So, how might we pursue a purposeful and pragmatic approach, without falling into the trap of inappropriate positivism?

Critical realism, conceived by Roy Baskhar, is introduced by Andrew Collier with the claim that:-

"Bhaskar's work offers us the possibility of a new beginning. This is so, in the first place, because it avoids the alternatives of irrationalism and a positivistic conception of rationality, which dilemma has beset modern philosophy." (Collier, 1994, p.ix)

The critical realist approach is adopted by a number of researchers exploring the relationship between technology and organisational change, as exemplified by Volkoff et al:-

"Critical realism, with its theoretical emphasis on objects existing in the real domain, supported the view of technology emerging from our data - specifically that technology has an inherent materiality that influences work practices, rather than technology as an object purely constructed through subjective interpretation." (Volkoff, Strong and Elmes, 2007, p.845)

The *materiality* issue referred to here is also central to actor-network theory [ANT]. ANT was adopted for use in a CEL study (Vickers and Bailey, 2006) which explored the pervasive influence of the built environment in colleges. In its *"Building Colleges for the Future"* (DIUS, 2008, p.27), the LSC saw an important role for ILT – as had been strongly evident in the equivalent schools' Building Schools for the Future [BSF] programme.

Vickers and Bailey précis Orlikowski et al (2001) as arguing in their influential 2001 study that *"technology is shaped by humans and at the same time technology shapes agency."*

Elsewhere Orlikowski argues that much research *"... largely disregards, down-plays, or takes for granted the materiality of organizations."* and that *"The challenge for organization scholars is to figure out how to take seriously the recursive intertwining of humans and technology in practice"* (Orlikowski, 2007). ANT's focus on human/non-human interactions is very relevant to ReMIT.

4.3 Methods & Meaning

The central purpose of ReMIT – which I see as a sociological study of colleges, rather than as a study about technology – became clearer when I read Neil Selwyn issuing a challenge to the education technology research community to focus on:

"... critical study of educational technology (...that...) seeks to address the use of digital technology in terms of 'state-of-the-actual' as opposed to 'state-of-the-art' questions" (Selwyn, 2010, p.70)

In issuing this challenge Selwyn the same concerns I have felt in getting involved in the research. A *"state-of-the-actual"* focus now forms the backdrop for whole of the ReMIT enquiry.

I have found Figure 11, which Bassey offered as part of a celebrated "Fuzzy Generalisation" speech (Bassey, 1998), very helpful in thinking about how best to balance the methods to be adopted in the ReMIT research design.

Questionnaires, interviews and documents will be the main sources of ReMIT data – collected through case studies, surveys and exploration of an archive of relevant documents.

The data acquired from these sources will be analysed qualitatively and/or quantitatively according to their nature.

The surveys (and to some extent the document analysis) are expected to yield data that will support meaningful quantitative analysis.

Remembering the *"symmetry of potential outcomes"* criterion I aspire to for ReMIT, the research design must enable the extraction of as much *meaning* as possible from the data that can be captured in the time available. I need to keep the research design flexible – grounded, and with different analytical options should the data emerge in unanticipated ways – a very likely outcome in the fuzzy world described by Grint (1997).

I'll collect data from individuals and from colleges and by using these two *units of analysis* to provide 2 kinds of data derived from 2 kinds of sample:-

"... we can be more confident in the general thrust of the results." (de Vaus, 2002, p.30)

4.3.1 Singularities & Samples

Bassey's Figure 11 characterises case studies as *'studies of singularities'* and surveys as *'studies of samples'* of some kind. The singular nature of each case study remains intact even where multiple case study research projects are set up, as in ReMIT, to deliberately seek opportunities for generalisation. The diagram presents the notion of *'outcomes as predictions'* as something that can, via Fuzzy Generalisation, emerge from case studies. Bassey identifies a second type of case study outcome – *'outcomes as interpretations'* - I expect both from ReMIT.

Discussions about sampling usually raise a presumption that *'probability sampling'* techniques (of the kind traditionally associated with quantitative research) will be used. However, that which Teddlie and Yu (2007) refer to as *"purposive sampling"* is more appropriate to the ReMIT situation.

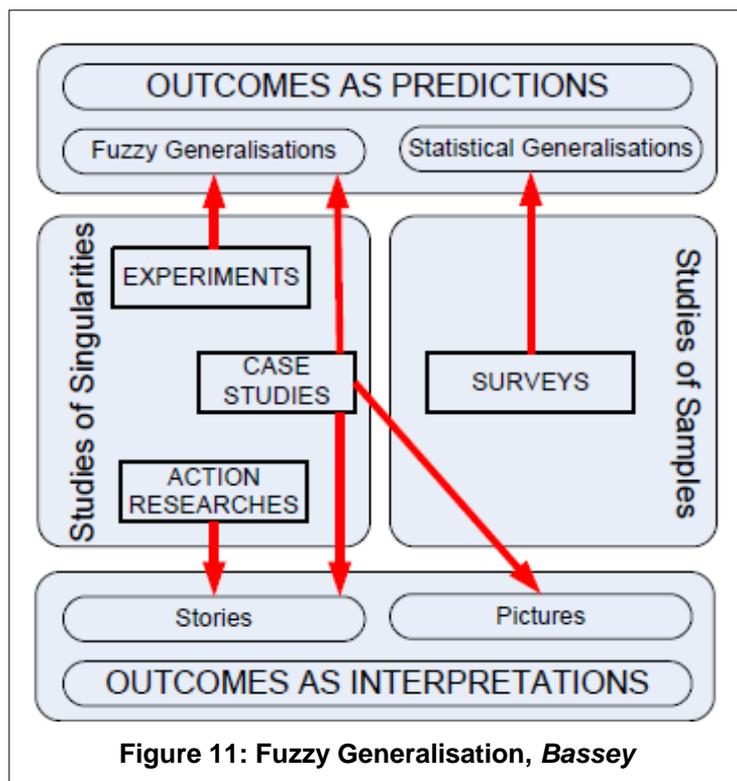


Figure 11: Fuzzy Generalisation, Bassey

Notwithstanding Hammersley's (2001) criticism of this fuzzy generalisation concept, Bassey's description of a spectrum of confidence that can be assigned across generalisations of the scientific, statistical and fuzzy varieties resonates for me.

4.3.2 Generalisation

Our confidence in generalisations – derived from our explicit, or implicit, assessments of reliability and validity – is inevitably linked to the available sample characteristics (considering a Bassey singularity as a sample of size $n=1$). Looking specifically at the significance for a mixed methods study (Johnson and Onwuegbuzie, 2004), Teddlie et al (p.87) describe the range of different sampling approaches and the data derived from their adoption.

Charmaz (2006, p.182) and Bazeley (2002; 2003, p.387) are amongst those who allude to the relationship between grounded theory (GT) approaches and the use of mixed methods. Urquhart (p.340) chronicles the way that GT methods have become increasingly used in information systems research. The rationale offered by Bamford (2008) for his partial GT research methodology reflects a similar set of needs and opportunities to those ReMIT has. Bamford's study used a combination of documentary analysis, case study and survey methods to carry out real world enquiry in a company.

The *"constant comparison"* (Glaser and Strauss, 1967, p.101) which I seek to emulate, using the range of methods and actions detailed below and the planned episodic reworking of data in NVivo and from the ReMIT data collector (see page 36), should go some way toward delivering outcomes of value.

4.3.3 Case Studies

Over the past 2 years, alongside my exploration of the literature, I have been carrying out case study observations and interviews in a college in [REDACTED]. At the end of the pilot study work completed during 2007/8, I revised my research proposal (Gray, 2008b) to include case study work as an open-ended, insight-gathering way of collecting together of the issues and perceptions that would later frame the ReMIT surveys.

I have subsequently secured approval to extend this case study work to a second [REDACTED] college, which is currently merging with the first one. I am also exploring arrangements for doing a study at [REDACTED] in collaboration with a staff member there, [REDACTED] who completed a PhD thesis (2009) on staff ILT skills acquisition. He has secured the support of the college principal for us to extend his work there to include issues of ReMIT interest.

At this time there are few genuine *'state-of-the-actual'* case studies documented in FE ILT. Most FE 'case studies' consist of commercially-inspired marketing collateral done on behalf of IT vendors by (at least partially) sponsored colleges – a clear example of high stakes organisational product placement.

In the context of a study designed to *"assess aspects of the rapid introduction of Information Technology"* Tellis (1997) provides a useful review of case study methodology and design. Quoting Feagin (1991, p.152) Tellis states that:-

"... the quintessential characteristic of case studies is that they strive towards a holistic understanding of cultural systems of action [and that] cultural systems of action refer to sets of interrelated activities engaged in by the actors in a social situation" (p5 of A4 printout of web item)

Yin alerts researchers to the dangers inherent in what he sees as the deceptive simplicity of case study as a research method and offers a number of salutary warnings of the danger that he sees as inherent in approaches which:

"... deliberately avoid specifying any theoretical propositions at the outset of an inquiry." (Yin, 2003, p.28)

“... conceive of statistical generalization as the method of generalizing the results of the case study. This is because your cases are not “sampling units” and should not be chosen for this reason.” (Yin, 2003, p.32)

“... case studies, like experiments, are generaliseable to theoretical propositions and not to populations or universes” (Yin, 2003, p.10)

Yin suggests that where multiple case studies are used it is more appropriate to apply a “replication logic” rather than a sampling logic (Yin, 2003, p.47). As a celebrated advocate of the case study method, Yin identifies the case study advantage (Yin, 2003, p.13) of being able to investigate a contemporary phenomenon within its real-life context, whilst experiments (not, of course, a ReMIT option) must divorce the phenomenon from the context. Yin maintains that surveys can try to deal with both, but that their ability to investigate context is limited. Gomm et al (2000) provide a rich collection of other authors’ views of case study method.

The ReMIT case studies will do well if they enable a better understanding and recognition of just what the nature of the “ILT in FE” phenomenon is, and what counts as context in respect of the ReMIT research questions. Their role is to form part of a mixed methods approach to the enquiry, serving to add insight – initially to guide the use of surveys and documentary research, and to be, in their own right, a source of qualitative data.

4.3.4 Surveys

An important element of the ReMIT empirical work during 2011/2012 will be a sector-wide survey. Cohen et al (2007, p.205) characterise survey as a “*style*” of research alongside other styles, including the case study and documentary research styles to be used in ReMIT.

Cohen et al (Ibid., p.315) list questionnaires and interviews as “*strategies for data collection*” and, in their in-depth study of survey research, Aldridge & Levine (2001, p.51) evaluate the 3 primary methods of using them to collect survey data (each of which is likely to be used in the planned ReMIT surveys(s):-

1. Self-completion questionnaires (on paper, or electronically)
2. Face-to-face interviews
3. Telephone interviews

Questionnaires and interviews will be used to acquire primary data for the surveys and, within available budget, everything will be done to maximise the response rate. I am anticipating significant difficulties in achieving response rates of an acceptable level.

Survey instruments will be aimed at both individuals and organisations: paper-based questionnaires will be sent to each FE college in England, and individuals will either complete on-line questionnaires, or be interviewed using the questionnaire as an interview schedule.

Whilst the colleges (and, subject to database update, their principals) are known, there are insufficient data in the public domain to allow a stratified sample of specific individuals to be invited to participate. In a necessarily grounded way, I intend to make survey instruments available to the widest possible FE audience and ask all survey respondents to provide sufficient attribute data to assess the significance of the profile of survey data collected.

Even with careful attention to the critical factor of questionnaire length (Galesic and Bosnjak, 2009) and general ease of use (Muijs, 2004, p.50) I am expecting the external effects of survey fatigue (Sinickas, 2010); the internal impact of change cynicism on change-weary staff (Watt and Piotrowski, 2008); and the increased use of spam barriers by many college e-mail systems to impact negatively on survey response rate. Estimating the effect of response set submissions (Shulruf, Hattie and Dixon, 2008) on survey results also represents a concern.

The ReMIT data collector is planned to allow for retrospective & repeated sampling

"When deciding on a sampling strategy, researchers also need to consider what the time orientation of their sample should be. That is to say, whether they need to look at a snapshot in time or need to sample at different time points - either prospectively and/or retrospectively in time." (Di Gregorio and Davidson, 2008, p.19)

I will keep the questionnaire web pages active right up to the final writing up of the thesis, and periodically analyse and profile the collected responses with a view to initiating new campaigns if needed. There is some secondary data in the public domain (Becta, 2010b; 2010c) that can, with appropriate caution (Smith, 2008), be used to augment the value of the primary data obtained.

I expect to use the NVivo 9 classifications feature (which replaces the attribute data features in earlier NVivo versions) to enable such profiling:-

"The primary use of attribute data is to make comparisons (...) For those engaged in a mixed methods project, or who are simply working with responses to open ended questions as part of a larger survey, (...) allowing, for example, connection between interview data and measurements or survey responses ..." (Bazeley, 2007, p.136)

Significant organisation-level attribute data is/has been available from (quasi-)governmental sources like LSC, OFSTED, LLUK over the years. A key element in the ReMIT data collection arrangements is the use of a customer relations management [CRM] database to collect and host this data, and use it to maintain a continuous stream of communications with the sector. This will be used to invite individuals' participation.

4.3.4.1 Questionnaires

The primary data collection instrument for ReMIT will be the questionnaire – completed independently (on paper or online) or as part of a structured interview process. General guidance on the use of questionnaires is available from many sources (Oppenheim, 1992 is probably best known), but the use of questionnaires is not trivial:-

'The trouble with questionnaires is that sometimes they seem like a very easy way to get hold of a great deal of information quickly (no need to decide what to do with the responses until they arrive) and any fool can devise one in the time it takes to drink a cup of coffee. Wrong on all counts.' (Bell, 2002,#2566 p.159)

de Vaus (2002) identifies 2 sets of criteria that a survey questionnaire needs to comply with:-

- the questionnaire should aim to contain items that, together, test a particular profile of:
"... five distinct types of question content: behaviour, beliefs, knowledge, attitudes and attributes" (p.95)
- each item needs to have reliability, validity, discrimination & relevance; and be framed in a way that does not deter respondents from completing the question (p.96).

There are a number of examples in the public domain of ILT-related questionnaires that have been used for surveys in FE (LSN and Becta, 2007; SERO, 2009a; SERO, 2009b) and, in the restricted space of its password-protected web site, is the extensive Generator survey tool itself. The Generator question schedule has been transcribed from the online display and put into the public domain (Becta (compiled by John Gray from the Generator online tool), 2009). ReMIT questionnaires will mirror some of the Generator content.

It's a sobering fact that of the 235 GFE colleges and 225,000+ staff shown in the table on page 9, only 77 colleges and 524 individual FE staff responded to the national survey for 2009/10 carried out by SERO for Becta (2010b; 2010c). It will not be easy to get better survey returns than these.

ReMIT has no compliance lever of the kind that agencies often use to persuade colleges to complete surveys in order, for example, to qualify for project funding. Strategies for theoretical sampling (Charmaz, 2006, p.96) and analysis of whatever data sets are obtained will be needed to counteract the anticipated response rate challenge.

To make the best of what is likely to be a difficult job ReMIT questionnaires must aim for conciseness and clarity to encourage as high a response rate as possible. Whilst focusing on the organisational issues that are central to the project, they need to capture individuals' contact details to assist profiling and to arrange follow-up interviews and capture sufficient categorical data to enable correlation with available public domain national survey material and document analysis.

The ReMIT questionnaire(s) will be sent to each college, and deployed online using the Survey Monkey site rented for ReMIT. A recent study concluded with the observation that:-

"... in a population in which each member has Web access, a Web survey application can achieve a comparable response rate to a questionnaire delivered by surface mail if the Web version is preceded by a surface mail notification. A caveat is that we found a significant age difference in response to mail and Web survey versions." (Kaplowitz, Hadlock and Levine, 2004, p.100 2004 #2393)

The web address for the SurveyMonkey questionnaire will be widely circulated to target respondents by e-mail, with an invitation for them to complete the questionnaire online. A paper version of the same questionnaire will be posted to the principal of each college, along with an invitation that the questionnaire be completed on paper, or via the web-based data collector.

Data submitted online (or entered directly into SurveyMonkey by me from any paper-based questionnaires returned) will be exported directly into SPSS for quantitative analysis, and/or into NVivo 9 for qualitative analysis and triangulation with other data.

All submissions to the data collector are automatically date-stamped so that any change in response patterns over time will be visible. This should contribute to the envisaged 'constant comparison' based theory-building as the data accumulates. Subsidiary questionnaires may be added to the data collector as additional themes emerge from this process.

4.3.4.2 Interviews

Amongst the very many interview design experts, Kvale (2007) covers relevant issues in depth. For any interviews – face-to-face or via telephone - it's worth remembering Oppenheim's caution that:-

"When taken seriously, interviewing is a task of daunting complexity." (p.65)

Whilst face-to-face interviews may involve only the simplest of question scripts, telephone interviews are very likely to use a detailed questionnaire as an interview script: so, the questionnaire design issues covered in the previous section are relevant here.

Usually interviewees, based on experience from my pilot visits and case study work since, are willing to be recorded. My face-to-face interviews are recorded using a digital voice recorder, whilst telephone interviews are carried out via Skype and recorded using the Skylook software.

Assuming that interviews are recorded, the sheer volume of work involved in transcription of the recordings (Rapley, 2007, p.49) comes as a surprise to novice researchers – as does realisation of the inherent subjectivity (Bucholtz, 2000; Oliver, Serovich and Mason, 2005) of whatever transcription strategy is adopted.

Now that Computer Assisted Qualitative Data Analysis Software [CAQDAS] software like NVivo allows audio and video file transcription and coding (Di Gregorio and Davidson, 2008, p.31), it is possible to carry out an initial timeline transcription (Gibson, 2010a) relatively quickly, mark the

sections needing more detailed attention and so make the transcript contents part of the project data set.

4.3.5 Document Analysis

Documents produced for/by the FE community provide a very rich source of data relevant to the ReMIT research theme. Both McCulloch (2004) and Rapley (2007) provide in-depth guidance on the research principles involved in making use of such materials. Most of the available sources are now available electronically in PDF format (or can be scanned). This makes them amenable to new levels of analysis using the PDF-handling capabilities available in NVivo 9.1.

At the macro level government documents like Harnessing Technology (DfES, 2005) set the development agenda that institutions respond to even though, as illustrated by a sceptical analysis of the Harnessing Technology consultation documents (Crossouard, 2004) such documents are often rhetorical in character, tending to present issues as non-problematic when in fact they may be very complex and intractable.

A substantial amount of institution-specific data is available in the public domain from LSC, Becta and other bodies. Reports, presentations and spreadsheets, sometimes provide sector-wide data at a sufficiently low level of aggregation to enable its use as "attribute data" (Bazeley, 2007, p.135) to help categorise institutional cases in a way that can assist in interpreting otherwise highly qualitative data.

OFSTED reports are available online for all colleges, and represent an indirect window onto some of the most powerful influences on colleges and their managers in the "funding and audit" driven world that is FE. Indeed, OFSTED grades for institutions are one of the performance indicators defined for the effectiveness dimension of the Framework for Excellence which is used in the ReMIT RQF. Internal college documents can fill in detail, or provide longitudinal character to what might otherwise be snapshot views of organisations.

Discourse analysis, invariably involving the use of documents, can yield some powerful insights. Cripps (2002) applies the approach across 4 colleges in an attempt to understand how:-

"... public policy-making and the effect of that policymaking on the development of further education colleges and their identity [... and ...] how skewing discourse - the covert or overt power to shift debate and change legitimacy to control - could be used by the government to change educational practice in the colleges." (p.2)

Crossouard (2004) used critical discourse analysis to examine the consultation document which preceded the finalisation and publication of the government's Harnessing Technology policy document that has, more than any other, influenced and legitimated Becta's campaigns promoting the transformational benefits of technology. She concluded that the analysis revealed

"... tendency towards a discursive construction of consensus within the consultation process itself, a construction which appears natural within the episteme of our times, involving a rather promotional, advocating message." (p.12)

According to Phillip, Lawrence & Hardy (2004):-

"... institutions are constituted through discourse and that it is not action per se that provides the basis for institutionalization but, rather, the texts that describe and communicate those actions. It is primarily through texts that information about actions is widely distributed and comes to influence the actions of others." (p.635)

Underwood & Dillon (2004, p.221) provide an e-maturity modelling example of what can be done when organizational data is available for integration with other data sources. It is unlikely (though

not impossible if I were to use Freedom of Information calls extensively) that I will be able to assemble college-level documents to use in this way.

In the absence of college-level documents I will use the public domain OFSTED reports on each college as proxies for the fuller documentation. There is an interesting precedent for this approach from secondary sector research (Glover and Levačic, 2003, p.94).

4.4 Data Into Theory

Previous sections of this paper have indicated how the various ingredients necessary for the ongoing development of theory will be brought together and correlated.

*"An insight, whether borrowed or original, is of no use to the theorist unless he converts it from being simply an anecdote to being an element of theory."
(Glaser and Strauss, 1967, p.254)*

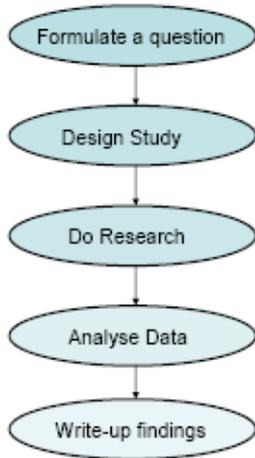


Figure 12: Linear Research, Gibson

Will Gibson (2010b) introduced the IoE Qualitative Data Analysis module by reference to Figure 12 and Figure 13. The point of this comparison was to emphasise the need to see analysis not as a stage in a linear sequence leading from questions to answers, but rather as a dynamic and on-going part of the whole research process.

The creators of the grounded theory [GT] methodology (Glaser and Strauss, 1967, p.101) saw *"constant comparison"* as one of its 2 central features. They saw constant comparison as something that was needed to enable researchers to discover hypotheses rather than just test them.

A second feature Glaser & Strauss saw as central to GT was *"theoretical sampling"*. Robson comments on the link between GT and theoretical sampling, making the point that GT often involves:-

"... initial sampling, and from analysis of the results extend the sample in ways guided by their emerging theory" (Robson, 2002, p.265)

Charmaz, a former student of Glaser & Strauss, observes that:-

"Theoretical sampling prompts you to retrace your steps or take a new path when you have some tentative categories and emerging, but incomplete ideas". (Charmaz, 2006, p.96)

In the course of preparing this submission document I have both retraced steps and taken new paths, notably in the process of refining and structuring the original research questions – and I expect to do the same again as the data accumulates.

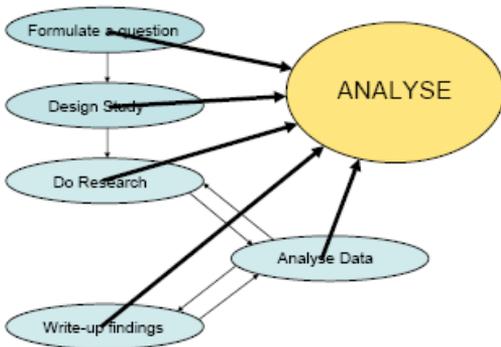


Figure 13: Iterative Research, Gibson

When I first started the ReMIT work I assumed it would involve surveys to collect data, quantitative analysis of the data acquired, and then some kind of commentary. Instead the research plans have developed a more qualitative and grounded theory perspective which I believe is more likely to

help to build the “...*relatively stabilized body of theory which can help to illuminate other research in the area.*” (Layder, 1998, p.16) needed to add value to our understanding of ILT in FE.

The bulk of ReMIT data will be textual, derived from documents of all kinds, interview transcripts or free text responses from questionnaires. However, there will also be data that are amenable to quantitative interpretation as well, or can be made to be amenable following quantization (Tashakkori and Teddlie, 2003, p.9).

There are no obvious measurable variables that could yield continuous data of the kind that allow use of many of the statistics familiar to us in quantitative research (Muijs, 2004) but a range of categorical data (Field, 2005, p.682) is likely to be available from the survey and from secondary data sources. Such data may well reveal, through use of chi-square tests for example, significant patterns linked to the attribute data collected for the colleges or those college staff who have provided biographical data through the questionnaires.

As software for supporting mixed methods research has become available (Bazeley, 2003):

“Boundaries between numerically and textually based research are becoming less distinct; data may readily be transformed from one type to another, making achievable integration of data types and analysis methods.” (p.385)

I have invested resources and time in order to make good use of several available research tools.

4.5 Tools For ReMIT

Every opportunity will be taken to capture data relevant to the RQF and to do so in a manner that keeps open as many data analysis options as possible. Whilst actively pursuing relevant quantitative data where available, I am nevertheless anticipating a substantially qualitative project.

Despite having the confidence and willingness to use quantitative methods myself, I do not anticipate that they will dominate the ReMIT research. Problematic issues around sampling and generalisation across the FE college population are likely to preclude the adoption of a predominantly quantitative research strategy, but in some places it will have a role and add value.

Given access to today’s statistical analysis software, the computational elements in quantitative methods need hold no terrors for researchers. SPSS use for quantitative analysis in education research settings is particularly well supported (Muijs, 2004). Nevertheless, the understanding of data types and probability, and being capable of assessing the appropriateness of using any given statistical tests for a given purpose, all remain challenges to any researcher.

Given my professional background and interests, I’ve always expected and intended to use IT tools to assist my research. However, because of the illness that affected my work over 2009/2010, I’ve needed to plan for remote data collection to form a greater proportion of my research activity than I had originally expected.

To support this I have designed and programmed a bespoke Windows application, RAPID (Rapid Access Project Information Dashboard). This application:-

- stores all my communications, network of contacts across English FE, college details and task information in Microsoft Outlook 2010 with Business Contact Manager for Outlook
- stores my citation and bibliographic data in EndNote X4 with each reference PDF named with a prefix incorporating its unique EndNote ID number to facilitate integration
- stores notes, quotations and citation data for each reference I use in NVivo 9.1, even though Acrobat and EndNote both provide facilities to store notes about reference material, so making this data available to NVivo for analysis
- uses Skype (and its Skylook extension to Outlook) to plan, conduct and record audio interviews with college staff and managers – recordings are transcribed within NVivo 9.1 and

can be coded 'in situ' and visualised using the model building features of NVivo 9.1

- uses the web-based tool Survey Monkey for the online capture of questionnaire data and its incorporation as data within NVivo
- uses SPSS to conduct significance checks on those parts of the survey data that are amenable to statistical interpretation
- enables me to write my thesis in MS Word 2010, using Endnote's Cite-As-You-Write functions to maintain chapter-level reference lists based on the citation data entered into Word, or copied in from NVivo where a library of quoted material is maintained as Endnote-formatted citations

Finally – and most definitely not a trivial point - a large widescreen flat screen computer monitor has proven to be an essential element in my IT-mediated desk research, allowing simultaneous display of a wide range of data for search, writing and analysis. The availability of the additional screen space, when coupled with RAPID's compact screen layout, makes a tangible difference to the efficiency of research operations.

di Gregorio (2008) provides an expansive view of the new opportunities that the use of Qualitative Data Analysis Software [QDAS] can bring to research. As ReMIT data grows in volume, the data manipulation and modelling of theory that I adopt will draw on di Gregorio's guidance

4.6 Data Collector

The data collector is a web site where ReMIT questionnaire(s) can be accessed, completed and submitted. This data collector will be kept open as long as the ReMIT research is in progress.

The ReMIT questionnaire(s) are being built on the basis of the principles already addressed in the questionnaires section of this paper starting on page 30.

The table below contains the RQF themes from which questionnaire items are being derived.

| RQF and the ReMIT Story | RQF Survey Themes | RQF Survey Question Groups (option choice and/or attitude scale items normally used to capture the data) |
|--|--|--|
| <p>RQ-01: What Kind Of College?</p> <p><i>If our colleges' mission requires them to become e-mature ...</i></p> | <p><u>General College?</u></p> | <ul style="list-style-type: none"> • What kind of college are you from? • What job do you do in/for FE? • How much experience do you have of FE? |
| | <p><u>Excellent College?</u></p> | <ul style="list-style-type: none"> • How responsive is your college? • How effective is your college? • How efficient is your college? |
| | <p><u>e-Mature College?</u></p> | <ul style="list-style-type: none"> • Does your college use ILT strategically? • Does your college use ILT effectively? • Does your college use ILT competitively? |
| <p>RQ-02: What Influences ILT Adoption?</p> <p><i>... then what is it about a college that influences how it will adopt ILT?</i></p> | <p><u>Change Readiness?</u></p> | <ul style="list-style-type: none"> • How much change is needed in FE? • How does your college handle change? • How do you cope with change? |
| | <p><u>Organisational Factors?</u></p> | <ul style="list-style-type: none"> • How does your college structure influence change? • What type of culture does your college have? • Is your college a learning organisation? |
| | <p><u>ILT Environment?</u></p> | <ul style="list-style-type: none"> • Is there a well-structured software environment available? • Is your access to IT equipment and to the internet good? • Have you had sufficient training to apply IT to your job? |
| <p>RQ-03: Is The College e-Mature?</p> <p><i>... and have colleges, 15 years after Higginson, yet been successful in becoming e-mature?</i></p> | <p><u>Engaged and Empowered Learners?</u></p> | <ul style="list-style-type: none"> • Are your students well-informed and aware of what ILT provision they can expect at college? • Do all your students have good access to ILT resources? • Can students get support to develop their IT skills? |
| | <p><u>Enhanced Learning Experience?</u></p> | <ul style="list-style-type: none"> • Do your students have access to a full range of online content to support the service you provide? • Can your students access learning opportunities flexibly? • Do students have their progress continuously monitored and recorded online? |
| | <p><u>e-Confident and Effective Provider?</u></p> | <ul style="list-style-type: none"> • Is there a clear ILT strategy in place, and used by college staff & managers? • Does your college invest effectively in ILT? • Do your management Information systems support the college effectively? |

5 Index And Glossary

- ACL**
Adult & Community Learning, a component part of the FESR area, 6, 10
- ALT**
Association of Learning Technology, a practitioner based Higher & Further Education body aimed at the advancement of ICT use across these sectors, 19, 44, 48
- ANT**
actor network theory, concerned with how human and non-human agents interact, 26
- AoC**
Association of Colleges, a membership body representing the interests of all colleges in the UK, 11, 42
- Becta**
British Educational Communications Technology Agency, for some years the government's strategic partner for the development of policy and support of good practice in the use of educational technology in education, its closure recently, 5, 6, 7, 8, 11, 12, 13, 19, 20, 21, 22, 23, 24, 30, 31, 32, 42, 43, 44, 46, 48, 49, 50
- Becta,**
Becta, 5, 7, 11, 12, 13, 19, 20, 21, 22, 23, 30
- BIS**
Department for Business, Innovation and Skills, which has overall responsibility for Higher and Further Education in England, 8, 43
- BPR**
Business Process Re-Engineering, 17
- BSF**
Building Schools for the Future, a flagship national investment programme that put huge amounts of capital funding for new buildings into English schools, withdrawn from 2010, 26
- CAD**
Collecting and Analysing Data, 4
- CAQDAS**
Computer Assisted Qualitative Data Analysis Software, 32
- CDR**
Conceptualising and Designing Research, 4
- CEL**
the Centre for Excellence In Leadership, the Learning & Skills sector quality improvement agency, now incorporated in LSIS, the Learning and Skills Improvement Service, 23, 26, 42, 43, 44, 51
- change management**
a structured approach to transitioning individuals, teams, and organizations from a current state to a desired future state, 12, 13, 14, 15, 43
- Confident Leadership and Workforce**
a KSA descriptor used by Generator, 23
- CRM**
Customer Relations Manager, a category of IT system dedicated to maintaining communications and collaboration with important business stakeholders, 30
- DELG**
Distributed and Electronic Learning Group, which met in the early years after LSC's formation with the objective of establishing LSC policy on e-learning, 6
- DfES**
Department for Education and Skills, responsible for English schools, colleges & universities until 2007 when it was reorganised into the DCSF and DIUS
DCSF now renamed DoE, 6, 8, 10, 11, 13, 21, 22, 32, 44, 45, 48
- DIUS**
Department for Innovation, Universities and Skills created in July 2007 to bring together government oversight of both further and higher education sectors in England, now incorporated in BIS, 26, 44
- Educational Computing**
Term widely used in the 1980s to include CAL, IT and early administrative computing - also the name of a popular magazine at the time, 45
- e-learning**
A term defined in many slightly different ways. In the FE sector e-learning is often used synonymously (and inaccurately) with the term ILT, Information & Learning Technology, 3, 22, 24, 45, 51
- e-maturity**
A concept used to describe the degree to which an organisation is using information technology to

| | | |
|---|--|--|
| add value to the ways it pursues its objectives, 5, 11, 12, 19, 21, 23, 24, 33, 43, 50 | use of e-Learning, ILT, ICT, IT, 6, 13, 20, 22 | FESC Further Education Staff College, 6, 10, 18, 43, 48 |
| EMFES eMaturity Framework for Further Education and Skills, the working name for Generator during its development, 23, 44 | e-technology a term introduced at ELF 2008 to refer to the wide range of IT that can be used, rather than just e-learning, a term often inaccurately applied to this wider range, 8, 11, 25 | FESR Further Education, Skills & Regeneration – a term used by Becta to delimit the sub-sectors this document's contents apply to, 50 |
| EMFFE e-Maturity Framework for FE, based on the MIT90s thinking about transformational change, 45 | FE Further Education, a term used in the UK to refer to general Further Education and Sixth-Form colleges - in England currently funded until recently by the LSC, and currently subject to changes resulting from the Machinery of Government I, 1, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 28, 29, 30, 31, 32, 34, 36, 42, 43, 44, 46, 47, 48, 50 | FfE Framework for Excellence, a performance monitoring environment, piloted in 100 colleges 2007/8 and extended to all colleges in England 2008/9 (also see Framework for Excellence), 10, 11 |
| EndNote Widely used citation and bibliography management software which gives Cite As You Write functionality within MS Word, and which the RaPID application manipulates using Visual Basic for Applications in many useful ways, 3, 34 | FEDA Further Education Development Agency, created to support the professional development of FE staff and managers, responsible for the QUILT development programme that emerged from the LTC Report recommendations, 6 | Flexible Delivery and Pathways a KSA descriptor used by Generator, 22, 23 |
| Enhanced Learning Experience A phrase used in Becta's Generator to cover KSAs 4-6, 23 | FEFC Further Education Funding Council, created in 1992 as a shadow body to fund the new FE sector in England created by the incorporation of colleges from 1st April 1993 - replaced by LSC in 2001, 6, 7, 8, 9, 11, 13, 16, 18, 24, 45, 46 | FOI Freedom Of Information, 22, 46 |
| Equitable Access a KSA descriptor used by Generator, 22 | FERL FE Resources for Learning, created in response to a Higginson Committee recommendation, 18 | Framework for Excellence a major initiative from LSC to create a unified performance and audit framework around the 3 central concepts of Responsiveness, Effectiveness and Efficiency (also see FfE), 10, 11, 32, 48 |
| e-readiness A concept related to e-maturity but which emphasises putting the organisation's needs for technology at the centre of consideration rather than the technology itself, 12 | | Generator An online e-maturity self-assessment tool referred to by Becta as 'the technology improvement tool for further education and skills', 11, 12, 21, 22, 23, 24, 30, 43, 46 |
| e-ready a description applied to an organisation in which information technology is being used optimally to pursue its objectives, 7 | | GFE General Further Education, the descriptor which is applied to LSC-funded colleges that have the broad curriculum profile and wide age range of students characteristic of |
| e-strategy term used here for any documented plans for the | | |

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|--|---|---|
| FE colleges, 3, 6, 7, 9, 10, 31 | ILT | KSAs |
| GT | Information and Learning Technology, a holistic term used in UK colleges to include all the activities that involve the use of ICT in the operation of the college. Nowadays often incorrectly used interchangeably with the term e-learning, 3, 5, 6, 7, 8, 10, 12, 13, 18, 19, 20, 22, 24, 25, 26, 28, 29, 30, 34, 36, 42, 45, 47, 49 | Key System Attributes, 21, 22, 23 |
| Grounded Theory, 28, 33 | | LDSE |
| Harnessing Technology | | Learning Design Support Environment for Lecturers, a programme based at the London Knowledge Lab, 24 |
| UK government's national e-strategy for schools, colleges and universities launched in its initial form in 1995, 6, 11, 12, 13, 20, 22, 32, 42, 43, 44, 49 | | Learner Voice |
| HE | | a term used to refer to learners' views on the learning experience they have in our educational institutions, used increasingly as an integral part of performance review, 44, 50 |
| Higher Education, a term universally used but meaning somewhat different things in different geographies, 7, 12, 13, 17, 18 | Informed Demand | |
| | a KSA descriptor used by Generator, 22 | |
| HEFCE | Innovative Use of Resources | |
| Higher Education Funding Council, funds all the universities, many research institutions and HE programmes in FE colleges across the UK, 10, 12 | a KSA descriptor used by Generator, 23 | Learning & Skills Sector |
| hypothesis | IoE | until recently funded by LSC, with a number of varied sub-sectors Further Education (FE), Work-based Learning (WBL), Personal and Community Development Learning (PCDL) and Offender Learning (OL), 48 |
| a proposed explanation for an observable phenomenon, 25, 26 | London University Institute of Education, 1, 3, 4, 24, 33, 45, 46, 47 | |
| ICL | IS | |
| International Computers Limited – a significant UK computer and services company until it was taken over during the late 1990s, 47 | Information Systems, 20, 45 | Leitch Report |
| ICT | IT | the Leitch 'Review Of Skills Prosperity for all in the global economy world class skills' contained, amongst lots more specifics, a general recommendations for development of employer-led 'demand led' provision in FHE, 11, 47 |
| Information and Communications Technology, 3, 4, 7, 10, 11, 13, 19, 20, 22, 24, 42, 43, 46, 47, 50 | Information Technology, 3, 6, 13, 14, 17, 19, 20, 28, 34, 35, 36, 44, 47, 48, 49 | |
| ifL | JANET | |
| Institute for Learning, 9, 24, 46 | Joint Academic Network, provides access to the internet for all colleges - as well as many other academic and research users, 7 | Lifelong Learning |
| IIEL | JISC | a once-widespread term used to refer to either 'cradle to grave' education, or specifically to all elements of post-school education, 9, 48 |
| International Institute of Educational Leadership, formerly a postgraduate research unit within the University of Lincoln, 4 | Joint Information Systems Committee, responsible for the procurement of the Janet network system, and for e-technology policy advice in the Higher Education systems of all areas of the UK, 7, 12, 22, 46 | LLUK |
| | KPIs | Lifelong Learning UK the Sector Skills Council for employees in colleges, universities |
| | Key Performance Indicators, 11 | |

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|--|--|---|--|
| | <p>and all other providers of lifelong learning in the UK, sets the management competence specifications for college leaders, 9, 30, 47, 48</p> | <p>LUMS Lancaster University Management School, carried out much of the FE management research sponsored by CEL during 2006-8, 43, 44</p> | <p>encouraging IT-enabled learning in the US, 51</p> |
| <p>LSC Learning and Skills Council, formerly responsible for planning and funding of the Learning and Skills Sector of the English education & training system, 6, 7, 9, 10, 11, 13, 19, 26, 30, 32, 44, 48</p> | <p>Machinery of Government the term applied to the educational structure changes made by Labour government in 2008, 7</p> | <p>OCI Abbreviation used by John Gray's ReMIT research for the Organisation theory <> Change theory <> Information systems theory research field, 8, 12, 13, 14, 26</p> | |
| <p>LSIS Learning and Skills Improvement Service, latest successor to FEU, FEDA, LSDA, QIA, CEL, 9, 12, 23, 24, 44, 47, 48</p> | <p>MIS Management Information System, 49, 51</p> | <p>OFSTED Office for Standards in Education – the English agency that now inspects both schools and colleges, 10, 11, 23, 30, 32, 33, 49</p> | |
| <p>LSN Learning & Skills Network, formed from parts of the LSDA when it was broken up in 2004, 24, 30, 48</p> | <p>MIT Massachusetts Institute Of Technology, 11, 12</p> | <p>PDF Portable Document Format, the most widely used electronic document format, 32, 34</p> | |
| <p>LSRC Learning and Skills Research Centre, sponsored by the DfES and LSC to focus solely on post-16 learning, initially located with LSDA and later with LSN, 43</p> | <p>NCET National Council for Educational Technology, renamed as Becta in 1998, which is itself to be closed during 2011, 6, 11, 12, 47, 49</p> | <p>Personalisation a term prevalent in discussion about most areas of public service, but in particular education, 11, 22, 42</p> | |
| <p>LSS Learning & Skills Sector, an abbreviation used by Frank Coffield and other researchers in the field, 6, 9, 10, 13, 24</p> | <p>Next Generation Learning a government campaign initiated by Becta. to encourage the use of technology to create a more exciting, rewarding and successful experience for learners of all ages and abilities, 42</p> | <p>Personalised Assessment a KSA descriptor used by Generator, 22</p> | |
| <p>LTC Learning and Technology Committee, better known in FE circles as the Higginson Committee - set up by FEFC in 1993 to explore the potential uses of IT in FE, published its report January 1996, 6, 7, 13</p> | <p>NHS National Health Service, 21, 22</p> <p>NILTA National Information & Learning Technology Association, a membership body of UK FE colleges, incorporated into the AoC fully from July 2007, 8, 11, 42, 49</p> <p>NLII National Learning Infrastructure Initiative, an Educause programme</p> | <p>PI performance indicator, a combination of a measurement and a standard for some aspect of performance at an individual or organisational level, 10, 11, 32</p> <p>Proactive Support a KSA descriptor used by Generator, 22</p> <p>QDA Qualitative Data Analysis, 4, 45</p> <p>QDAS Qualitative Data Analysis Software, 35</p> | |

| | | |
|---|---|---|
| QIA | self-assessment | now widely used in educational research, 25, 31, 35 |
| Quality Improvement Agency, 10, 11, 23, 43, 49 | a widespread element of quality control and performance management nowadays, 12, 21 | Tailored Content and Resources |
| Quantitative research | Self-Improving Organisations | a KSA descriptor used by Generator, 22, 23 |
| research that uses methods that lend themselves to the collection, analysis and interpretation of numerical data, 26, 27, 34 | a KSA descriptor used by Generator, 23 | TEL |
| QUILT | SfA | technology enhanced learning, concept distinguished from that of e-learning by its focus on the pedagogic context, 24 |
| Quality In ILT | Skills Funding Agency, the body set up under the UK Machinery of Government changes, responsible for funding FE's adult programmes, 7 | TES |
| FE's first really extensive professional development programme, a result of implementing one of the FEFC's Higginson Committee recommendations, 18, 44 | SIR | Times Educational Supplement, the widest read specialist newspaper for education professionals, 8, 44, 47 |
| Quality in Information and Learning Technology, an FE sector ILT skills development programme operated for FEFC by FEDA, 18, 44 | Staff Individualised Record, an annual staffing data return in GFES and SFCs – previously carried out by LSC and LLUK, now done by IfL, 9 | TLRP |
| ReMIT | SMT | Teaching and Learning Research Programme, 6 |
| the abbreviation for Researching e-Mature Institutional Themes, John Gray's MPhil/PhD research on GFE e-readiness, 4, 7, 8, 9, 10, 12, 15, 16, 20, 22, 25, 26, 27, 28, 29, 30, 31, 32, 34, 35, 36, 46 | Senior Management Team, 24 | VLE |
| RQF | SPSS | Virtual Learning Environment, 23 |
| Research Question Framework, 8, 12, 22, 32, 34, 36 | Statistical Package for Social Sciences, one of the most widely-used tools for carrying out analysis of data from quantitative research, 31, 34, 35, 45, 49 | WBL |
| | SRM | Work based learning, a component part of the FESR area, 6, 10 |
| | System Reform Model, 21, 22, 23 | Web 2.0 |
| | Survey Monkey | a term for the variety of tools and services now available to allow heightened interaction with Web resources often associated with 'social networking', 22, 48 |
| | An online survey administration service | YPLA |
| | | Young People's Learning Agency, 7 |

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