Leadership of thinking in Further Education: A review undertaken for the Further Education Trust for Leadership

By UCL, Institute of Education

Leadership of thinking in Further Education

This review from UCL Institute of Education has been commissioned by the Further Education Trust for Leadership (FETL). It has been informed by discussions with:

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Foreword

The further education (FE) and skills sector faces a distinctive set of challenges. Its diverse organisational nature, as well as the need to respond to the policy imperatives and practices of the public and private sectors, each with different expectations and practices makes effective leadership in this sector critical. The challenges of future, tight central funding constraints and an expectation that employers will fund 'skills training', as well as an increasingly complex global and national environment require new ways of addressing the challenges. This review seeks to provoke discussion and open dialogue about new ways to lead thinking and to help leaders at all levels in the sector.

This Literature Review is part of a development partnership between the Further Education Trust for Leadership (FETL), an independent Think Tank and UCL Institute of Education is designed to contribute to the re-engineering of leadership perspectives and aspirations in the FE and skills sector, by drawing together the knowledge and expertise of each organisation in ways that will promote growth in thinking and innovation and excellence in practice.

This review is one of a series of tasks designed to support FETL activities, widen and deepen the knowledge base about the challenges facing the sector and maximise knowledge sharing. It is intended to contribute to a broader understanding of the nature of the leadership challenges facing the FE and skills sector and, specifically, to identify new directions for leading thinking and innovation.

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Executive summary

In the context of a future shaped by tight funding constraints, an increased role for employers and students in funding skills training and complex global and national forces, this review aims to open a new dialogue and debate for the future of the FE and skills sector. The review suggests ways to harness people's agency for change and as well as conceptualising new ways of considering leadership that apply to professionals working at all levels in the sector.

Using an ecosystem framework, we explore leadership of thinking from the global level (the Macro-system) down to the level of individuals working with learners (the Micro-system). The Macro-system challenges to the sector include technological changes that affect patterns of learning and work, an increasingly complex sector with new organisational arrangements, networked - forms of working and new ways of relating to clients. In this context, the review asks how stakeholders might re-examine the central values that hold the different elements of the system together. The role of the government in shaping and sustaining the sector and developing a skilled workforce is also explored.   At the regional level (the Exo-system), three strands of literature are addressed. First, a body of literature on the development of learning and skills ecosystems is explored. Secondly, motivational factors in partnership arrangements between businesses and social enterprises are considered, in particular the desire to build community capacity. Finally, knowledge based relationships between FE and skills sector providers that add value to their clients are addressed. At the institutional level (the Meso-system), organisational leaders are asked to consider the pros and cons of an institutional versus an organisational framework, how to apply adaptive thinking to leadership practices and how to lead organisations that learn and remain outward–looking. At the individual (Micro-system) level we suggest new forms of professionalism; ones that address the layers of connectivity within which they work, including bridging the worlds of work and learning; ones that take into account technological advances in learning and pedagogy; and the use of enquiry in the practice of leadership. Reflective questions, designed to stimulate thinking, appear at the end of each section. The review concludes by asking how innovation can spread in the FE and skills sector and how sector-relevant models of systems leadership may emerge and be enabled.

Introduction

"The current challenge for the (FE and Skills) sector leaders is to ensure they respond with learning both for short-term market need and long-term public good, and build provision which is fit for purpose, fit for context, fit for phase and fit for place." (Silver 2015)

In a global context of flux and uncertainty the challenges facing the FE and skills[1] sector are multiple. Within the UK, these include severe funding cuts and threats to the future shape of the sector though area reviews. As a result, there is a need to re-consider the values underpinning the decisions of stakeholders and to find new ways to think and learn with the aim of making the sector more creative and adaptive. Collaboration and using the knowledge and abilities of people at many levels in the system is important for the future – heroic single leaders are not enough. The review provides new ways of re-framing issues facing the sector, to understand its complexity, and provides possible future lines of enquiry and ways forward.

What do we mean by 'leadership of thinking' in this review?

How we have conceptualised leadership: Leadership is not just that carried out by people in senior positions, such as CEOs or Principals of colleges. It needs to be undertaken by people at all levels, and should involve collaboration and connective ways of working.

How we have conceptualised thinking: 'Thinking' is not passive but active, linked to action, change and improvement. It helps to frame the issues in different ways and generate new ideas, both from within and beyond the sector. Thinking is about learning, enquiring, reflecting, creating, experimenting and innovating.

'Leading thinking' brings together these concepts. There needs to be opportunities for such activities to take place, harnessing people's appetite for change.

Aims and Approach of the Review

The review is both a literature review and a 'Think Piece'. It offers ideas and aims to provoke discussion and dialogue among people working at all levels of leadership in the FE and skills sector. In broad terms, the review:

- Incorporates the conventional aspects of a literature review: exploring recent reports, articles and other literature reviews about the leadership in the FE and skills sector.
- Identifies developments and practices that are innovative, particularly in relation to building cross-boundary alliances;
- Explores issues within the corporate and public administration/authority sectors, as well as areas such as social leadership, to highlight new thinking and relevant developments;

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[1] The term further education and skills sector (FE and Skills sector) is preferred in this report, although in some

- Draws on this information to conceptualise the leadership field and to develop ideas which can be tested within the FE and skills sector.

The direction and scope of the review was informed by discussions with key people at UCL Institute of Education, in particular Professor Toby Greany, Paul Grainger, Professor David Guile, Professor Ann Hodgson and Professor Ken Spours and also by Kathryn James from the Education and Training Foundation (ETF). The review also draws on the London Centre for Leadership's knowledge base on leadership.

In carrying out the review and assessing the effectiveness of different practices, the UCL IoE team has adopted a rigorous approach, focusing on peer reviewed research, while remaining open to what can be learned from emerging, and as yet unevaluated approaches.

Structure of the Review

To address the complexity of the FE and skills sector and the challenges it faces, the review applies the structure of an interconnected eco-system[i] to address the various layers and levels of the system.[ii]This approach reinforces the collaborative thinking needed to unite the private, public and third sectors, employers and educationally focused providers in a successful skills systems (Commission 2015).

The review considers:

- **The Macro-system**: the global and national level context, trends, policies, the social, cultural and economic context and also the big ideas that shape thinking of the whole system;
- **The Exo-system**: the regional and local level in which FE is provided for learners
- **The Meso-system**: the institutional level of FE;
- **The Micro-system**: the work of teachers and lecturers and the impact surrounding the learner
- **The Chrono-system**: considering how change and innovation can be spread across each level

At each level, the context, challenges and opportunities are considered along with new ways for leading thinking and poses questions. The point of this framework is to generate dialogue about how to address the issues for people in positions of leadership at each level. However this approach also provides a sense of a system whose parts are interdependent, and where alignment between policy, regional level decisions, organisational leadership and professional practice is essential.

Part I:The Macro-level
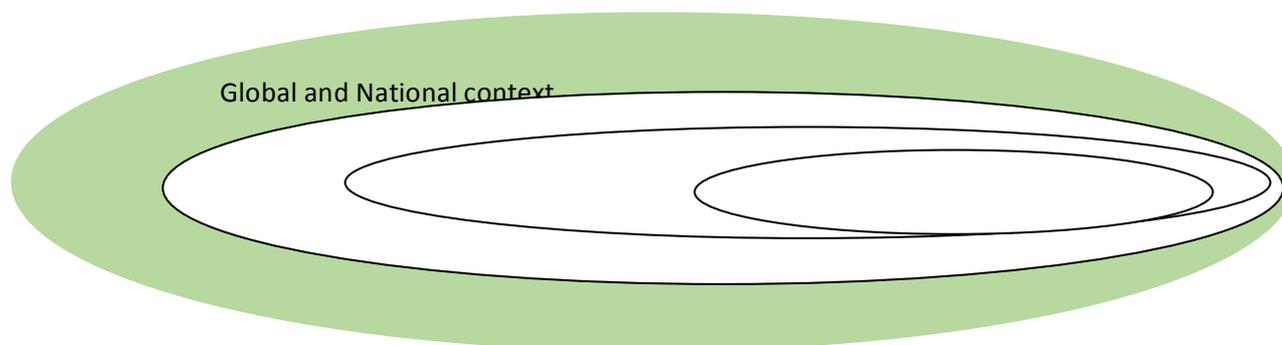
This section considers the wider global and national contexts that affect the sector. These include changes to the population, workforce and learners and the influence of new technologies. It also looks at global trends in thinking about business-client relationships and the nature of state intervention and other strategic shapers of the system. These issues consider how to use creativity, innovation and change at the macro level.

1.1 The global context

It is widely acknowledged that the world has become increasingly technologically connected and interdependent. Economic power is becoming re-distributed, away from the west and towards emerging economies in China, India, Brazil and elsewhere. An increasing world population is leading to greater demands on resources such as energy, food and water and changes to climatic conditions that affect migration patterns and the quality of life (Wilson, Lefton et al. 2014 p.3). All of these features have led to a level of social and economic change and unpredictability that sets unique challenges for leadership. As a result, some authors have predicted the emergence of a new brand of ethical capitalism that includes socially responsible investment and value-driven consumers (e.g. Aburdene 2007). Moreover, the emergence of the so-called 'Millennial generation'[iii]also creates new demands for how people want to learn[iv] and their expectations for future employment[v].

One consequence of the above economic and social trends is that relationships with clients have changed, with knowledge-based relationships becoming more important (Dawson 2012). In the past specialist knowledge was carefully protected. Now, in an era of freely flowing information, such an approach may need to be modified. Companies can add the greatest value to their clients through a coordinated approach to delivering services. This can make it impossible for competitors to step in and offer the same for less money. Such a strategy requires cooperation between partners with different specialist knowledge and the careful building of relationships and systems.

An increasingly competitive global market for skilled labour has also put additional pressures on preparing young people through both academic and vocational education.[vi]Sahlberg (2007) has suggested that the societal remit for the education of young adult learners is likely to increase, as governments wish to pursue aims that develop the person, a future labour force and tackle issues such as youth unemployment and crime. This calls for a long-term strategy and a degree of consensus building about what needs to be done at a systemic level.

Leaders will therefore need to be sufficiently agile to take into account unpredictable patterns of future demand and be sensitive to difference in an increasingly globalised and culturally heterogeneous market. At a minimum, leaders will need to have an entrepreneurial approach in relationship building with organisations (clients) to maintain their long-term viability and competitiveness.

1.2 The UK context

Compared to other Organisation for Economic Co-operation and Development (OECD) nations, the UK has a higher than average number of those not in education, employment or training (NEET) (Department for Education (DfE) 2014).Recent figures show this to be 922,000 young people aged from 16 to 24 (DfE 2015). Other educational outcome indices compare poorly: the UK ranks 22nd out of 24 countries for literacy and 21st for numeracy (OECD 2013) and only 67% of learners at age 16 have achieved level 2 qualifications, rising to 86% by age 19 (DfE 2014). England has taken a different approach to its national education system compared to its UK counterparts; favouring markets, competition, choice and standardisation of teaching and learning and test-based accountability[vii]. While Scotland and Wales have tended to follow the trend towards integrating vocational and academic programmes, in England the education of young adults has become increasingly separated and tracked.[viii]Schools and sixth form colleges are set to provide academic learning, with work placed learning providers and FE colleges focusing on professional and technical learning, alongside newly created specialist institutions such as University Technical Colleges and Studio Schools(Hodgson and Spours 2014 p.689). In England, a report by the Institute for Public Policy Research has called for greater coherence in the education of the 14-19 phase[ix]. For this to occur, some authors have suggested that there is a much greater need to collaborate between institutions and professionals, and to create greater alignment of qualifications and local services.[x]

Over recent years a widely cited narrative in the UK has suggested that schools and colleges have not done enough to supply highly skilled workers to meet the needs of employers in an increasingly competitive market place. For example, a recent survey carried out by the Chartered Institute of Management Accountants (CIMA) showed that there was a skills shortage in the financial sector[2]. The criticism is sometimes made that young people lack employment-related skills and character, including lacking the grit, discipline and self-confidence to get jobs.[3]

Blame is often laid at the door of schools and FE colleges for failing to teach the necessary literacy and numeracy skills or higher technical qualifications for science, technology, engineering and mathematics (STEM) careers. However, a counter narrative has argued that the fault lies as much, if not more, with 'demand side' issues. There are calls for employers to significantly increase training with young people and to demand high skills for entry into their industries.[xi]

In this period, funding arrangements have been continually revised also look set to continue. This has created turbulence in the system, as governments have used funding as a lever to control the sector (Fletcher, Gravatt et al. 2015). Colleges that were previously awarded money on the basis of successfully completed qualifications now fund younger learners on a per capita basis. This hits FE

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[2]http://www.telegraph.co.uk/education/educationnews/11704551/UK-school-leavers-the-worst-in-Europe-for-essential-skills-report-says.html
[3]http://www.dailymail.co.uk/news/article-2398505/Young-lack-grit-jobs-Too-school-leavers-arent-fit-work-says-Minister.html

and sixth form colleges disproportionately hard compared to schools.[4] Colleges continue to be poor cousins to mainstream schools through the VAT exemption that the latter enjoys.[5] Such funding decisions suggest that policy-makers tend to overlook the importance of the sector.[xii] Sixth Form Colleges, despite their success, have arguably become an 'endangered species'.[6] Funding for adult education will largely no longer come from the public purse (Jupp 2015) and overall, the FE and skills sector faces further, swingeing cuts.[7] The work carried out by the FE sector to serve approximately 40% of all learners at 16 (Jupp 2015 p.159) and its tendency to disproportionately serve working-class and ethnic minority children (e.g. Hodgson and Spours 2015) may have contributed to it being neglected by those in government. New requirements for the post-16 sector will stretch finances further. For instance, the FE sector is now responsible for some learners up to the age of 25 with special educational needs (SEN) and disabilities (DfE 2015) and providers are charged with cooperating locally to be "ambitious for young people with SEN" (2015, p.113). The increase in the age of participation in education or training to 18 will also require significant new collaborative arrangements for leadership in the sector. In the midst of this, government sponsored reports have set ambitious targets for teaching and learning,[xiii] the increased use of technology[xiv] and for apprenticeships (BIS 2015). Moreover, the latter significantly alters the FE and Skills Sector's relationship with employers. From now on the challenge will be to secure contracts from employers to deliver education and training for their apprenticeship programmes, rather than to entice employers to take apprentices.

Such a context calls for increased collaboration and connectivity within the sector and with external organisations (BIS 2016). In September 2015 the Department of Business, Industry and Skills announced a system of Area Reviews, scrutinising the Further Education and Skills offer within sub-regional areas. This process is not a full scrutiny of local provision, as schools are not included in the review. However it is the intention of the reviews to make suggestions on both rationalising the courses on offer, and securing adequate specialist provision

In light of the above development, new challenges emerge for leaders in the FE and skills sector:

- Working with Local Enterprise Partnerships (LEPs) and other stakeholders to contribute to regional skills planning
- Managing competition and collaboration to achieve both institutional success and coherent provision for learners and employers across local systems;
- Leading learning, in particular to meet the needs of new audiences and to introduce new technologies;
- Changing or customising curricula and qualifications to reflect local needs and, wherever possible, to involve employers in their delivery;
- Building capacity, enhancing professionalism and designing effective professional learning to address the challenges;
- Managing performance and accountability in this new context.

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[4] http://www.theguardian.com/education/2013/aug/26/sixth-form-colleges-funding
[5] http://maplegroup.org/News/Show/6011. This amounts to approximately £250,000 to £500,000 additional cost for medium to large Sixth Form Colleges per year in tax
[6] http://www.theguardian.com/education/2015/feb/13/sixth-form-colleges-we-are-an-endangered-species
[7] https://www.tes.co.uk/news/further-education/breaking-news/fe-sector-warns-tough-future-without-further-funding

1.3 Making sense of complexity

The FE and skills sector has been an under-researched part of the education system, lagging behind higher education (HE) and mainstream schools[8]. However, the creation of new bodies with funding dedicated to research activities in FE, such as the Education and Training Foundation (ETF), the Centre for Vocational Education Research (CVER) and FETL, has the potential to begin to redress this issue.[xv] In 2014 the ETF commissioned three reviews on leadership, including learning from beyond the sector and identifying specific challenges and strategies that apply to the present context (Greany, Earley et al. 2014, Hughes, Berryman et al. 2014 and Wilson, Lefton et al. 2014). These identify a leadership backdrop of austerity, complexity and ambiguity that is shared with other sectors.[xvi]

In an attempt to imagine a potential future of the sector in 2020, the 157 Group conducted a 'Delphi' exercise[9] on leaders in the FE and skills sector between April and December 2012 (Sherlock and Perry 2013). In the first phase, a group of FE and skills sector experts 'suggested four key issues:

1. The use of technology
2. Managing the supply of learning and responding appropriately to demand
3. The outcome in FE of wider reforms in the public service
4. Social inequality

(Sherlock and Perry 2013 p.11).

The positive scenario for the future involves:

- Teaching and learning where technology is widely used
- Pedagogy is adapted to a new reality in which online courses and flexible modes of study are commonplace
- A supportive government has delivered an integrated curriculum for 14-18 year olds
- A dynamic sector, combining public and private collaboration and agile leadership to capitalise quickly on opportunities and local integrated services has led to clear qualification routes that enable learners to move out of situations of economic and social disadvantage.[xvii]

In another 'leadership conversation'[xviii] imagining the sector in 2025, there was clear consensus that, to meet the challenges of the global and national context, individual leaders would no longer suffice. Instead, they would need to have a *"systemic mind-set"* and a willingness to *"lead beyond own organisational boundaries"* (157Group 2014, p.31).

These exercises show overlapping conclusions about leadership: the need for boards of directors, governors or trustees to strategically consider the future of the organisation in order to collaborate and/or cooperate with others as needed and the ability to shrink or expand. Directors of these organisations will need greater expertise, sharper commercial sensibilities and will need to come from more diverse backgrounds. Leadership must include people working at many/all levels of the system as the variety of challenges and tasks require expertise that cannot be faced by a few individuals.

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[8] http://www.theguardian.com/education/2014/aug/31/poor-research-further-education-government-funding-cut
[9] Delphi is a systematic forecasting method originally developed by the Rand Corporation in the 1950s in which experts are brought together and use collective intelligence to think about probable future outcomes

Overall, the context makes this a time of both challenge and opportunity for the sector:

> "Because of this combination of wider factors and recent policy shifts, not least the Raising of the Participation Age to 18 by 2015, GFEs [General Further Education Colleges] could now be considered to be at a crossroads where radical rethinking is required in order to ensure that their potential for positive social, economic and educational purposes can be harnessed."

(Hodgson and Spours 2015 p.166).

To sum up, the FE and Skills sector faces an existential crisis. There needs to be opportunities for all stakeholders to fully consider and re-imagine the sector, focusing on the core values of the sector and the wider social good.

1.4 Wicked problems and adaptive leadership

Many of the issues faced by those working in the FE and skills sector, as described above, can be described as 'wicked problems' (Rittel and Webber 1974). Wicked problems are challenging because they are difficult to define; there is no correct solution, they are inextricably linked to the context, there may be no obvious cause and effect and they are likely to lead to much debate, disagreement and conflict. Take the issue of employer involvement in programme delivery or IT use in FE. In both cases the global trend is for greater employer involvement and more online resources is clear. However, there is no agreed 'solution' on how either can be accomplished, but there are excellent local examples of practical success (Teach Too 2015).

The issues facing the FE and skills sector are complex, and need to be acknowledged as such. They require new forms of leadership that bring people together to co-construct the future, or "the art of engaging a community in facing up to complex problems" (Yukl and Mahsud 2010). A useful way to understand this can be by comparison with 'critical problems' and 'tame problems' (Fien and Wilson 2014) (see graph below). Critical problems are characteristic of crisis situations such as a natural disaster or the prospect of immediate financial ruin. These are often clear and leaders need to focus on the task at hand using 'command' modes of leadership to achieve short-term objectives. While tame problems can also be difficult to solve, they contain characteristics of situations that have been seen before. Therefore the solution is to apply the appropriate technical expertise, resources and procedures. For example, if there is a lack of capacity in the computer network in an organisation, the application of the right scientific knowledge, the use of network specialists and, of course, assuming there is sufficient funding to purchase the necessary resources, such an issue can be resolved.

In these situations, leaders may move towards adopting a more managerial approach. While 'management' issues call for rational, procedural and calculative responses, leadership approaches that tackle wicked problems, require greater skills in managing relationships and emotions; so-called 'soft power', see figure 1, below:
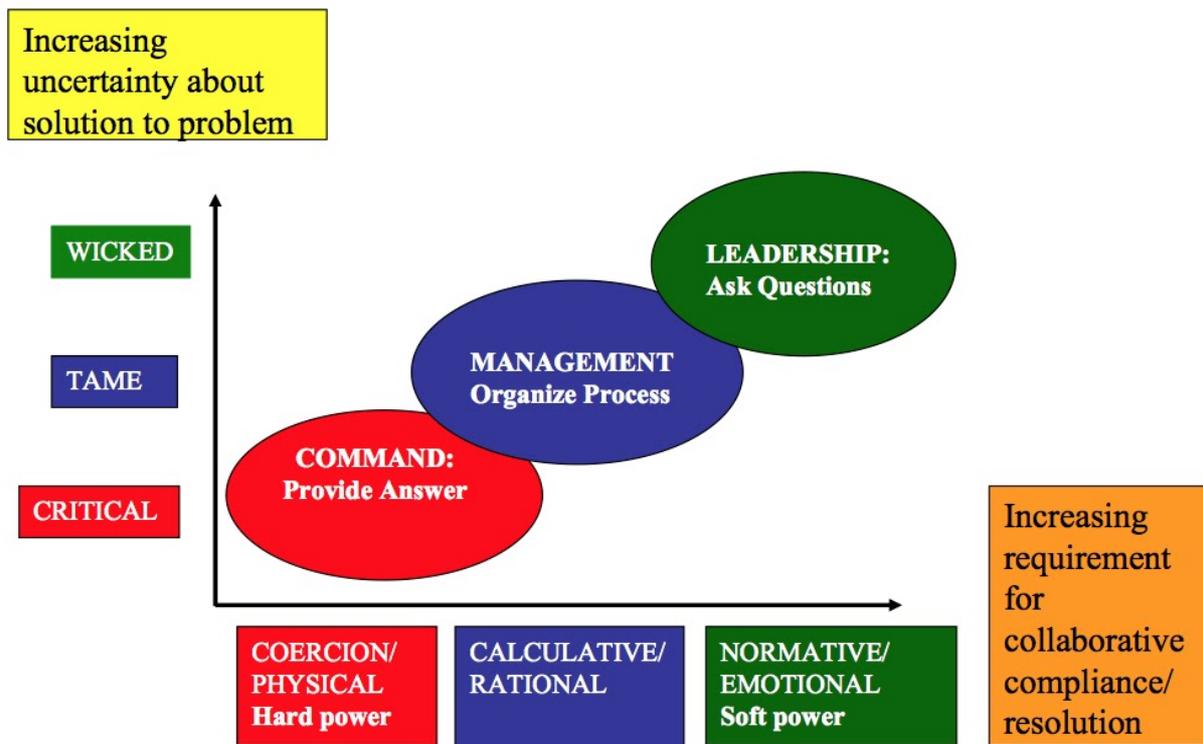
Figure 1Issues and leadership styles(Grint 2010)[10]

Adaptive and resourceful leadership approaches require leaders to: monitor external changes; identify relevant strategies; articulate an appealing vision; identify reasons for resistance to change and seek to convert opponents; build realistic optimism; keep people informed of progress and evaluate the outcomes of strategic decisions in order to refine mental models (Yukl and Mahsud 2010 p.98).

1.5 The role of values in the sector

In a time where the economic and political context has set strong challenges for leaders in the post-16 sector, research points to the need to focus on the essential prerequisites of the job:

"the core mission of improving educational outcomes for learners and the skills to support economic growth without being deflected by short-term funding initiatives or policy requirements: avoid reactive compliance"(Greany, Earley et al. 2014, p.28).

The above quote highlights the danger of 'following the money' and losing a sense of the values and connections with the community that underlie the activities of both professionals and learners in the sector. There is evidence in other sectors of the dire consequences that occur when essential values are lost. For example, the Francis Inquiry at Mid Staffordshire NHS Foundation Trust found a culture of bullying, defensiveness, secrecy, acceptance of poor standards; a culture that was inward rather than outward-looking (Kings Fund 2013). Overall, the Trust failed to put patients first in all that was done. Such features can act as warning to those working elsewhere. As providers in the NHS look to

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[10]https://vanguardinhealth.files.wordpress.com/2013/10/33955-screenshotwickedprobs.jpeg

work together in an integrated, patient-centred culture, those working in the FE and Skills sector may need to re-assess practices with the learner at the centre.

The Kings Fund report makes several recommendations that may equally apply for the FE and Skills sector as it does for the NHS. These include the need to: find a common cause and be prepared to share sovereignty; develop a shared narrative; create time and space to develop understanding and new ways of working; build integrated care from the bottom up as well as the top down; pool resources and innovate in the use of commissioning and contracting and recognise that there is not 'best way' of integrating care (Ham and Walsh 2013).

Value issues also make good business sense. There are many dimensions of this which include the way learners are treated in colleges. Creating a sense of belonging to the community and places of learning can not only help increase the quality of experience for learners and also impact on the wellbeing of the community (Riley, 2013). For sector leaders this requires a nuanced understanding that includes the physical, socio-economic, emotional and spiritual realities of the places learners occupy.[xix]Another dimension is how organisational leaders treat their employees. Evidence from research into the NHS suggests that staff engagement is clearly linked to both stronger organisational performance and patient satisfaction(Fund 2015). Relationships with clients (both learners and partners) also need to keep pace with change. Whereas in the past, client relationships were predicated on the need to protect knowledge in professions, the free flow of information across the Internet makes this an out-dated approach. Today, companies need to work collaboratively to provide a high quality of service to customers and 'clients' need to be helped to take their own decisions and actions based on access to reliable knowledge (Dawson 2012).

1.6 Government inspired change or change from within?

In times of austerity and turbulence, the importance of organisations and individuals working together to make changes and meet the challenges of the time is great. A growing body of public-sector evidence is emerging which points to the need for changes to occur from within (Ham 2014) and for systems to be self-improving (Hargreaves 2010). The elements of such systems are still very much contested and part of this centres on differences in views on the role of the state, i.e. interventionists versus proponents of 'small government'. A report on reforming the NHS from within suggested that if the sector focused on improving itself, it could "avoid frequent shifts of direction that create barriers to transformational change" (Ham 2014). The need to be protected from the buffeting effects of frequent top down policy changes arguably affects the FE and Skills sector even more strongly. Ham's report for the King's Fund also recognised the need for a settlement with politicians to agree their long-term relationship to the sector. So, how might this relationship look for the FE and Skills sector?

The current government policy discourse is strongly in favour of the state supporting the effective operation of markets, suggesting that innovation and wealth creation is largely or wholly the result of the activity of the private sector. This view tends to gloss over examples of innovation in which the early stages of development and risk have been absorbed through significant public sector financed activity, for example, in the development of the World Wide Web.[11] An alternative view sees the state having an 'entrepreneurial' role, that is, actively directing innovation in ways that go beyond just providing the conditions in which it can take place such as providing tax incentives and grants for research and development Mazzuto, 2011). From this perspective the role for the state is to provide leadership and direction to an agile and innovative economy; concretely, to:

- Create strategy for an area of innovation with high growth potential (e.g. nano-technology)
- Fund the exploratory, high risk phase of research
- Commission specific projects that are needed
- Oversee the 'commercialisation process'(Mazzucato 2011).

The challenge therefore is to strike a better balance between bottom up reform efforts and top down support. While system leadership may be seen to be crucial for public sector institutions and services to change from within (Timmins 2015) there may be barriers that prevent this from happening and a new enabling role for government that has yet to be fully explored.

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[11] See http://home.web.cern.ch/topics/birth-web

The Macro-Level: Questions for Reflection

1. What are the core and distinctive functions of the FE and Skills Sector?
2. How can consensus be built around the core functions of the FE and Skills Sector?
3. How should local and national government interact in order to provide a more stable framework for FE providers to deliver effectively?
4. How might competition and collaboration coexist in a Sector where competition and market forces have been predominant since 1992.
5. Do area based reviews presage a long term intent by policymakers to reshape the provider base, or they are short term contingent response to financial constraints within the Sector?

Part 2: The Exo-system level

The local and regional context
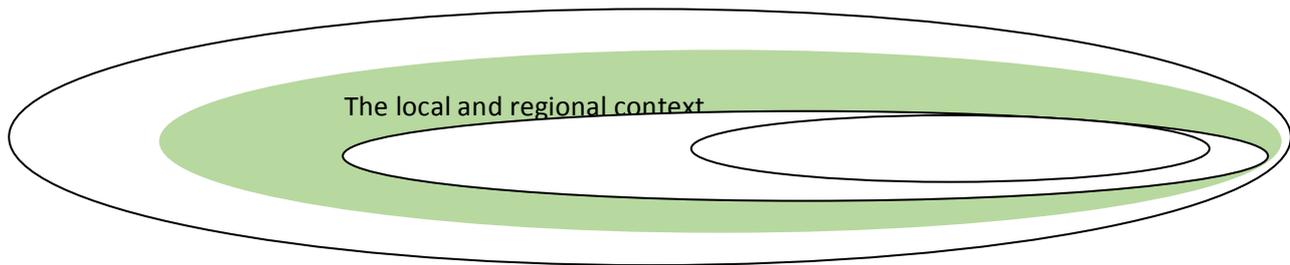
This refers to the complex interactions between social, economic, environmental, organisational and political factors at the local community or regional level.[xx]

Currently, Local Enterprise Partnerships (LEPS) are a key national aspect in the government's economic growth strategy, though in the cases of proposed devolution, such as the 'Northern Powerhouses' playing a secondary role within wider local developments.[xxi] Underpinning their creation is the so-called 'smart specialisation' concept, which proposes evidence-based and technology-enhanced approaches to the local connection and integration of ideas, finance and services, by:

• strengthening local innovation 'ecosystems' and building local capabilities;
• supporting local supply chains to invest and collaborate;
• catalysing and leveraging the differing opportunities of social innovation; and
• branding and positioning places as credible centres of smart specialisation.
(BIS 2015, p.5)

2.1 Local and regional ecosystems

The role and impact of the FE and skills sector on a local area can be considered using skills ecosystem theory, such as the research from Finegold(1999). He suggested four elements[xxii] in the success of dynamic, adaptable high-skilled eco-systems: a catalyst; fuel or nourishment; a supportive host environment and a high degree of interdependence. More recently, London has been cited as a successful innovative and entrepreneurial ecosystem.[xxiii] Clearly, London can be viewed as a separate case, an outlier, from the rest of the UK. Some have also pointed to its growing inequalities and also the over-dominance of the capital[12]. Equally, Silicon Valley in California may have unique characteristics that are hard to replicate elsewhere. Nevertheless, Finegolds' four elements may be applied to the UK FE and skills sector, as suggested in Box 1 below:

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[12]http://www.newstatesman.com/2014/08/london-problem

Box 1: A local FE and skills ecosystem?

Catalysts: Local and central government help to shape local skills ecosystems. This includes marshalling sources of funding to meet agreed local area learning and skills initiatives and to fund research and development to test and evaluate local approaches to the delivery of courses, pedagogy and innovative use of technology.

Nourishment: Improved development of leadership and pedagogical expertise. This includes the use of IT solutions to meet learners need to combine work and study. Leadership training includes entrepreneurial skills to commercialise some of their initiatives and to fund transformations to the local system.

A supportive environment: Pooled resources to enable the development of an infrastructure of support services for young and adult learners in the area. This includes expensive computer networking, virtual learning environments, financial and personnel support, legal advice and specialist subject, pedagogical and industrial expert consultancy. Services made available to the smaller Independent Learning Providers (ILPs) and voluntary sector partners. Local peer-review arrangements provide challenge mixed with support for innovation, risk taking, cooperation and learning.

Interdependence: Flat organisational structures and learning cultures provide opportunities to collaborate across teams including visits to other organisations to learn about how they work. A high degree of trust created in locally agreed vision statements and a professional identity that looks beyond allegiances to single organisations.

Building on Fingeold's four elements and extending them through incorporating insights from the 'entrepreneurial state' argument, Hodgson and Spours (2015) suggest a 'post-incorporation' model that centres around the notion of FE colleges as local and regional economic and vocational hubs. The larger general further education colleges (GFEs) would play a central 'hub' role in meeting the needs of young learners in the areas they serve. This would imply changes to give distinct and complementary roles to the other types of providers in each locality, i.e. higher education, school sixth forms, sixth form and tertiary colleges and independent learning providers (ILPs). Work on High Progression and Skills Eco-systems (HPSEs) suggest a role for FE, working with small and medium sized enterprises (SMEs) and HE, *"nurturing educated, curious and innovative young people"* and building progression routes up to Level 4 and above (Spours 2015).
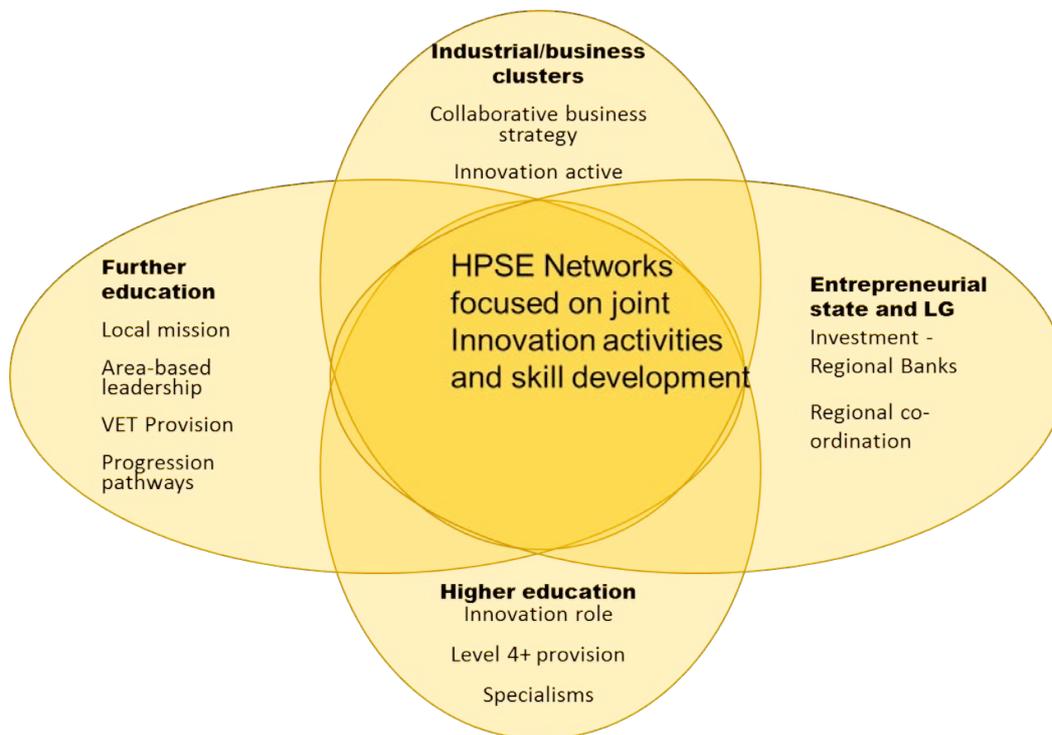
Figure 2: High Progression and Skills Eco-systems

Reproduced from presentation at High skills regional eco-system Seminar (Spours, 2015) and previously adapted from presentation by Kim Windsor – Skill Ecosystems: What have we learned? (2009).

For a local skills ecosystem to work there needs to be more devolved powers to regions in England. This could include a new role for government that would be less concerned with punitive accountability of organisations. Instead, the focus would be on innovation, collaboration and greater involvement of a wide range of stakeholders in the governance of local provision. Leaders at all levels would need to get used to collaboration and making connections to serve the needs of their communities in a local eco-system (Hodgson and Spours 2015). The emergence of LEPs also creates new possibilities for the configuration of local ecosystems that may take further shape as their influence unfolds over time.

2.2 New partnership arrangements

If multiple partnership arrangements are set up at the local level then such social alliances will need to be understood. Multiple partnership are "voluntary collaborative efforts of actors from two or more economic sectors in a forum in which they cooperatively attempt to solve a social problem of mutual concern" (Sakarya, Bodur et al. 2012 p.1712). While social enterprises may be motivated to join such alliances in order to benefit from the additional funding, resources and technology, businesses may be motivated by the enhancement of their reputation and by inspiring customer loyalty (Sakarya, Bodur et al. 2012 p. 1715). Despite these differences, their underlying motivations may be similar as the alliances are joint 'creations' with shared values and a shared goal of 'building community capacity'. The former relates to the extra value-added for the client through the combination of resources and the latter involves working with marginalised or disadvantaged people, helping to build up their own capacities (ibid, 2012 p. 1716). Within these broad areas of overlap, there will be nuances of priority and differences of interpretation.. Equally, other forms of

alliances with competitors may be possible or necessary, where aspects of each firm's markets reveal the areas that each company or organisation have complementary roles to provide in a local area. This challenge of cooperating with competitors has increasingly been seen in the business sector and has been referred to as 'coopetition' (Nalebuff, Brandenburger et al. 1996). Another area for cooperation is through combining and trading data across organisations in order to add value to the client(Parmar, Mackenzie et al. 2014). Five patterns of such collaboration have been identified:

1. Augmenting products and services through data sharing and use.
2. Digitizing assets
3. Combining data with and across industries
4. Trading data
5. Codifying a distinctive service capacity for commercialisation

2.3 Relationships with clients and knowledge management

Knowledge relationships with clients have changed; the protection of specialist knowledge is secondary to how it is used strategically, including sharing and combining knowledge, in order to add the most value to clients. Once this is achieved, the level of cooperation and integration established ironically makes competition from outside groups more difficult to push away existing providers. As a result, managing knowledge is an essential leadership task. Dawson (2012) suggests that a challenge for leaders is how to combine knowledge to broaden and deepen understanding of their clients in ways that add value to both them and their businesses. He outlines five types of knowledge in business-to-business and business-to-client relationships:

Knowledge to: Knowledge transferred from one firm to another
Knowledge from: Importing knowledge from other parties, including research and development
Knowledge about: Gaining deeper knowledge about clients and partners
Knowledge blending: Bringing together knowledge from other firms to create business value
Knowledge co-creation: Creating new knowledge in collaboration with others

(Dawson 2012 p. 25)

The Exo-system level: Questions for Reflection

1   How does my organisation fit in a local skills ecosystem and what role does it play?
2   What is needed to join up the various elements more effectively?
3   Which alliances and partnerships might be of benefit and what are the challenges in creating and sustaining them?
4   How can partnerships and the use of technology be used to drive

    innovation, decrease costs and increase value to clients?

5   How will area based reviews affect the balance between collaboration and competition? What are the prospects for coopetition in FE and Skills?

Part 3: The Meso-system level

Institutional level
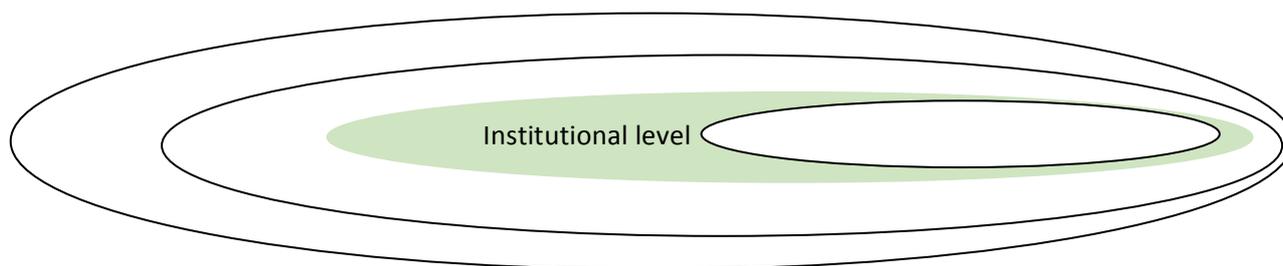
This relates to the organisational and institutional level, i.e. the places that learners study. Structurally, the sector is becoming more complex, with an increasing number of alliances, federations and mergers and new entrants such as Prospects College, coming from the private sector. FE colleges are become fewer and bigger (Jupp 2015 p.159). New structures for leadership have emerged too, for example, where a CEO oversees the work of alliances of organisations, including a mixture of schools, sixth forms and colleges within a group. A focus on the strategic direction of a newly merged organisation is a key aspect for leaders, who must try to avoid the tendency to become too inward-looking during this phase (Jupp 2015 p.159). In this context, governing bodies need to reflect more adequately, the communities they serve; and have the appropriate expertise to hold colleges to account (Grayston, Orr et al. 2015).The Association of College's code of practice for Governors has needed to change accordingly (AoC 2015, p.13).

3.1 An Institutional framework

While recent discussions have been in terms of 'organisations' rather than 'institutions', some have expressed the advantages of a shift towards thinking in terms of the latter (Glatter 2015). Arguments include the mechanistic connotations of the word 'organisation'; the narrow managerial focus and the dominant idea that schools and colleges are merely vehicles for delivering academic (or vocational) targets. Where viewed as institutions, FE colleges can be seen to have a role in promoting civic values. Furthermore, institutional frameworks suggest greater stability which may help resist structural changes that may be counter-productive or a waste of resources. In viewing FE as an institution, there is the centrality of values in such ideas.

3.2 Adaptive leadership of organisations

FE and skills sector leaders have faced 'volatile times' (Greany, Earley et al. 2014). In times of economic difficulty there is a danger that leaders can 'hunker down'; "their primary mode will be drawing on familiar expertise to help their organisations weather the storm" (Heifetz, Grashow et al. 2009). The understandable tendency is that, once over the initial crisis, leaders can return to familiar ways of working and proceed on a trajectory of gradual decline. The challenge instead is to become an *Adaptive leader(adaptive thinker)* and take advantage of the new hostile conditions to re-assess fundamentally the shape and direction of their organisations. Heifetz, Grashow et al. (2009)refer to this as the adaptive phase and characterises the tasks as being about i) fostering adaptation, ii)

embracing disequilibrium and iii) generating leadership. Fostering adaptation calls for the development of 'next practice' rather than 'best practice', confronting loyalty to legacy practices and distinguishing the essential from the expendable. In order to get to a new solution, this calls for experimentation in which successful trials are adopted and unsuccessful ones reject or refined. The trials that yield negative effects need to be seen as valuable learning experiences rather than failures, otherwise people will become too risk averse and will fall back on tried and tested ideas. This is where, to embrace disequilibrium calls for close monitoring by leaders, so that stakes are not set too high, while keeping people on task and productive. This is helped when leaders depersonalise conflict, smooth over tensions in relationships and create a culture where people are allowed to challenge practices. Finally, adaptive leadership is not possible by single organisational leaders alone, leadership needs to be taken collectively and at all levels. Formal leaders can however help by creating structures and spaces in which learning and experimentation is possible; and by encouraging diversity and inclusivity to widen the net for ideas and innovation.

Increasingly leaders are looking to a more distributed strategy which strikes a balance between their role as acting as 'animateurs' (Keep, 2014) in their local economy to broker partnerships and to contribute to economic and social planning and accepting responsibility for role design and the design of support systems to encourage staff at all levels to accept their responsibility for leading and managing teams and functions. The development has generated interest in concept of 'distributed leadership' (Boden, 2011).

This concept chimes with the ecological perspective advanced in this report because it recognises that leadership can be generated within an organisation or its operating environment in a variety of ways: 'spontaneous collaboration' (cross college or locality generated), 'planful alignment' (senior management initiated), 'formal distribution' (team-generated), collaborative distribution' (team or network generated). The concept of 'distributed leadership' offers colleges, which often serve 20,000 plus students, and which may grow further as a result of the recent round of mergers a way to support at such scale firstly, managers to be empowered to make strategic decisions within their sphere of responsibility internally and externally. Secondly, leaders to assume an even more strategic role within the system in which their college is located as they endeavour to support their college to be successful in a strong and dynamic system, rather than one characterised by excessive and damaging competition (Bolden 2011). A development in the area of skills where close and collaborative integration with employers and other colleges to meet needs and avoid unnecessary duplication requiring skills will prove to be increasingly beneficial. See for example the role played by Hull College within the Humber Regeneration project (Hull 2016)

3.3 Leading learning in organisations

Many of the leadership challenges in the FE and skills sector call for a view of organisations as being entities of 'learning'(e.g. Senge 2014). Looking at the challenges facing directors of children's services, a report by the National College for School Leadership found that "organisations are more likely to deal effectively with change when they utilise the learning that takes place within it." (Daniels and Edwards 2012 p.23). Their report found three process that supported leaders of learning: 1) Recognition, identifying the learning challenges and the types of data and learning that were required to address it; 2) Response, forming the appropriate leadership practices to promote the learning needed and 3) Reflection, asking if the learning challenge had been addressed. For the first process, various options included ways of examining current practice and encouraging questioning of practice. For the 'response' this included developing horizontal and vertical learning relationships across boundaries within organisations and to develop partnership learning

relationships. Activities that promoted reflection included peer review arrangements, work shadowing and commissioning external reviews (Daniels and Edwards 2012 p.24-28).

If individuals are to be enabled to make decisions that help the organisation adapt, one way to facilitate that change of style is for leaders to strike a better balance between holding groups accountable for *outcomes* and for *processes*. The former can lead to restricted thinking, hold back innovation and over commitment to one strategy. *Process accountability* suggests the need for structured 'spaces' for interaction. These may involve discussion, reflection and enquiry, sense-making and brainstorming tasks. Having such structures ensures all members of groups are involved and that a language is developed that enables effective exchange and creation of knowledge (Wielkiewicz and Stelzner 2005). The need to develop mutual trust and "a framework within which professional judgements can be safely made" (Daniels and Edwards 2012 p. 15) is more important than any specific organisational or partnership structures.

3.4 Leading outward-looking learning organisations

Organisations in successful eco-systems are judged in terms of their ability to adapt to the environment, they gain nourishment from their outward connections and they feed into the success of the eco-system of which they form a part. One of the major shifts in ecological systems theories is from the idea of the organisation as a discrete 'sealed' unit to one that has 'semi-permeable boundaries'.

Wielkiewicz and Stelzner (2005) propose six premises of ecological leadership:

1. There should be less emphasis on singular, positional leaders to direct activities and a movement towards seeing leadership as 'emerging' from the relationships and interactions among people that lead to transformational change.
2. There needs to be a balance between the swift decision-making that is possible in traditional, hierarchical models of leadership and the more open ended participatory leadership that allows for greater flow of feedback and information.
3. Leadership (at all levels) occurs in a web of inter-related factors. A tension arising out of this aspect is that of devoting time to thoroughly understanding the context and taking decisions.
4. Adaptability is determined by the richness of 'feedback loops' in organisations. On the one hand, there is a need to understand the organisation's practices, policies and procedures through the feedback gained from (and about) learners, from employers, teachers, leaders and other data, for example that gained from review or inspection visits
5. A further tension in organisations is inherent in the need to strive for diversity and inclusion versus the need to make single-minded decisions. Overall, greater diversity in eco-systems aids adaptability to the environment; the ability to scan the horizon more broadly is greatly enhanced by taking into account the views of people from a variety of cultural backgrounds
6. The final premise is that leadership of organisations should be judged in terms of how it enables the organisation to adapt to long term challenges. Organisational leaders will need to exercise courage in their long own vision to pursue course of excellence, rather than relying purely on external, accountability driven measures of institutions.

For leaders of organisations, the challenge in the literature on eco-leadership, is presented in one of two ways: Shifting thinking from mechanistic, industrial ideas of bureaucratic organisation towards more organic, ecological, systems thinking and managing a series of 'tensions'.

The Meso-system level: Questions for Reflection

1   Given the use of an institutional framework for the FE and Skills sector, what identity does it have and should it have in wider society and what central values could all institutions in the sector hold in common?

2   What spaces and structures can be set up to allow individuals' to learn together and benefit the organisation?

3   What changes in organisational culture are needed to make sure that experimentation and innovation can flourish in the organisation and that all members of staff are involved?

4.   How can the FE and Skills Sector develop leadership that is adaptive and set to flourish in a policy landscape emphasising both collaboration and competition?

Part 4: The micro-system level
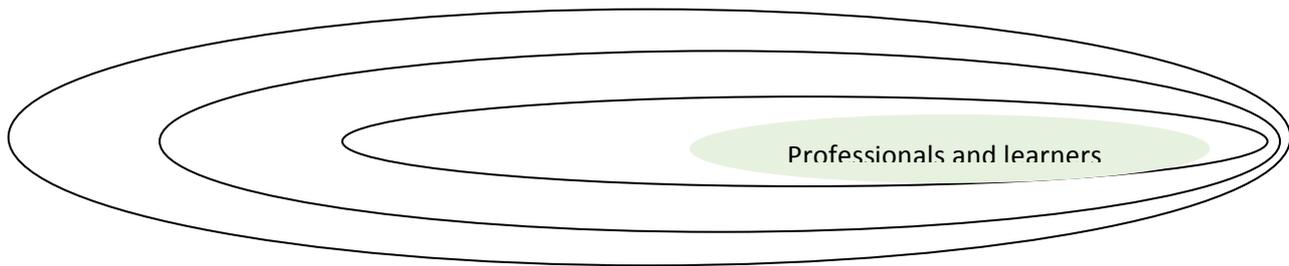
This section considers the professionals that work with learners and apprentices in the FE and skills sector. It also relates to learners, and how to encourage deep engagement in learning and its connection with work.

4.1 New forms of FE professionalism

One recent suggestion has been for the FE and Skills Sector to develop staff as 'dual professionals', that is, able to use the knowledge and skills of both their subject domain and pedagogy to operate effectively as teachers in education and work contexts (CAVTL, 2013). Others have suggested a 'triple professionalism' is needed, one that is ethically driven, involves co-production with other professionals and students; fosters democratic institutions and involves the ability to think and act on differing and expanding ecological 'scalings' or levels from the individual to the international (Spours 2015). This '*ecological professionalism*'[xxiv]includes building connections in both 'hard' and 'soft' discourses. The former involving 'client interaction' and bureaucratic responsibilities, the latter involving informal interactions, conversations and considerations of beliefs, ethics and ideas.

A strong aspect of this multi-dimensional view of professionalism is the need to manage and create different types of knowledge. This calls for an '*inquiry-stance' to professionalism*, which is as much about making knowledge of practice problematic as it is about seeking solutions to problems of practice (Cochran-Smith and Lytle 2001). A traditional model of evidence-based practice, one that defines a linear process through which research generates a definitive solution to a problem of practice, to be implemented by professionals in their work, is inadequate. *'Research-informed' professionals* will need to connect individual professional learning to the organisational, institutional and wider system aims towards the learner. One report on leading learning conversations in FE suggested the need for:

- The development of more research-informed approaches to teaching and learning
- Investigation into the types of support that leaders can provide to promote innovation and best practice in teaching and learning
- How to better assess the impact of professional development on teaching and learning
- The development of professional identities and more networks for teachers and trainers

(Thomson 2012)

The development of research-informed teachers thus had both an institutional level, that can be supported by senior and middle leadership practices and an occupational level, helped by having a strong independent, professional body for FE teachers.

4.2 Enquiry as leadership

The process of enquiring and researching practice can be seen as integral to leadership. Outside of the FE and Skills sector, there are examples of leaders being trained with this principle at the heart of their learning. The Clore Social Leadership Foundation[13] encourages leadership among those working in the third sector, through 'action experiments'. These follow several steps of experimentation:

- Framing: Defining the issue, its importance, relevance and context;
- Aspiration: One's aspiration in relation to what has been framed;
- Reflection: Reflecting on the issue, Identifying the main question and issues arising;
- Moving from question to action: Giving some shape to the question. One helpful hint was to try saying "How do I act in the world, if I say I am….";
- Act in the world;
- Notice: The effect on you, others and the 'system';
- Recording your noticing: both inner - what happens inside you, and outer -what happens outside you;
- Begin another cycle; and continue as need.[14][15]

As systems thinkers, participants are also encouraged to think about how they should remain open to others' beliefs and perspectives, to question ones' own assumptions and to observe the effect of one's' actions on other aspects or people, or the system as a whole. Enquiries shape individuals' mental models, these shape their actions and change their practices. As the situation changes, new enquiries are made and new hypotheses are proposed in a continuous cycle.

4.3 Learner engagement

To bring out a distinctive and appealing vision of learning, the challenge for the FE and skills sector is to find a new way to respond to the global, generational and technological challenges that have shaped learners' expectations. One useful concept here is the notion of 'good work', which was pioneered by Harvard University. Essentially, 'good work' is, i) technically excellent, ii) personally meaningful or engaging and iii) carried out ethically. A central influence on this concept is Csikszentmihalyi (1997) ideas about the role of 'flow' in creativity and motivation, which recognises that the work of single people occurs within an alignment of influences some of which are outside of the immediate control of the person, and argues that the achievement of good work is brought about through the alignment of four forces:

1) Personal qualities. These are influenced by genetics, early experiences, learned in the community or family.
2) The requirements of the job itself. This includes professional standards and historical and socially established practices.
3) Institutional and interpersonal relationships. These are determined by expectations of leaders, colleagues and other stakeholders.

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[13]http://www.cloresocialleadership.org.uk/home.aspx
[14]http://www.cloresocialleadership.org.uk/Cordelia-on-Systems-Thinking
[15] Based on steps by Martin Sandbrook at: http://www.systemslearning.org/systems-learning/action-experiment

4) The influence of extrinsic rewards. These include rewards related to job performance, respect and the values afforded by wider society.

> The good work toolkit provides a set of questions to engage learners in education about the notion of good work such as:
> *How do I define "good work?*
> *What does it take to carry out good work?*
> *What are my own personal standards? What are the professional standards for excellence and ethics? How can I reconcile these different viewpoints?*
> *What are some of the factors that make it difficult to do my best work? What can I do to prepare myself for these challenges?*
> *How can my community/organization support excellent, ethical, and engaging work?*
> *Why is good work important to society? To our organization/profession?*
> *How is my work meaningful to me? What are my goals? What do I want to get out of my work? Why is good work important to me as an individual?" (Barendsen, Csikszentmihalyi et al. 2011, p.53)*

In one case study of 'good work', young people involved in using social media to engage in social and political activities were interviewed at depth (Barendsen, Csikszentmihalyi et al. 2011). They identified elements of informal learning and networking and evidence of some highly motivated 'social entrepreneurs' that nurtured leadership for social change and deep learner engagement. The idea of combining an ethical sensibility with a commitment to occupational excellence and academic study, potentially, offers the FE and skills sector new ideas about how to bridge the worlds of work and study. The central message of striving for excellence and ethical standards in work also reinforces the development of dual/triple professionalism amongst staff as well as offering learners new role models.

4.4 Technology-enhanced learning

Connectivist pedagogy (e.g. Anderson, Upton et al. 2015, Balaji 2015, Joksimović, Dowell et al. 2015, Williams 2015) offers professionals in FE a theoretical perspective on how to use new technological innovations to supplement teaching and learning. Technology-enhanced learning, including using MOOCs provides the new modes of learning that present and future generations are likely to require and come to expect. The rationale underlying the introduction of new technologies needs, however, to be clear in order to avoid it becoming a technological replication of didactic modes of learning. This will require lecturers to support learners to try to make points of connection between their current interests and source of potentially relevant information contained in databases they have or can be supported to access, to develop new lines of inquiry and new ways of thinking:

"learning (defined as actionable knowledge) can reside outside of ourselves (within an organization or a database), is focused on connecting specialized information sets, and the connections that enable us to learn more are more important than our current state of knowing"(Siemens 2014)

The use of connectivist pedagogy to guide the deployment of MOOCs involves a commitment to:

- Encourage diversity of opinions.
- See the maintenance and nurturing of connections as an outcome as well as a process of learning.
- Contain up-to-date, and updateable knowledge (such as wikis).
- Help to build social capital through engagement of those across boundaries of work and learning.

Connectivist pedagogy suggests that the tools of learning can, if used imaginatively, to transform the nature of the learning experience itself; as learners make new connections, they can shift between communities of learning, can construct a new identity for themselves and dissolve the barriers between formal and informal learning, and between the worlds of work and learning.

The micro-system level: Questions for Reflection

1   What new forms of professionalism need to be developed to help construct a better future for the sector?
2   How can distinctive teaching and learning practices for the FE and Skills sector encourage excellence, high ethical standards and a bridge between the world of work and learning environments?
3   How does pedagogy need to be reconfigured to keep pace with technological changes?
4   How can resource constraints in FE and Skills be reconciled with the need for comprehensive, forward looking CPD required to underwrite dual or triple professionalism?
5   How might FE and Skills providers cooperate to leverage investment in MOOCs and other forms of technology-led learning?

Part 5: The chrono-system level

Spreading innovation across the system
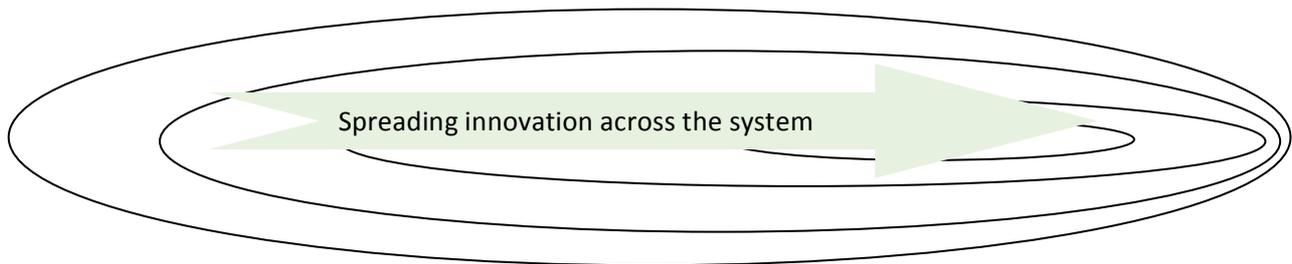
This section considers how policy changes, organisational rearrangements and changes in teaching and learning patterns can work across the system.

5.1 Innovation at a system-wide scale

Throughout this review, we have used the structure of an eco-system, highlighting how inter-connected and complex the FE and skills sector is. One aspect that runs across each level is the time-dependent way in which development, reform and change occurs. This can be conceived of as a spiral, cyclical model of change, in which continuing feedback in the system leads to modifications and improvements.

Adopting an eco-systems approach, some writers have approached the issue of how to diffuse innovations across all levels over time and space, in a cycle of action (see figure 3).[xxv] While applied to a school system in Singapore, the principles in Toh et al's model may, with contextual modification, be relevant in the UK's FE and skills sector.
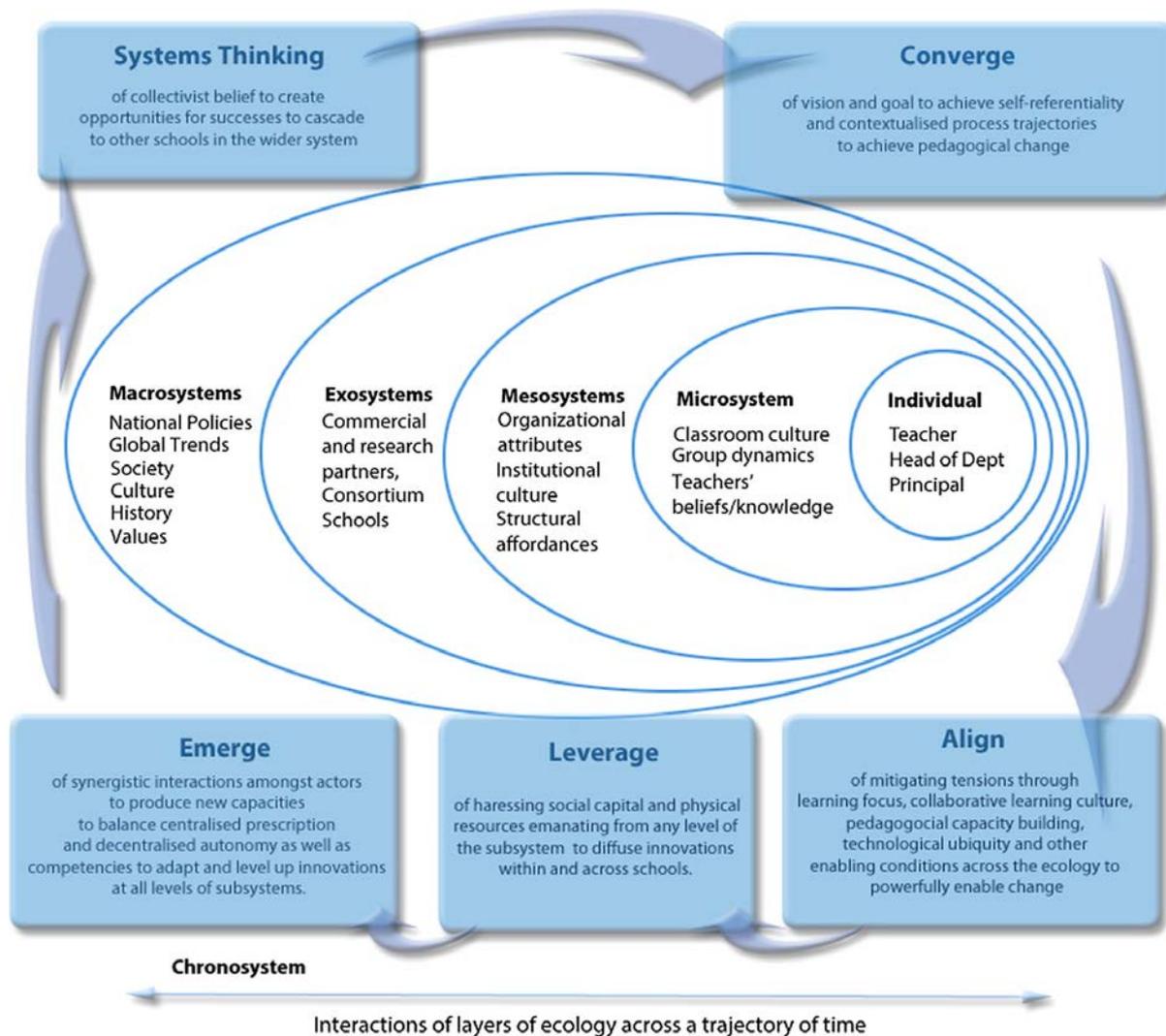
Figure 3: Exercising ecological leadership for diffusing innovations through SCALE

(taken from (Toh, Jamaludin et al. 2014, p.846)

The above model for diffusing innovations is achieved through **SCALE**, i.e.:

- **S**ystems thinking to benefit more stakeholders in the community and increase collaboration
- **C**onverge vision and contextualise innovations in relation to overarching mandates
- **A**lign efforts by mitigating tensions and paradoxes within and across the subsystems in the ecology
- **L**everage collective wisdom and resources emanating from any level of the subsystem to diffuse innovations
- **E**mergence of new adaptive capacities for sustainability

(Toh, Jamaludin et al. 2014, p.845)

The SCALE approach recognises several important aspects of leading innovations eco-systems that are, potentially, relevant for the FE and skills sector: Solutions cannot be effectively arrived at in isolation; no one is able to know all aspects of the system from their own perspective (there is no 'one reality'); there are always conflicting motives within collaborations that need to be resolved and finally, that collective action leads to 'emergence' of properties that helps to create capabilities and resilience that are greater than the sum of the parts.

5.2 System leadership in FE

Paul, I think the material on 'altruism' could be inserted here instead of the section on 'nudge'

System leadership has been examined through case studies of successful leaders in the NHS sector (Timmins 2015). These found that while the individuals did not always see themselves as system leaders, as this could be seen as counter-productive, a number of common themes were identified.

These included ideas from behavioural economics (see Harvard Business Review's HBS Working Knowledge - http://hbswk.hbs.edu/ -for clear summaries of ideas) of 'nudging' processes along, knowing when to use coercion or softer powers of persuasion, and being an enabler or facilitator, ensuring forward movement and steering people and processes in order to stay on course, and knowing when to call upon people's 'altruisim'. In the case of the former, system leadership could be seen as a role occupied by someone who prefers to be behind the scenes, out of the spotlight and without an 'ego'. Furthermore, it may be better conceived of as a property that emerges when people engage in system thinking. This means that instead of leadership always being hierarchical, related to targets and motivated by external rewards, it is seen to respond as well to the demand and the flows of work, is integrated into work and related to people's values and dependent on intrinsic motivation (Ham 2014).

In the case of altruistic leadership, which can be defined as harnessing staff's intrinsic goodwill to assist others, this results in as Krog and Govender (Rouco 2015) observe, leader*s "in the first instance adopting and exhibiting persuasive mapping and caring qualities, in order to make their employees feel empowered".* A further stage of development of this approach is to act in the best interests of everyone in a system: a system of inter related givings (Kolm and Ythier 2016). The local system is built around a spirit of co-operation where strategic leaders identify a direction of travel for improvements to the local economy, supported by the development of relevant skills. Planners and skills providers collaborate to ensure that students are work ready for employment in an area which is growing within the region. This can lead to a general economic growth to the ultimate benefit of the college (Mallen 2013).

The chrono-system level: Questions for Reflection

1   How can innovations in FE be brought up to scale?
2   What kind of system leadership and systems' thinking is required for system wide changes to occur?
3   How might Toh et al's SCALE model work in relation to the UK FE and Skills sector?
4   Who might take on the task of stimulating systems leadership in FE and Skills?

Final Reflections

This review has identified innovative developments and practices around the topic of leadership which can be applied to the FE and skills sector. Throughout the review a number of questions have been posed for stakeholders and sector leaders which consider the issue. In particular there has been a focus on 'leading thinking', suggesting that there is a requirement for new spaces to be opened up and new dialogues encouraged to harness people's agency for change.

Looking into the future of any sector is fraught with problems. It is however a necessary step otherwise there can be a tendency to remain obsessed with the present or be nostalgic about recent past. This is particularly unhelpful, especially when the major issues facing the sector are 'wicked issues', that is, multifaceted and requiring complex solutions, which call for special skills of 'seeing' the system more holistically, and working in ways that allow for solutions to be arrived at in action and through experimentation. In FETL's 2015 inaugural lecture, Jim Krantz gave a comprehensive overview of international developments in the leadership literature that were seeking to address such challenges. The picture he painted was one of increasing complexity due to the inter-connected nature of the world.

"Even simple decisions aren't simple any more. Now they involve multiple interests and numerous stakeholders. People work within multi-faceted, loosely organised environments. Authority is diffused, resources dispersed, stakeholders diverse, and goals ambiguous, vague or conflicting. Leaders need to be adept at fostering systems that produce the capacity of people to take thoughtful decisions and take meaningful action in the midst of such uncertainty" (Krantz 2015, p.15).

Such a landscape of uncertainty and complexity opens up the necessity for a new paradigm for leadership. Many writers are now considering ecological leadership as one such new paradigm based on an understanding of social-ecological systems bounded by insights from complexity theory.

Is leadership, as currently understood, always the right word?

The consistent message in this report is that notions of singular heroic leaders are insufficient, and the evidence presented has emphasised that there is still much to be learned about system leadership across all areas of the public sector, and the literature in relation to the FE and skills sector in particular, is under-developed. Leadership of thinking, such as 'system thinking' requires new ways of conceiving the term 'leadership'; specifically, the importance of leadership being collective and to be spread throughout organisations at many levels,

Metaphors, theories, concepts or models can help the diverse participants in this process, for example, GFE, Upper Secondary education providers, ILPs, the voluntary or 'third' sector, employers, Local Enterprise Partnerships (LEPs) and local and national government, navigate themselves through the complexities. The report hopes that it has begun the process of providing new ways to break down and represent the different elements and levels of the education, training and skills system and their inter-relationships to support the formulation of new questions that participants can use use to address the impending challenges, notable ones being devolution, areas reviews, and the Sainsbury Review of Technical Education etc.

By highlighting new strands of thinking arising from research and development, the report has affirmed to the FE and skills sector the way that research can shed light on the relationship between

wider societal trends patterns of future demand, therefore assisting timely action (Biesta 2010).The new CVER at the LSE may have a pivotal role in supplying up to date, and comparative research on trends and patterns of demand, while the UCL – Institute of Education Post 14 Centre for Education and Work may have an equally important role facilitating the development of theory-to practice and practice-to-theory via practitioner level case studies and action research projects that exemplify 'thinking in action'.

The need to develop organisations that learn through multiple feedback loops suggests that FE sector leaders will need to encourage research in a learning culture and a profession in which research engagement is valued (Scott and McNeish 2013). Building and cultivating links (between FE colleges or other organisations in the sector) with HE organisations may also help to support and sustain research engagement (McLaughlin, Hawkins et al. 2006). Research into the type of system leadership required for the FE and skills sector is an avenue of much promise and developments in terms of skills eco-systems help to connect the value of Further Education to wider societal benefits. This is fertile territory for a 21st century FE and Skills sector.

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Endnotes

[i]Literature in this area comes from a number of domains, including research from:
industry and technology Finegold, D. (1999). "Creating self-sustaining, high-skill ecosystems." Oxford review of economic policy**15**(1): 60-81.

, workforce development Hall, R. and R. D. Lansbury (2006). "Skills in Australia: Towards workforce development and sustainable skill ecosystems." Journal of Industrial Relations**48**(5): 575-592.

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, education Armitage, D., et al. (2012). "The interplay of well-being and resilience in applying a social-ecological perspective." Ecology and Society**17**(4): 15.

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For our purposes, ecosystems research can be applied to an understanding of the system as a whole and its sub-levels; the study of skills ecosystems and system leadership.

First, some key concepts are provided below:

Ecology has been defined as the:

*"study of the inter-relations of living systems and the environment. Human ecology is study of humans and their relationship to the environment"*Western, S. (2013). Leadership: A critical text, Sage.

Eco-systems refer originally to the biological study of organisms:

*"Ecosystems are complex adaptive systems that require flexible governance with the ability to respond to environmental feedback"*Olsson, P., et al. (2004). "Adaptive comanagement for building resilience in social–ecological systems." Environmental management**34**(1): 75-90.

Eco-system theory also provides a global framework for understanding the whole system. Urie Bronfenbrenner first applied this theory to the fields of educational research and child development.

To understand the child, he suggested the need to take into account a nested system of levels that learners inhabit. These were:

The micro-system: The immediate setting of the learner, such as the school, home, classroom, family; the activities taking place here and the roles, seen over time.

The meso-system: These comprise the inter-relationships among the major settings containing the learner, such as interactions among family, school or peer group

The exo-system: This extends from the meso-system and contains major institutional structures such as the world of work, different levels of government and mass media

The macro-systems: These are the overarching institutions of education, society, politics and legal systems of which the other levels are the concrete manifestation. These are *"carriers of information and ideology that, both explicitly and implicitly, endow meaning and motivation to particular agencies, social networks, roles, activities, and their interrelations"*Bronfenbrenner, U. (1976). "The experimental ecology of education." Educational Researcher: 5-15.

Bronfenbrenner developed his thinking over years of scholarship, later adding the **chrono-system** to take into account the dimension of time across each level of the eco-system. This could include thinking about historical changes in the macro and exo-systems, such as patterns of reform and policy and changes over time that affect the nature of the micro and meso-levels, for example a learner's developmental stage or family circumstances. Bronfenbrenner, U. (1999). Environments in Developmental Perspective: Theoretical and Operational Models. Measuring Environment Across the Lifespan: Emerging Methods and Concepts. S. L. Friedman and T. D. Wachs. Washington DC, American Psychological Association Press**:** 3-28.

[ii] The eco-system approach offers a clear ontology of the dynamic world in which learners and workers exist and, adapting Bronfenbrenner's levels, allows for an analysis of the system and its horizontal and vertical connectivity. Bronfenbrenner, U. (1979). The ecology of human development, Cambridge, MA: Harvard University Press.

[iii]Generational trends in the lives of workers and learners have brought about new attitudes, skills and priorities. One aspect of this is the emergence of a so-called 'Millennial' generation, who:

- Leave home, have children and buy a house later
- Prefer flatter leadership structures
- Show less deference to authority and more likely to require people to earn their trust
- Prioritise flexible working hours and effective use of time

Wilson, R., et al. (2014). Leadership design: a guide to leadership and development in the education and skills sector. The Education and Training Foundation and OSCA.

[iv] New learning technologies, such as Massive Open Online Courses (MOOCs) call for new conceptions about pedagogy including: knowledge management theories that explain the link between individual and organizational learning; an understanding of the role of technology in supporting the learning process; and supplementing know-how and know-what, with know-where (how to find the knowledge needed) Siemens, G. (2014). "Connectivism: A learning theory for the digital age." Retrieved 28/07/15: , from http://www.itdl.org/Journal/Jan_05/article01.htm.

[v] Younger generations are also more likely to be familiar with, and come to expect communication styles that involve digital technologies. Research has also shown that students may have higher 'digital confidence' than their own teachers, reaching a peak at age 15-16 and declining in later adulthood.

The experience of lifelong learning has changed in a number of ways:

- Many learners will move into a variety of different, possibly unrelated fields over the course of their lifetime.
- Informal learning is a significant aspect of our learning experience. Formal education no longer comprises the majority of our learning. Learning now occurs in a variety of ways – through communities of practice, personal networks, and through completion of work-related tasks.
- Learning is a continual process, lasting for a lifetime. Learning and work related activities are no longer separate. In many situations, they are the same.
- Technology is altering (rewiring) our brains. The tools we use define and shape our thinking.

    Ibid.

[vi] There is evidence of greater priority being given to Upper Secondary Education (USE) across the world due to the increasingly competitive global market for skilled labour. Hodgson, A. and K. Spours (2014). "'Heavy Fog in the Channel—Continent Cut Off': Reform of Upper-Secondary Education from the Perspective of English Exceptionalism." European Educational Research Journal **13**(6): 683-698.

    Four international trends in USE have been identified:

1. Movement towards increased participation in USE
2. Academic and vocational education coming together
3. Movement towards more centralized accountability and assessment
4. Concern for improving pedagogy and the integration of information and communication technologies (ICT)

Ibid.

[vii] The ways in which different nations have developed upper secondary education has varied. Sahlberg, P. (2007). "Secondary Education in OECD Countries. Common challenges, differing

solutions." <u>Documento presentado en el Seminário Internacional sobre Ensino Médio Diversificado. Brasilia</u>**17**.

Sahlberg suggests three broad types of USE models around the world:

- Anglo Saxon (e.g. USA, England, New Zealand, Eastern Europe and now Africa) – markets, choice and competition; standardisation of teaching and learning and test-based accountability;
- Pacific (e.g. South Korea, Taiwan, Hong Kong, Singapore and now China) – authoritarian/ conformist; high levels of parental/social support for education; didactic teaching methods; high expectations and normative behaviours;
- Nordic (e.g. Finland) – a high-status education profession; high trust relationships; devolved responsibilities within broad national frameworks; an emphasis on links between education, social services and localities linked to school improvement.

Hodgson, A. and K. Spours (2014). "'Heavy Fog in the Channel—Continent Cut Off': Reform of Upper-Secondary Education from the Perspective of English Exceptionalism." <u>European Educational Research Journal</u>**13**(6): 683-698.

[viii] Within these broad international groupings, USE systems also vary in terms of the extent to which academic and vocational learning is integrated or divided. The English system bucks the international trend, including Scotland and Wales, towards further unification.

While other countries have separate tracks for vocational and academic programmes, such as France and the Netherlands, these also have a range of requirements to study areas of general education within a baccalaureate system IPPR (2015). Moving on up: Developing a strong, coherent upper-secondary education system in England. London, Institute for Public Policy Research.

The recent UK coalition and now Conservative governments have tended to strongly divide academic and vocational learning, with schools being responsible for the former and FE colleges, employers and other independent providers delivering the latter. In England, this division is particularly reinforced by reforms to academic qualifications; changes to GCSEs and A level examinations reinforce traditional knowledge acquisition, while on the vocational side, the number of work-based apprenticeships has been significantly increased. The English curriculum at USE also remains particularly narrow compared to other national systems. For example in Denmark, students take at least 13 subjects between the ages of 16 and 19, while in Finland, young people choose within a selection of eight areas of the curriculum ibid.

A report by the Institute for Public Policy Research recently called for greater coherence to the English USE sector, with core learning requirements and consistent standards, literacy and numeracy to be developed throughout the 14-19 phase for all, requiring skills to tackle complex problems, critically and independently and with a personal and community development element. The IPPR suggested that this would need to be backed up by stronger devolved responsibilities and coherence in an accountability structure that shifted focus to achievement at 18, rather than at 16 and fairer distribution of funding to learners 16 and over ibid.

[ix]

[x] Hodgson and Spours suggest four key principles for reforms to the UK Upper Secondary Education sector:

1. A unified curriculum and qualifications framework
2. Strong local collaboration between institutions and the social infrastructure
3. A collaborative professional culture, including peer review and communities of practice focused on teaching and learning

Strong devolved governance, that support career development and coordinates local services

Hodgson, A. and K. Spours (2014). "'Heavy Fog in the Channel—Continent Cut Off': Reform of Upper-Secondary Education from the Perspective of English Exceptionalism." European Educational Research Journal**13**(6): 683-698.

Ibid.

[xi] Part of the issue may be that the portrayal of the 'skills shortage' has been one sided, looking more at the 'supply' of skilled workers to employers and their supposed dissatisfaction at this. Taking a different viewpoint, Ewart Keep argues that a) robust evidence shows relatively high levels of satisfaction by employers and b) points to the increase in participation of learners in Further and Higher education in the UK. He goes on to say that there is evidence that many workers are over-qualified in a market that has a preponderance of low paid, low skilled jobs and that many STEM graduates choose to go into un-related careers. The lack of up-take of STEM careers may also be due to the perception that these are poorly paid, offer less satisfaction and are less glamorous than alternatives open to well-qualified graduates. One suggestion is to shift the debate away from the supply side to the employer 'demand' side.Keep, E. (2012). "Education and industry: taking two steps back and reflecting." Journal of Education and Work**25**(4): 357-379.

Arguably, the private sector has relied heavily on tax payer funded training and should contribute more financially to adult and continuing training. Many more apprenticeships need to be offered by employers in the UK (only 10% do so, compared to 25% in Germany). Employers should also demand more qualifications, as the UK has a high number of vacancies that require none or very few. Finally, employers do not take enough of a role in the design of apprenticeships, often out-sourcing this ibid.

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[xii] One strategic alliance of Sixth Form Colleges has reacted to this inequitable funding climate by commissioning a report to demonstrate the success, and value for money, of the sector emsi (2014). Demonstrating the value of the Maple Group of Leading Sixth Form Colleges. Analysis of the Social and Economic Impact of Learning.

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[xiii]In 2013, The Commission on Adult Vocational Teaching and Learning (CAVTL) published a summary report. This set out a vision for the sector to provide first class teaching and learning. Key characteristics of adult vocational teaching included the need for a 'clear line of sight to work'; 'dual professional' teachers who combine pedagogical and occupational expertise; access to industry-standard facilities and clear routes to higher level vocational training [xiii]

A year on from the report, its author points to 'good progress', including £5million in contracted investment on improving the quality of vocational teaching and learning and 60 colleges reviewing their provision according to the CAVTL guidance McLoughlin, F. (2014). "CAVTL: Commission on Adult Vocational Teaching and Learning: one year on review."

. The priority of moving towards a 'two-way street' between the ETS sector and employers is identified as an ongoing, long term vision that requires "concerted action by BIS (The Department for Business, Innovation & Skills), the ETF and the UK Commission", in order to avoid "reverting to previous polarities" ibid.

. Other areas of progress to build on include the development of new professional development of teaching and vocational pedagogy, including 'Teach Too' to train up industry experts and a maths teacher recruitment scheme. In the planning phase, the report cites a programme to support leadership of VET, especially the outward-looking dispositions needed to build effective partnerships with employers ibid.

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[xiv]The Further Education Learning Technology Action Group (FELTAG) set up a programme to enhance the use of learning technologies ibid.

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It set out a number of challenging recommendations:

1. Keeping up to date with technology (Horizon Scanning)
2. Fast and agile procurement of IT infrastructure
3. Regulation that does not inhibit innovation and use of ICT
4. Building the capacity and knowledge of the entire sector's workforce in relation to technology
5. Building employer – FE digital partnerships
6. Exploit the skills and digital resources of learners

FELTAG (2014). Paths Forward to a digital future for Further Education: Recommendations. F. E. L. T. A. Group. London, www.feltag.org.uk.

The FELTAG suggest that the use of learning technology could become a distinctive aspect of FE pedagogical identity, involving online communities of practice; practical problem-solving and critical reflections on experience; using a range of assessment practices; operating across several settings and engaging in context-based and collaborative tasks that match the changes in the work environment ibid.

However, a recent report by Eduserve has highlighted the struggle for the FE and Skills sector to meet these technological targets, including the one set by FELTAG for 10% of all courses to be made available online. The report found that colleges struggled to afford the commercially available resources and had inefficient procurement strategies. Staff were frequently not well engaged in the use of new technologies and there was also concern that ICT was introduced carefully, in ways that led to improvements in pedagogy and learning, rather than as a gimmick or response to government demands. One of the proposed solutions to these barriers was to collaborate with other FE and HE providers to shared services and purchasing arrangements Eduserve (2015). A digital student learning experience: How can the Further Education sector deliver increased digital learning resources against the backdrop of budget cuts? A research report by Eduserve. Eduserve. London.

[xv]In March 2015, The Department of Business Innovation and Skills (BIS) awarded the contract for the Centre for Vocational Education Research (CVER) to the London School of Economics, to be led by Dr Sandra McNally from the LSE and based at its Centre for Economic Performance. The ambition of the CVER is to create a world-class workforce of the future by "Creating new ideas for skills provision, rooted in analysis and rigorous research"[xv]. In addition, FETL have established funding for research fellows and research grants to find innovative solutions to leadership issues in FE. ETF have also committed to supporting research and development, including funding research into engaging learners in GCSE, supporting Joint Practice Development and compiling FE workforce data.

[xvi] In one such report, commissioned by ETF, CFE research interviewed 15 experts and practitioners from H.E., F.E. and Business and public sector organisations and combined their comments with an overview of the literature on leadership Hughes, T., et al. (2014). Leadership insights from beyond the sector. The Education and Training Foundation, CFE research.

Three overall typologies were examined:

- Distributed leadership
- Systems leadership
- Context-sensitive leadership

Grouping together the varied definitions and variations of **distributed leadership** (e.g. shared, co-leadership, collective and collaborative leadership), the authors of the CFE report cite a review of the literature that identifies three characteristics of these models:

- Distribution of leadership away from the top of an organisation to incorporate other levels and/or individuals: The boundaries of leadership are expanded. Therefore individuals or groups from different layers of an organisation may have at least some leadership responsibility.
- Interaction from multiple actors: This includes the sum of leadership input from more leaders, and also the net product of their efforts, which is greater than the sum of their own individual actions.

- Plasticity and sharing of inputs: This involves shared expertise, knowledge and practices within a collaborative culture. The experience and skills of leaders may vary across the organisation, but individual input is shared and adopted, and improved collectively

Bennett, N. (2003). Distributed leadership: a review of literature carried out for NCSL, National College for School Leadership.

Distributed leadership can also be seen as normative, i.e. an organisational ideal to aspire to, to encourage greater density of leadership throughout the organisation, increase knowledge mobilisation, staff motivation and the effectiveness of decision-making Hughes, T., et al. (2014). Leadership insights from beyond the sector. The Education and Training Foundation, CFE research.

It also addresses the need to reduce the workload for senior leaders and to reduce the number of managers in relation to frontline staff ibid.

Encouraging 'multiple leadership' has been shown to be effective in raising student achievement in school contexts Leithwood, K., et al. (2008). "Seven strong claims about successful school leadership." School leadership and management**28**(1): 27-42.

However, the role of formal leaders in creating an environment in which distributed leadership can occur is vital and is unlikely to occur when a Principal is resistant to such a model Bush, T. and D. Glover (2014). "School leadership models: what do we know?" School Leadership & Management**34**(5): 553-571.

The idea of *system leadership* has gained much ground in relation to the education sector, arising from to the idea of a 'self-improving system' Hargreaves, D. (2010). Creating a self-improving school system, Nottingham, National College for Leadership of Schools and Children's Services.

, Hargreaves, D. H. (2011). "Leading a self-improving school system."

Such a system is characterised by: Clusters of schools (structure); local solutions and co-construction (culture) and systems leadership (people). Focusing on educational 'systems' has arisen by a large degree of consensus among academics internationally that successful reforms are not possible when directed at fragmented parts of the whole or without a need to see how such changes will be sustained Hargreaves, A. (2000). "Four ages of professionalism and professional learning." Teachers and teaching: theory and practice**6**(2): 151-182.

System leadership generally describes "efforts to align different services in order to achieve holistic outcomes for disparate, often marginalised, communities and users" Greany, T., et al. (2014). Leading in volatile times: learning from leadership beyond the Education and Training sector. Final Report, The Education and Training Foundation and the Institute of Education.

For leaders, such as Principals of colleges or Head teachers in schools, this essentially means taking on responsibilities that extend beyond the immediate needs of their organisation. System leaders have three core capabilities: The ability to see the larger system, to foster reflection and generative conversations and to shift from reactive problem-solving to co-creating the future Senge,

P., et al. (2015). "The Dawn of System Leadership." <u>Stanford Social Innovation Review</u>**24**(Winter): 27-33.

Given the nature of ***contextual differences in leadership*** that the FE and Skills sector faces, the ETF commissioned a review of leadership development that took into account numerous case studies from the private and public sector Wilson, R., et al. (2014). Leadership design: a guide to leadership and development in the education and skills sector. The Education and Training Foundation and OSCA.

Regarding the challenges facing the globe and the ETS sector specifically, Specific aspects of leadership were identified and programmes and tools for how they can be audited and developed. These include: 'agile leadership' Joiner, B. (2009). "Creating a culture of agile leaders: A developmental approach." <u>People and Strategy</u>**32**(4): 28.

, 'emergent leadership' Mintzberg, H. (1987). <u>Crafting strategy</u>, Harvard Business School Press Boston, MA.

, 'transformational leadership' Mezirow, J. (2000). <u>Learning as Transformation: Critical Perspectives on a Theory in Progress. The Jossey-Bass Higher and Adult Education Series</u>, ERIC.

, open leadership Li, C. (2010). <u>Open leadership: how social technology can transform the way you lead</u>, John Wiley & Sons.

, anti-heroic leadership Wilson, and innovation led leadership Schmidt, E. (2010). "Google's CEO on the Enduring Lessons of a Quirky IPO." <u>Harvard Business Review</u>**88**(5): 108-112.

In order to reduce the complexity of this array of possible leadership development programmes, a typology is proposed from the report, that classifies leadership development in terms of: i) informational learning ii) informational learning and personal reflection (reflective) or iii) informational learning plus personal development (transformational) Wilson, R., et al. (2014). Leadership design: a guide to leadership and development in the education and skills sector. The Education and Training Foundation and OSCA.

The authors also suggest a matrix for when to apply what type of leadership development that takes into account whether the programme is designed for a) senior leaders b) organisational (distributed) leadership c) complicated problems (puzzles where problem is agreed) or d) complex problems (tricky issues with no agreement what the problem is ibid.

The point is that leadership approaches, rather than being globally defined or stable for individuals to apply across the board, may require traits and strategies that are appropriate for different purposes and in different *contexts.*

Such typologies may serve a useful purpose. The plethora of leadership styles proposed from beyond the sector reflect a mix of those that are well established and have some firm empirical backing and others that do not. Some proposed models outside of the sector may be worth considering, although these may reflect the focus of a particular organisation. The challenge is to begin to evaluate new approaches in the context of FE leadership challenges.

[xvii] A group of 'time travellers', drawn from colleges, private learning and skills providers, local authority community learning providers and 'third sector' charities and not for profit providers, were asked to imagine future outcomes for these four issues at a national level. For each issue, this group had to imagine a potential positive and negative outcome. Some of the potential **positives scenarios** are outlined below for each:

1. The use of technology

A future was envisaged in which gaming and simulation technology has radically transformed learners' experiences. Teaching is now more about coaching and mentoring and arranging peer support groups than traditional transmission approaches. Students' knowledge of information technology (IT) is harnessed for the benefit of all learners, through the appointment of 'e-ambassadors'. Online courses provide great flexibility for mode of study and webinars, voice over the internet (VoIP) providers (e.g. Skype) enable geographically spread national and international participation and collaboration.

2. Managing the supply of learning and responding appropriately to demand

Imagining a future where FE is given a high priority by successive governments, the outcomes involve an integrated vocational curriculum, in which schools have positive relationships with the sector and pupils are offered an FE delivered, employer sponsored 14-18 option. Improved careers guidance help generate interest in technical and practical careers. In addition, the FE sector provides a range of course units, of different sizes and length to help meet consumer needs. A marketplace of suppliers, informed by online evaluations along the lines of Amazon and eBay drives consumer choices for a range of options and quality improves through intense competition. Sites for courses are more diverse and dispersed, with lower capital costs.

3. Public service reforms

Here, the 'time-travellers' imagined a dynamic and flexible sector where the private sector plays a significant role and local democracy helps to contribute to a flourishing local enterprise. In this future scenario, there are fewer FE colleges but plenty of smaller providers and voluntary sector involvement. Partnerships thrive and take into account the range of organisations, including UTCs (University Technical Schools) and free schools. An integrated system of qualifications simplifies the system for learners and allows for routes that include the work place. New college principals are 'group chief executives' who 'spend much of their time creating learning opportunities outside their institutions, fostering education wherever it is needed and can be most effectively delivered." An agile system, driven by diverse sources of funding and flexibly delivered local curricula holds itself accountable, rendering Ofsted largely obsolete.

4. Social inequality

Part of this future vision entailed seeing a re-birth of local activism and citizenship. Thus, education supply responds to such demands, helping to drive from demand upwards (pull as much as push). An integrated government policy takes into account community outcomes, such as numbers of young NEETS (Not in Education Employment or Training) as much, or more so than prescribing particular forms of curricula. Investing in learning is commonplace and draws in funding from government, grants, loans, sponsorship and a variety of innovative new forms.

Sherlock, D. and N. Perry (2013). "Further education in 2020: making the system work." 157 Group.

xviiiIn a 'future vision' exercise, ETF and the 157 group commissioned a 'leadership conversation' involving conversations with sector leaders, an online crowd sourcing exercise to imagine what the future may hold by the year 2025, a brainstorm of challenges for the sector leadership and the production of a number of video think pieces. The report produced a sector perspective on excellent leadership and a framework designed to apply to leadership attributes across teams and organisations rather than single, heroic leaders. Some traits such as resilience, effective people management and excellent communication might equally apply to leaders in most domains, and the "commitment to addressing learner's needs and supporting successful outcomes"

157Group (2014). Leadership Conversation summary report, The Education and Training Foundation.

xix Recent international comparative work examining 'leadership of place' in schools in the UK, South Africa and the US throws light on provides a framework to explore the context in which teaching and learning takes place Riley, K. (2013). Leadership of place: Stories from schools in the US, UK and South Africa. London, Bloomsbury.

Riley's research opens up the world of the learner and brings into sharp focus the myriad of issues faced by learners such as local ethnic tensions, gang violence, economic uncertainty and the challenge of adapting to a new life as a recent immigrant. The point about the word 'place' is that it

She thus sets a challenge for school leaders (equally applicable (and overlapping) to leaders of the FE and Skills sector), which is to:

- build connections in the community and between communities
- Provide a safe place for learners
- Challenge the voices emanating from parts of the community (e.g. towards crime/violence/being cool)
- Help young people to break the link with community

Kathryn Riley's concept of place and belonging applies well to those working in the sector, supporting and teaching learners, leaders of institutions and learners themselves. Her work offers four levels of 'reality' that have been used to drive the work of school leaders and also to provide a framework for learners to research their own places and to influence them. These are:

- **The physical reality.** This includes aspects of the built environment and the infrastructure that affects the daily lives of learners, including transport links
- **The social and political reality.** This takes into the reality of young learners' lives at home and in their communities. It may include issues of poverty, instability and neighbourhood tensions.
- **The emotional reality**. Learners and leaders who work in the community may experience anger, frustration or exhaustion based on their life experiences.

- **The spiritual and ethical reality.** This may be about a commitment to social justice or this may be driven by religious affiliation. Value systems underpin people's motivations and decisions and affect everything they do and feel.

[xx] This level concerns those elements that have an indirect effect beyond the immediate environment of the learner. Essentially, this refers to the local community or the region within which colleges or other ETS providers are located. This level has been sub-divided for the purposes of examining local learning ecologies and skills ecosystems FE into **Exo-1 and Exo-2. Exo-1** comprises the local geography, community, traditions, institutional arrangements, travel to learn patterns, 14+ provision, curriculum offer and other social partners, including the local authority. **Exo-2** comprises relationships at the local and sub-regional level, such as the local labour market, training providers, regional agencies and further and higher education institutions Hodgson, A. and K. Spours (2015). "An ecological analysis of the dynamics of localities: a 14+ low opportunity progression equilibrium in action." Journal of Education and Work**28**(1): 24-43.

The challenge is how to generate, sustain and grow successful local learning and skills eco-systems.

[xxi]LEPs and Smart Specialisation
The UK Government's Department for Business, Innovation and Skills last 'innovation report , in March 2014 commented that:

BIS (2014). Innovation, Research and Growth. London, Department for Business Innovation and Skills.

"Innovation is systemic. Although competition is essential to create the incentives for businesses to innovate, formal or informal patterns of collaboration are also frequently found across innovating businesses. 'Open innovation' where firms and other stakeholders collaborate to develop new ideas is an area of increasing policy interest. This is because innovation entails problem-solving, and this frequently involves problems that are outside the existing capabilities of businesses."
However, the report also describes innovation as: "the application of knowledge to the production of goods and services". In a search for the term 'ecosystem' both uses of the word came in the context of opportunities within the global market. Thus the international dimension is considered. Areas of investment and collaboration that may favour the UK economy are cited in the BIS report as: bio-technology, transport and transport planning, energy technology, future cities, agri-tech and advanced manufacturing.
The smart specialisation report gives numerous examples of how R&D is being mobilised in campuses, supported by Innovate UK funding (e.g. Harwell Science and Innovation Campus) and case studies of successful local clusters called 'Catapult Centres', that benefit from funding to support the growth of technologies where the UK is likely to have a significant international advantage. Examples given include ones developing transport systems in Milton Keynes, Renewable Energy in Glasgow and Connected Digital Economy in London

BIS (2015). Smart Specialisation in England. London, Department for Business Innovation and Skills.

[xxii] An important catalyst for high tech sectors is funding for research and development, this helps to begin the process of concentration of firms in an area and also to take up some of the risks that private firms may not be able to sustain in the early stages of technological development. A key nourishing factor was considered to be a large pool of talent, some of which was drawn in from other countries. A supportive host environment was often created by ensuring the industrial-relevant infrastructure was in place and also in ensuring that the regulatory framework supported growth and innovation. A high degree of interdependence was the element that set an 'eco-system' aside from other clusters.

[xxiii]**London case study of a successful eco-system**

A recent report by Nesta/CITIE in collaboration with Accenture and the Future Cities Catapult looked at how cities can be made more innovative and entrepreneurial. They looked at 40 major world cities and carried out extensive analysis of nine roles that cities can play to support innovation and entrepreneurship CITIE (2015). City Initiatives for Technology, Innovation and Entrepreneurship: A Resource for City Leadership. J. Gibson, M. Robinson and S. Cain. London, Nesta, Accenture and Catapult Future Cities.

These nine roles were grouped into three areas: openness, infrastructure and leadership. In terms of these indicators, London was second only to New York and in the top tier of the cities studies. For Openness, this looked at regulation of companies; being an advocate for itself and in the procurement of business and innovation. On this indicator, it was the top ranked city in the research. For Infrastructure, London was in the top tier as host and investor in business and innovation but in the second tier as a 'connector', trailing behind cities such as Amsterdam, Helsinki and Paris. This element looked at the extent to which free Wi-Fi and high speed internet connectivity was in place as well as cycling and public transport infrastructure. Lastly, in terms of the leadership dimensions: strategist (a clear direction and capability to support innovation), digital governor (using digital channels to engage with citizens) and datavore (using data to provide information that supports and optimises innovation). Here, London was in the second tier as strategist, the third tier as digital governor and in the top tier for use of data ibid.

While lagging behind in some areas of leadership and connectivity (especially digital), London is highlighted as a 'front runner' overall.

CITIE (2015). City Initiatives for Technology, Innovation and Entrepreneurship: A Resource for City Leadership. J. Gibson, M. Robinson and S. Cain. London, Nesta, Accenture and Catapult Future Cities.

[xxiv] To account for the complexity within eco-systems, the ecological professional would be a nuanced concept. Five 'ecological registers' have been identified from the literature on ecology and these show how professionalism in the ETS sector can be understood.

i) The ecology of the professional self: understanding professional identity or identities
ii) The ecology of the client relationship: the trust, motivations and allegiances that hold this relationship together
iii) The knowledge ecology of professionalism: the forms or knowledge needed in different context and the existence of dominant and emerging types of knowledge
iv) The ecology of the professional environment: this includes the dynamics within and across organisations and those made across technological, physical and societal boundaries
v) The discursive ecology of professionalism: i.e. the type of knowledge domain, such as from ethics, organisational studies, philosophy, psychology or economics

Barnett, R. (2011). "Towards an ecological professionalism." Professional responsibility: New horizons of praxis: 29-41.

[xxv] One study has expanded the notion of system leadership using an ecological perspective, in the context of the diffusion of innovations across school clusters in Singapore Toh, Y., et al. (2014). "Ecological leadership: Going beyond system leadership for diffusing school-based innovations in the crucible of change for 21st century learning." The Asia-Pacific Education Researcher**23**(4): 835-850.

They identified in their case studies, a number of ways of *leveraging change* that cut across the five subsystems (Macro, Exo, Meso, Micro and Chrono). These 'linchpins' were afforded by leadership practices that were at times "philosophical (self-referentiality), pedagogical (twenty-first century learning), structural (infrastructure, financial, temporal), political (converging discordant interests), technological (provisions) and socio-cultural (sense-making) in nature" ibid.

Thus, they were outlining emergent properties of leadership rather than specific characteristics of leaders. These properties give a new perspective on system leadership, where heroic, single leaders with charisma and positional influence are not the only movers and shakers. They also observed that: