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Evolving Ecosystems for Encouraging, Supporting and Recognising the Lifewide Development of Students' in the UK Higher Education System

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Introduction

> *The theme of our conference this year is "Frameworks to encourage, support and recognise the lifewide formation of students." From my side, I would appreciate your consideration of a keynote address on a topic along the lines of "The step from encouraging to officially recognizing the lifewide formation of students: challenges and solutions." email Chris Picone 3 August 2016*

Norman: This generous invitation to me to provide a keynote contribution to the International Conference On Learning and Community Enrichment got me thinking about the journey we are on in UK HE towards the goal that Chris alluded to in his email. I suppose it's all a matter of perception in that there might be simple solutions to this challenge but the more I thought about it the more I saw it as part of a complex web of developments in the continually unfolding story of how a society shapes its educational institutions and systems in order to prepare learners for their unknown and unknowable future. A future in which harnessing the affordances in the lifewide dimension of their life in order to achieve and sustain themselves and their society will be the major lifelong challenge for most people.

This journey towards the recognition that the formation of people takes place through all the affordances they have and use in every part of their life - not just those parts of them that engage in formal education and training is a journey that is bound up and embedded in all manner of social, political and economic change. Recognising the lifewide formation of students is emerging as a natural consequence of trying to create a higher education system that fulfill the needs of learning in the 21st century and help and enable people to prepare for the turbulent 'white water' world they will surely inhabit.

This background paper has been prepared in collaboration with a friend and lifewide learning ally - Rob Ward who has spent a large part of his career in education helping higher education work towards the goal set out in the opening statement. Like me, Rob thinks systemically and ecologically ie thinking that embraces and connects the big picture and the practical detail.

We set out to do two things, firstly, to create a conceptual framework for viewing higher education as an ecosystem - more accurately a constellation of evolving ecosocial systems that interact and change over time. There are currently about 160 higher education institutional ecosystems in the UK higher education ecosystem and each one is evolving along its own unique trajectory along with numerous 'other organisational agents' that contribute to and influence the ecosystem as a whole.

The second purpose is to show how the UK higher education ecosystem has evolved and is evolving to encourage, support and recognise what we term 'lifewide learning and development' (Jackson 2011a). By this we mean educational approaches that encourage, support and recognise that people develop themselves through all aspects of their life not just those parts that involve them in formal education or training. Why is this important? It's important because we both believe that the purpose

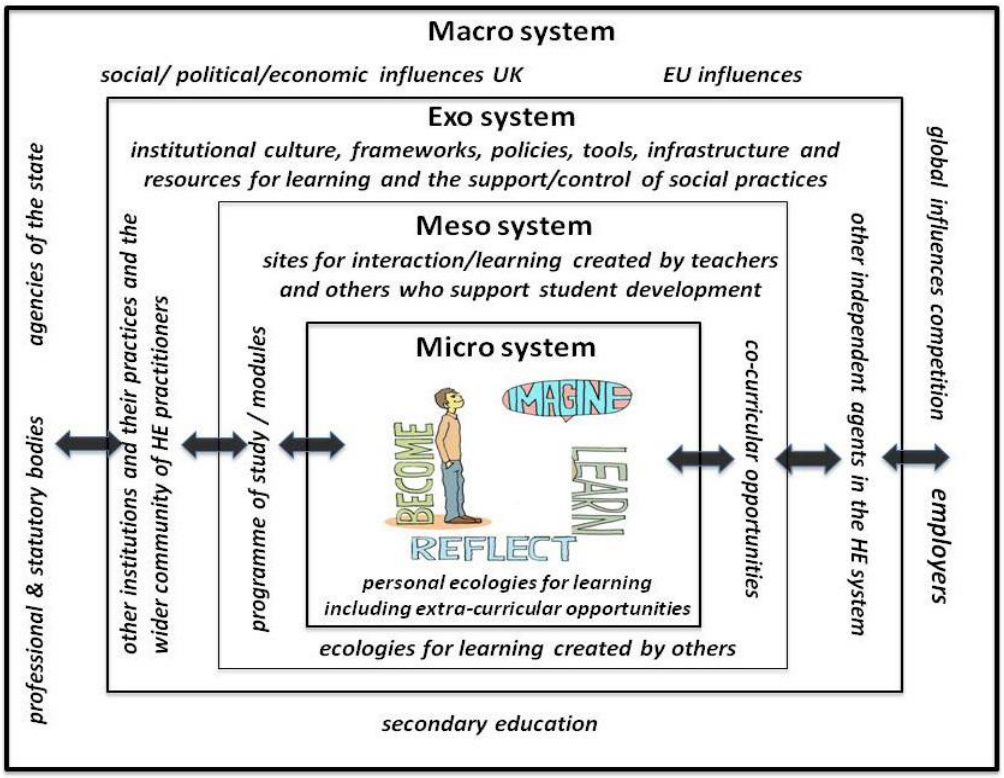
of a higher education is not just to prepare people for their first job/professional role (as seems to be promoted in the employment metrics of the soon to be introduced Teaching Excellnce Framework), rather it is to help and enable people to prepare for the unknowable, challenging, ever changing and often disruptive world they will inhabit for the rest of their life.

Conceptual framework for viewing Higher Education as a complex ecosystem

Urie Bronfenbrenner, a developmental psychologist, introduced his ecological paradigm for interpreting human development, 'in order to understand human development, one must consider the entire ecological system in which growth occurs' (Bronfenbrenner 1994:1643).

Bronfenbrenner's work culminated in his theory of ecological systems (Bronfenbrenner 1999). His conceptual framework highlights the nested nature of ecosocial systems. A personal interpretation of his model, in the context of UK higher education, is provided in Figure1.

Figure 1 Personal interpretation and representation of Bronfenbrenner's model of the nested structure of ecosocial systems. The ecosystem comprises PEOPLE interacting with other PEOPLE in their unique institutional environments each with their own cultures, policies, structures and infrastructures, to engage in social practices (teaching, mentoring, coaching and other means of supporting students' learning and development). Each level of the ecosystem interacts with the level above and below. It must also be appreciated that the UK higher education ecosystem is open to influences from the global ecosystem of higher education ecosystems.



A) The *microsystem* embraces all the situations and circumstances of an individual's life. This is the level at which we encounter situations, make decisions and plan what to do and how to do it and the level at which we act and use our capability (everything we know and can do) to deal with a situation. This is the level at which we reflect on our experiences and the effects of our actions. This is the level at which we create our own ecologies for learning, developing and achieving (the focus of my second conference contribution).

B) The *mesosystem* encompasses the interactions of people with particular physical and social settings like school, college, university and work. It involves students' relationships and interactions with their teachers and others who support their learning. In the context of a university course or programme its the level at which students fit into ecologies for learning and achieving that their teachers are creating. It's the level at which guidance and tools are provided to help learners fulfil the requirements for their programme. Appropriately organised activity in the mesosystem enables people to learn more and learn more effectively in their own microsystem.

C) The *exosystem* is the ecological level at which an institutional culture, policies and practices impacts the affordances for students' learning and development, at the mesosystem level of the course or wider learning experience. For example an educational institution might adopt a lifewide concept of learning and personal development and develop the frameworks to enable learners to gain recognition for achievements in the different parts of their life, not just their academic course. They might also develop tools like e-portfolios to encourage and enable learners to record their experiences and develop policies that encourage educational practices that value reflection.

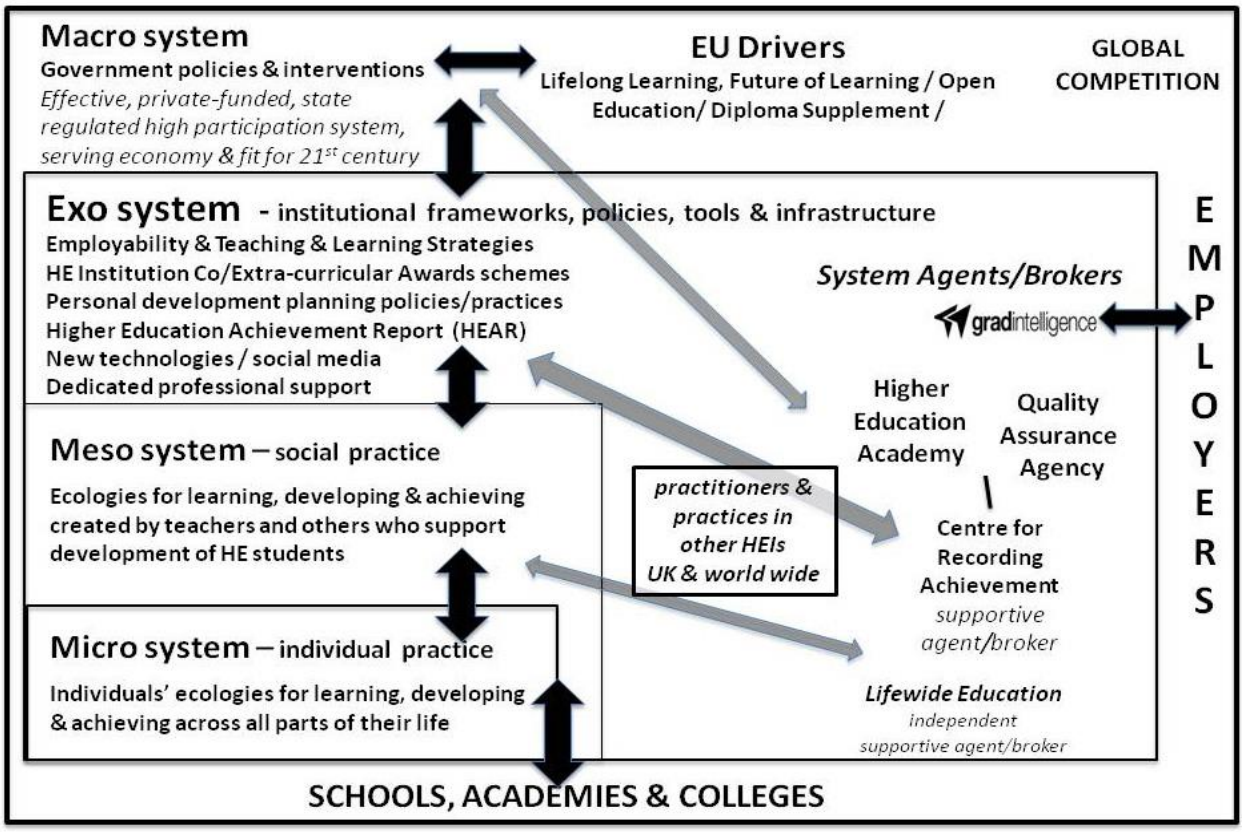
Ellis and Goodyear (2010) develop a compelling narrative for viewing the university as a large complex ecosystem involving all the relationships and interactions of all the inhabitants - students, teachers, researchers, support and administrative staff, managers and leaders, and their connections with employers and society more generally, and the resources, physical spaces and virtual environments, processes and practices that are played out day to day. A university ecosystem includes its culture which Seel suggests 'is the emergent result of the continuing negotiations about values, meanings and proprieties between the members of that organisation and with its environment - in other words culture is the *result* of all the daily conversations and negotiations between the members of an organisation about the way we do things [or perhaps would like to do things!] here'. Written and unwritten rules, procedures and policies that govern and control behaviour within which social (educational) practices are constructed.

D) The *macrosystem* is the wider society in which the educational institutions and enterprises of the exo- and meso-system are located. It includes the socio-economic, cultural and political contexts within which all activities are undertaken and includes government policies and strategies for promoting and supporting a citizens right to learn. In the case of the UK our macrosystem also includes the political and economic influences of the EU which is very active in the formulation of strategies for education and training, lifelong learning and open learning.

The ecosystems model highlights the connectivity and interdependence of the different parts of a higher education system and the society within which it is located. While the ecosystems can be mapped at any point, these points lie on a trajectory of change. Bronfenbrenner introduced the idea of chronosystem to represent all the changes in an individuals microsystem but the idea applies to change at any of the four ecosystem levels.

The higher education ecosystem has evolved to support a range of social practices and learning enterprises for example it supports very well what might be termed discipline-based academic learning and student development and disciplinary research and scholarship. In fact higher education institutions within this ecosystem are the primary vehicles for sustaining the disciplines in our society. But the ecosystem also contains features that encourage, support and recognise other forms of learning and development. For example, the development of learners as enterprising, employable graduates. In this article we focus specifically on the features of the ecosystem, at the macro- and exosystem levels of Bronfenbrenner's ecological systems model, in order to examine the ways in which the ecosystem is evolving to encourage, support and recognises students' development through their lifewide learning experiences (summarised in Figure 2).

Figure 2 Representation of key features of the ecosystem within which social practices relating to lifewide learning are being developed and enacted. The nested structure of the ecosystems is based on the framework developed by Urie Bronfenbrenner (1994 & 1999) and Figure 1



Current UK ecosystem for encouraging, supporting and recognising students' lifewide learning, development and achievement

Using the ecological framework outlined above we can recognise certain features in the higher education ecosystem that encourage, support and recognise students' lifewide learning, development and achievement (Figure 2).

The **macrosystem** contains Government policies and interventions, and EU political influences that have reshaped higher education in ways that give more meaning and substance to the recognition and representation of student development in a more comprehensive and explicit way than was the case in the past. The evolution of these policies and interventions will be considered later. It also contains the economy and the employers who are seeking a well educated and motivated workforce, and the secondary education system that provides learners for the tertiary system.

The **exosystem** contains the *institutional frameworks, policies tools, infrastructures and resources* that encourage, support and recognise lifewide development of students is the result of over two decades of Government intervention shaped and informed by thinking and policies emanating from EU and elsewhere. Key features include:

- Learning and teaching, and employability policies and strategies that place high value on the development of so called soft skills as well as traditional academic skills
- As part of learning and teaching policies - personal development planning (PDP) policies and professional practices that encourage and help students to plan for their own development,

act on plans and reflect on how they have developed. Such policies have been introduced systematically across all levels of HE since 2003. It is also worth noting that processes underpinning PDP – review, reflection, recording and planning, are increasingly prevalent across a range of pedagogic and learning contexts

- E-portfolios that enable students to record/curate their experiences (both academic and non academic) and record their reflections and evaluations of the development they have gained
- Institutional award schemes for encouraging and recognising students' development and achievement through co- and extra-curricular experiences as well as the academic curriculum. These might be supplemented by other schemes for recognising
- The Higher Education Achievement Report currently being rolled out across UK HE to provide comprehensive information about a student's achievement, including achievements gained outside the credit-bearing academic curriculum. The presentation of such information is a major step in the recognition of lifewide learning but only recognises achievements that have been verified by the institution.
- Professional support to enable their staff and students to make effective use of these policies, frameworks and tools both in making the most of their time within HE and to articulate and evidence their learning and achievements to third parties, such as employers…

It can be appreciated that significant investments have to be made by a university to create the infrastructure that is necessary to achieve the goal of supporting and recognising the lifewide development of students.

The exosystem contains the broader community of practice (ie the field of practising educators) residing in other universities and colleges in the UK and elsewhere. Typically, when an institution decides to develop new policies, strategies, frameworks and tools it looks around to see what others are doing. While universities and colleges compete for students, the UK HE system is a collegiate system: institutions and practitioners are generally open and willing to share their educational practices.

Important role of brokers in the exosystem

Complex ecosocial systems like the higher education ecosystem need 'brokers' to facilitate interaction and communication across the levels of the ecosystem and engage people in *considering and helping to resolve* problems and challenges (Jackson 2003). Brokerage is a type of agency. It's a means for *engaging* socially complex communities in ways that facilitate learning through the sharing of ideas and practices and ultimately change, as people find out and try out new ideas and create their own practices. In the UK higher education ecosystem for example, there is a need for brokers to facilitate exchange across the 160 institutional ecosystems it contains.

Brokers can be individuals, groups of people or organisations and they play a fundamental role in an ecosystem to facilitate change when there are lots of different interests involved and complex negotiations are required in order to share perspectives and advance thinking about what needs to be done. Brokerage is an intentional act in which the broker seeks to work in collaborative and creative ways with people, ideas, knowledge and resources to develop or change something. The professional actions typically include:

- envisioning the change(s) to be made;
- creating the conditions to enable change to be made;
- engaging people/organizations in debate/consultation/negotiation to help shape the nature of the change and facilitate the process of change;
- creating the infrastructures and processes to facilitate development and support change;
- facilitating research and the development, diffusion and use of knowledge for change;
- acting with integrity (Jackson ibid p5)

In the context of encouraging, supporting and recognising the lifewide formation of students', the exosystem contains several organisational brokers. Some of these have been established by Government eg Higher Education Funding Council's or the institutional representative bodies eg Quality Assurance Agency and Higher Education Academy. There are also agents in the exosystem that are essentially independent for example the Centre for Recording Achievement (CRA) has been a long-lived agent and broker in systemic changes relating to the recognition and recording of students lifewide achievements, and. Lifewide Education provides another example of an independent agent acting as both an advocate for lifewide learning and a broker and researcher for the further development of knowledge and practice. Brokers develop new tools to enable people to think, this article and the conceptual frameworks it contains is an example.

Ecosystem brokers also develop entirely new concepts that with time help change the paradigm on which an ecosystem is based. They play a key role in the formation and maintenance of networks and the building of communities. They facilitate ecosystem learning by connecting people and bringing them together physically and virtually to have conversations and discussions. They develop mechanisms for sharing ideas and practical knowledge based on experience. They fulfil a curatorial role in making such knowledge accessible through websites, publications and other media. They act as broadcasters to spread information and wisdom through the system and they add value to the information they have gathered through analysis and commentary.

In the areas of practice that relate to lifewide learning, both the Centre for Recording Achievement and Lifewide Education fulfil a networking role. They have established their own networks and communities and resources hubs, and also help maintain mail lists like: lifewideeducation@jiscmail.ac.uk, pdp-and-e-portfoliouk@jiscmail.ac.uk. There are also maillists for the higher education achievement record and for people with particular functional roles that might be involved in any of these things. All these networks facilitate learning across the whole ecosystem through discussion and the exchange of information.

Finally, there are in the exosystem independent commercial agents such as *gradintelligence* that is developing, in partnership with universities (currently 41), a portal for hosting the verified records of student achievement (HEAR). Their business model enables students to present their validated credentials to an employer or enables employers to search the data base of credentials.

Example of brokerage

The following story illustrates both the involvement of 'brokers' and the complexity and length of time it takes to create new elements of infrastructure and social practice in a higher education ecosystem. In 1997, the Government set up a National Committee of Inquiry into Higher Education (a strategic broker) which made over 120 recommendations about the future of higher education. One of these concerned the need for a comprehensive record of achievement for all UK graduates. It also recommended the need for a new agent in the system to help higher education institutions regulate the quality and standards of the education they were providing. This new agent the 'Quality Assurance Agency' (QAA) was established in 1997 and its first role was to create a new framework for the assurance of quality and standards based on the Committee's recommendations. QAA brokered the development of a policy to encourage the introduction of a Progress File that included a comprehensive transcript that contained many of the elements of the European Diploma Supplement that the UK Government had agreed to implement. The idea of a comprehensive record of achievement that satisfied the requirements of the European Diploma Supplement was developed further by a Committee led by a Vice Chancellor and containing representatives from all the stakeholders in the ecosystem. The result - the Higher Education Achievement Report is now being implemented by about one third of all the institutions in the ecosystem and we have reached a tipping point for the implementation of this 'brokered' policy. It has taken two decades to reach the tipping

point where we can say that this new element of policy and social practice is being implemented and embedded in the higher education system.

Another interesting feature of this development is the multiplicity of drivers that led to the commitment of so much resource and effort to achieve this goal including: 1) the desire by government to shift higher education away from sole reliance on the honours degree classification system as a means of representing students' learning and achievement, 2) the need to comply with EU requirements that all graduates should have a transcript that complies with a model developed for the European Diploma Supplement which the Government had signed up to through the Bologna agreement, 3) the desire by government to provide employers with a comprehensive record of what graduates have achieved. None of these drivers relate to the educational objective of encouraging, supporting and recognising learning and development gained by students across all the affordance they have in their life while they are studying at university. Nevertheless, the HEAR makes provision for the recognition of this learning in one of its sections.

Educational and learning practices in the mesosystem & microsystem

The **mesosystem** contains the policies, frameworks, tools, infrastructures, resources and incentives developed by an institution that regulate, encourage or discourage certain practices. These elements of the institutional ecosystem are interpreted and enacted by teachers and others who support students' development and through these interactions and conversations a culture is formed and practical meaning are created through social practices.

For example if a higher education institution explicitly or implicitly embraces a lifewide concept of learning and development in its policies then they may be translated into social practices by the people who have responsibility for programmes of study, work placements or volunteering, co-curricular opportunities, or perhaps through activities delivered by particular advisory services like the careers or library services, or student development officers working in the Students' Union. It is in this enormous range of activities and contexts that tahe?? meanings of lifewide learning and lifewide education are brought to life and given particular meanings.

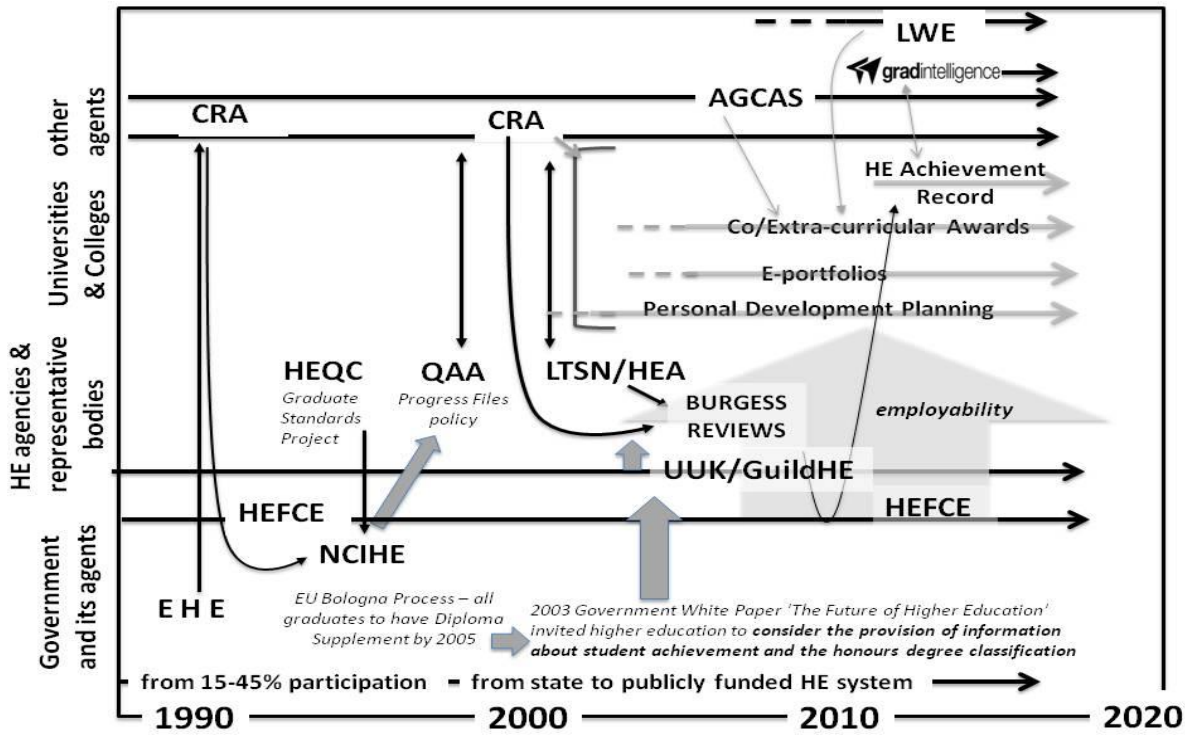
In the mesosystem people create ecologies within which students can learn and develop themselves. In the **microsystem** students create their own ecologies for learning, developing and achieving things they value. This is the level at which learning, development and achievement occurs in all the different parts of a student's life. In a university these ecologies will include their course or programme and other opportunities the university provides but they may also include activities and experiences that lie outside the university for example through part-time work, voluntary work, sport, travel and much more. If the opportunity exists at the mesosystem level, learning and other achievements gained through an individuals learning ecology may gain recognition.

Evolving ecosystems for encouraging, supporting and recognising students' lifewide learning, development and achievement

A higher education ecosystem doesn't just come into existence; it is a continually unfolding and emergent process of formation shaped by powerful political and managerial forces and mediated by the passions, interests, creativity and pragmatic responses of individual practitioners, institutions and other agents within the ecosystem. Another feature of an ecosocial system is that things often happen in parallel. New structures, policies and practices are being created and implemented simultaneously in different parts of the system and not sequentially across the whole system. New policies and practices are grown in particular contexts and developed for particular purposes so perceptions about anything are influenced by the local perspectives that people have mediated by any large scale developments that are taking place. Ecosystem development is a messy business and while the

narrative outlined below might seem well ordered it is a simplistic linear representation of the emergence of different policies and practices over nearly three decades. Figure 3 shows some of the more important interventions and educational developments over the last 25 years through which UK HE has developed an ecosystem for encouraging, supporting and recognising students' lifewide learning, development and achievement. This is far from complete but it serves to illustrate how key changes in a higher education ecosystem emerge and evolve over time

Figure 3 Some of the more important interventions and educational developments over the last 25 years through which the HE system in England has developed an ecosystem for encouraging, supporting and recognising students' lifewide learning, development and achievement.



Abbreviations: EHE -Enterprise in Higher Education Initiative, UUK - Universities UK and GuildHE (these are the current universities and colleges representative bodies, formerly these two bodies were called CVCP - Committee Vice Chancellors and Principals and SCOP Standing Conference of Principals). National Committee of Inquiry into Higher Education Chaired by Lord Dearing, HEFCE - Higher Education Funding Council England, HEQC - Higher Education Quality Council QAA - Quality Assurance Agency LTSN - Learning and Teaching Support Network HEA - Higher Education Academy CRA - Centre for Recording Achievement AGCAS - Association of Graduate Careers Advisors. LWE - Lifewide Education, PDP - Personal Development Planning

New elements and order in the ecosocial system emerges on the scale of years and decades. This pattern is brought about through the continuous interactions and adaptations of ideas, policies, practices and technological advancements through a combination of bottom-up inventions and practitioner movements grown at the level of the micro- and meso-systems, top down interventions from the macrosystem including policies and inquiries emanating from Government and its agents (eg Funding Councils) and independent university representative bodies, and responses to these bottom-up, top down and middle out developments by institutions, agencies and independent agents in the exosystem. The net effect is a system in continuous change and over time the trend is to increase the complexity in the ecosystem as new components are added, piloted and implemented, and then

efficiencies and other improvements are sought to connect the components and sometimes integrate them in new systems and processes.

Progress towards an HE ecosystem that encourages, supports and recognises that students' develop through their lifewide experiences is not the result of pursuing this goal. Rather, it is a consequence of pursing a raft of political goals for example - changing the emphasis in the pattern of purposes of a higher education system, increasing the levels of participation in higher education, a stronger emphasis on student employability and enterprise , making the outcomes of a higher education experience more explicit, and providing better information to graduates and employers about the outcomes of a higher education. Perhaps it's also a consequence of encouraging learners to take more responsibility for their own learning and managing their own development. However the net effect of introducing policies to accomplish these goals has been to create an environment which also encourages, supports and recognises that students' develop through their lifewide experiences.

A narrative of ecosystem change

Bringing about profound change in a higher education system requires Government intervention on a massive scale to disturb the existing order - which is always reluctant to change. A decision was taken (1988/89) to increase participation levels of the 18 year old cohort and by 1993 participation had risen from around 17% to 33% mainly through increases in the number of students attending Polytechnics. which had been freed from local authority control through the 1988 Education Reform Act (ERA) and expansion funded by a Polytechnics and Colleges Funding Council (PCFC).

But the universities were not participating fully in this expansion so to increase competition and encourage greater efficiency the 1992 Further and Higher Education Act gave polytechnics and large higher education colleges full autonomy with degree-awarding powers, and the right to use the title university. Higher Education Funding Councils were set up for the constituent parts of the UK, (Bathmaker 2003). These agencies became the tools that enabled Government to reshape the HE system. At the same time the Government department for education - the Department for Education and Science became the Department for Education and Employment reflecting Government thinking about what sort of higher education system we needed as we entered the 21st century.

This profound change in our higher education system laid the foundations for a new higher education ecosystem. It was driven by Government concerns to develop a different sort of higher education system, one that was more in tune with the needs of the economy was reflected in the major Government initiative which began in 1987 called Enterprise in Higher Education (EHE).

This was a programme of work between 1987-96 within higher education institutions (HEIs), funded by the Employment Department, and subsequently the Department for Education and Employment (DfEE). It aimed to establish and embed the concept and practice of enterprise within universities, and to increase the effectiveness of higher education (HE) in preparing students for working life. EHE was a response to concerns that HE was failing to provide graduates who were employment or enterprise oriented. Attention was focused on the need for effective supply of higher skills into the workforce; on the employability of graduates; and on the role of personal or transferable skills in making graduates effective contributors at work. Although based on funding for individual institutions, the ultimate aim was to influence the culture and practice of HE, across sectoral, institutional and disciplinary divides. Funding was primarily in the form of contracts with 56 individual HEIs worth £1million each over five years, the last concluding in 1996 (Burniston, Rodger and Brass 1999). According to these authors who conducted the independent evaluation of the EHE programme

'EHE ‘changed the mindset’ of HEIs to include employability and enterprise as legitimate concerns of HE; • careers issues received more acceptance; • work on learning and teaching, key skills, and the

application of new technologies was undertaken earlier, more systematically, and more completely, as a result of EHE support' (Burniston, Rodger and Brass 1999:1)

There is no doubt that EHE encouraged higher education institutions to develop new educational practices relating to the development of skills (particularly so called transferable skills) and how such skills might be recorded and assessed within the curriculum. It provided opportunities for many higher education teachers to explore ideas and develop new practices and many of these became active agents championing more holistic notions of student development within their institutions and across the sector. EHE also stimulated the formation of new networks of interest and also led to new organisational agents being established. One of these, 'Centre for Recording Achievement (CRA) established in 1991, began as a 2 year project concerned with improving admissions to HE but with the same interest in lifewide learning. How could admissions tutors go beyond examination grades for entry? and how could students' experiences and capabilities be more comprehensively and accurately described and presented in order that students could use a wider range of experience to gain entry to a higher education. CRA is still in existence today and has over the last 25 years been a key agent - influencer, broker, networker and researcher in the development of policies and practices that have a direct bearing on the encouragement, support and recognition of students' lifewide learning, development and achievement. Significant achievements include

1) after initial funding ceased creation of a sustainable organisation to enable practitioner networks to form around key areas of development and implementation like personal development planning (PDP), e-portfolios, co- and extra-curricular awards and higher education achievement records (HEAR)
2) influencing the NCIHE recommendations for recording achievements and proposals for the Progress File - transcript and personal development planning
3) through its networking, provision of resources and events, consultancy and formal association with the higher education academy a formal role in supporting the development and implementation of policies and practices in higher education institutions
4) through its networking, provision of resources and events and consultancy championing and supporting development and implementation of e-portfolios as a means of recording achievement and supporting reflective processes
5) through participation in the Burgess Scoping Group and later HEAR implementation group, and its networking, provision of resources and events to support implementation an important influence on the development of the Higher Education Achievement Record

Making academic standards & learning outcomes more explicit

After the massive expansion of higher education between 1988-93 concerns for academic standards began to emerge. In 1994 the Secretary of State for Education 'invited' the sector to give greater attention to 'broad comparability of standards' across UK HE. The representative bodies of higher education institutions (Committee of Vice Chancellors and Principals -CVCP, and Standing Conference of Principals of Colleges of Higher Education -SCOP) invited their agency the Higher Education Quality Council to undertake a review of the way academic standards were defined, assessed and quality assured, and to consider the feasibility of defining threshold standards that could be applied across all degree programmes. HEQC implemented a major R&D exercise between 1995-97 looking at many facets of the ways in which academic standards were determined and assured. This work, known as the Graduate Standards Programme, engaged the sector in serious discussions about the learning outcomes from an undergraduate degree and the result of this intervention was to encourage institutions and disciplines to make explicit the nature of the knowledge, skills, competencies and qualities - the terms 'graduateness' and 'graduate attributes' were used to describe the outcomes of a degree. The work laid the foundations for new approaches to defining standards - for example concepts of graduateness underlie the practice of subject benchmarking which were developed for all subjects from 2000. Two other strands of the GSP were important in the context

encouraging, supporting and recognising students' development and achievements through their lifewide experiences, the first was a study of the ways in which learning and achievements were being recorded across the sector, the second was developing the concept of a transcript so that it included much more information about students' achievements - in fact the emergence of modularisation across higher education was already leading to transcripts that listed grades for all the modules that had been studied.

As the information age progressed we began to see the world and our place in it differently and this began to influence the thinking of leaders and policymakers. Increasing complexity of the world means that individuals have to cope with a surfeit of knowledge and information and globalisation increased uncertainty and the chances of disruption. Increasingly through the 1990s it became apparent that individuals had to develop particular information handling capabilities and attitudes like resilience to survive and had to understand the wider context in which they lived and worked. This meant dealing with multiple frames of reference over and beyond their immediate situation (Bathmaker 2003:7). The influential sociologist Anthony Giddens (1994:7) explains this by saying that 'individuals more or less have to engage with the wider world if they are to survive in it.' There has been a growing recognition that as we move from the information age to the social learning age (Stodd 2012, 2014) people have to become more reflexive and adaptive in their own lives, actively plan and develop their own biographies, and be prepared to change sometimes in quite fundamental ways. Rapid social and technological changes in the wider world combined with these ways of thinking fundamentally changed the environment within which the higher education ecosystem was developing and the thinking of higher education professionals involved in providing career advice and support for employability

National Committee of Inquiry into Higher Education: Dearing Review

By the mid 1990s concerns for quality and standards in a massively expanded higher education together with concerns for the cost of funding and regulating the mass system it had created led to the Government setting up a National Committee of Inquiry into Higher Education Chaired by Lord Dearing between 1996-97. The Committee's report published in 1997 contained over 120 recommendations and paved the way for tuition fees as the costs of a higher education were shifted from the state to the people benefitting from their education. It also paved the way for new regulatory (quality assurance) frameworks and agencies to help universities regulate academic standards. The newly formed Quality Assurance Agency for Higher Education took responsibility for developing a new quality framework which contained within it frameworks for making explicit the nature and outcomes of a programme (Programme Specifications), the production of Subject Benchmark statements to act as reference points for the outcomes of a degree in a particular subject, and the idea of Progress Files - an official academic transcript provided by the institution and a collection of information owned and managed by the student.

Progress Files

The concept of a progress file was inherited from a Government initiative in schools launched in 1991 called the National Record of Achievement (NRA), which built upon earlier local work and through which students were encouraged to represent themselves and their learning through a process of reviewing, representing and recording a wider range of their achievements, both academic and non-academic, during their secondary school career.

In the three years following the Dearing review the Quality Assurance Agency (QAA) worked with higher education institutions and practitioners to give the Dearing recommendation for a Progress File material substance. The co-created policy was approved by the Board of Universities UK and the Standing Conference of Principals in 2001. When implemented the Progress File was intended to

provide each student with a transcript - a record of their learning and achievement and a means by which the student could 'monitor, build and reflect upon their personal development (QAA 2001). The term Personal Development Planning (PDP) was used to denote this process and HEIs were expected to have their own policies in place by 2005/06. The espoused benefits claimed for the Progress File were: 1) to improve the quality of information available about what people know and can do for the benefit of anyone who needs to know; 2) to extend the repertoire of learning skills of students and enhance their self-awareness and their capacity to communicate what they know and can do.

Jackson and Ward (2004) argued that the Progress File was an attempt to solve the problem of how we represent learning and achievement for a world that requires people to understand and demonstrate their capacities and capabilities for working with both disciplinary and transdisciplinary knowledge - so important in many employment contexts. Implicit in the conception of the Progress File is the notion that, while universities and colleges can take primary responsibility for the assessment and representation of disciplinary learning and achievement, learners themselves must take primary responsibility for evidencing and representing their learning and achievement in, and for,, the transdisciplinary world.

Personal Development Planning (PDP)

The recognition of complex achievements, such as are gained through lifewide learning experiences requires certain capacities to be developed by students in order for them to recognise what they have learnt and demonstrate and make claims for their learning, development and achievements. PDP was developed as a pragmatic way to achieve this objective and to secure the involvement of students in the process of providing the complex personalised information required of the evolving ecosystem. PDP is defined as (QAA 2000) 'a structured and supported process undertaken by an individual to reflect upon their own learning, performance and / or achievement and to plan for their personal, educational and career development.' Interestingly, this is the only educational policy ever mandated in UK higher education and it was designed in such a way as to enable institutions and practitioners to interpret and make sense of the idea in their particular contexts. Consequently, there are many interpretations and many different practices have developed over the years, including some not called PDP at all.

PDP attempts to engage students in thinking about the experience of learning as well as the results of learning. It encourages a strategic process of – thinking and planning; doing; recording experiences, learning and performance; reviewing evaluating experience, learning and performance and using this personal knowledge in future actions. Strivens and Ward (2013) use the term 'stopping and thinking' to describe this process. The complex process through which we imagine and decide what to do, then do it monitoring the effectiveness of our actions and then after the event reflect on the experience and what we have learnt, is called *self-regulation* and this is a very important process underlying individuals' learning ecologies (Jackson 2016 chapter 7).

> *Self-regulation is not a mental ability or an academic performance skill; rather it is the self-directive process by which learners transform their mental abilities into academic [and other sorts of] skills. Learning is viewed as an activity that students do for themselves in a proactive way rather than as a covert event that happens to them in reaction to teaching. Self-regulation refers to self-generated thoughts, feelings, and behaviours that are oriented to attaining goals..... These learners are proactive in their efforts to learn because they are aware of their strengths and limitations and because they are guided by personally set goals and task-related strategies.....These learners monitor their behaviour in terms of their goals and self-reflect on their increasing effectiveness. This enhances their self-satisfaction and motivation to continue to improve their methods of learning. Because of their superior motivation and adaptive learning methods, self-regulated students are not only more likely to succeed academically but to view their futures optimistically (Zimmerman 2002: 65-6).*

While the motives for introducing PDP into higher education might have been politically motivated (to join up thinking and practice in schools and universities) building the capacity to record, reflect on and make sense of experiences, is a fundamental building block in the development of an ecosystem's capacity to support students' lifewide learning and development and it became important in the context of the next development described below.

Electronic portfolios

The expanding use and development of electronic portfolios, variously defined, has been a feature of higher education practice in the last decade in the UK and in many other parts of the world (see e.g. AAEEBL in the USA, EpIC in Europe). In 2006 the CRA, working with the Higher Education Academy, undertook a survey of e-portfolio use in Higher Education in the UK (Strivens 2007).

Responses were received from 71 separate institutions, of which 66 were UK HEIs. The other five included FE colleges and one overseas university. Multiple responses were received from 13 institutions, all UK HEIs. Through this snapshot the following trends were distinguished:

- Just over half of HEIs surveyed claimed to have an e-portfolio tool or system.
- Almost all HEIs claimed that PDP had now been implemented in their institution and over three-quarters of these were using some form of electronic tool to support the process.
- Implementing PDP and supporting overall development were the most popular purposes for their systems, both cited by nearly all of those who claimed to have a system.
- Presentation/showing was cited as an important purpose of the e-portfolio by three quarters of respondents who had an e-portfolio, use in assessment by around two thirds and CPD for staff by a half of respondents
- Most institutions still regarded themselves as being at a pilot stage and had plans to evaluate their experience. However very few had committed the resources to run trials of different systems in-house.

Other policy initiatives at this time also emphasised the role of e-PDP-style practice. In 2005 the Higher Education Funding Council for England (HEFCE) in its e-Learning Strategy encouraged 'e-based systems of describing learning achievement and personal development planning' (HEFCE, 2005, p.13), and the Department for Education and Skills in its e-Strategy supported the greater 'personalisation' of learning across all educational sectors, but note the focus upon course related achievement and presentation here:

> *We will encourage every institution to offer a personal online learning space to store coursework, course resources, results and achievements. We will work towards developing a personal identifier for each learner, so that organisations can support an individual's progression more effectively. Together, these facilities will become an electronic portfolio, making it simpler for learners to build their record of achievement throughout their lifelong learning.* (DfES, 2005, p. 5, para10)

As this perhaps suggests, most writers on e-Portfolios acknowledge that attempts at definition are fraught with difficulty (see for example Stefani et al., 2007; Grant, 2009). This impacts directly upon the potential for e-portfolios to support the lifewide learning and development agenda we are concerned with here. Thus Barrett (2011) speaks of balancing the two faces of e-portfolios: *a student-managed learning portfolio and an analytical framework...to serve assessment purpose,* while the JISC Infokit on e-Portfolios comments, *'ideas of what an e-Portfolio 'is' are complex and to an extent the definition and purpose will vary depending on the perspective from which a particular person is approaching the* concept' (JISC, 2009). At a subsequent international seminar bringing together practitioners from the US, the UK, Europe and Australasia, (Cambridge and Hartley 2010, reported in Strivens and Ward, 2010), suggested a list of 'things we think we know' about e-Portfolios. The list actually included a number of 'don't knows' which echo some of the above discussion and some which reflect the experience of PDP itself:

1. Different e-Portfolios offer very different underlying assumptions/approach and organisation.
2. We do not have a shared or absolutely coherent definition of what an e-Portfolio actually is.
3. There are different 'cultural traditions' which affect both the adoption and uptake of PDP and e-Portfolios.
4. The role of the academic tutor is absolutely critical to the successful adoption of both PDP and e-Portfolios by students.
5. Tutors use e-Portfolios in very different ways.
6. E-Portfolios have varying efficacy for certain types of assessment.
7. E-Portfolios must have an articulated and coherent educational philosophy to guide practice.
8. E-Portfolios need ongoing (and long-term) support from staff and the institution (including an appropriate degree of training and familiarisation.
9. Some students on some courses benefit significantly from PDP activities which are managed through e-Portfolio.
10. The e-Portfolio genre is especially valuable for synthesising experiences across contexts, both academic and otherwise, and for cultivating professional and disciplinary identities.
11. E-Portfolios can/may have impact on student engagement and retention;

In putting together this list, Cambridge and Hartley *ibid* further acknowledged the real challenges of the e-Portfolio research agenda, 'what we need to know':

a. The long-term impact of e-Portfolio adoption/use (how should this be evaluated?).
b. Whether we can expect one e-Portfolio to suit every student (or even the majority of students).
c. The underlying psychological processes that support or impede the take-up of e-Portfolios, for both staff and students.
d. The importance of skill and confidence in using ICT.
e. How reluctant tutors can be persuaded or encouraged.
f. The most significant institutional barriers and enablers.
g. A better understanding of the multiple audiences for e-Portfolios (not just students and tutors).

Cambridge and Hartley speculated that meeting these challenges will require a broader range of methods and approaches (crucially involving more observation of behaviour and less self-report), but methods and approaches shared across the e-Portfolio community of practice so that data can be compared across institutions.

In the UK context the outcomes of work developed through a suite of Projects funded and led by Jisc have not focussed to any extent upon the potential lifewide learning benefits of e-portfolio use. This may reflect the institutional focus of Jisc work. The mata-analysis undertaken by Joyes, Gray and Hartnell-Young (2009) did not explicitly focus upon this area, rather reporting:

> *Analysis of the results revealed that there are tangible benefits associated with e-portfolio use. These may include efficiency (such as time savings for students, academics, and administrators), enhancement (such as improving quality of evidence and feedback, skill development, satisfaction and increases in recruitment and retention) and transformation (such as innovation and changes to institutional policy).*

In the US however there is evidence/learning which emerges from the structured analysis of implementation across contexts, notably through the 'Connect to Learning' Project, a 3-year funded project coordinated by LaGuardia's 'Making Connections National Resource Center' in partnership with the Association for Authentic, Experiential, and Evidence-based Learning (AAEEBL) and a network of 22 participating institutions and focused on creating national models for effective ePortfolio usage see e.g. Eynon and Gambino (2015) and Eynon, Gambino, and Török (2014).

One of the propositions developed and supported within this work (proposition 2, in Eynon, Gamino and Torok, op cit) concerned with Making Learning Visible' reports that:

> *'helping students reflect on and connect their learning across academic and co-curricular learning experiences, sophisticated ePortfolio practices transform the student learning experience. Advancing higher order thinking and integrative learning, the connective nature of ePortfolio helps students to construct purposeful identities as learners.'*

They cite cross-institutional survey data in support of their case (Table 1) and suggest that

> *'the practices and data from C2L campuses, while not conclusive, suggest that reflective ePortfolio pedagogy helps students make meaning from specific learning experiences and connections to other experiences, within and beyond the course. Integrative ePortfolio strategies prompt students to connect learning in one course to learning in other courses, co-curricular activities, and life experiences. Ultimately, students recursively connect their learning to consideration of goals and values, constructing a more intentional and purposeful sense of self.'*

Table 1 Questions Drawn from the National Survey of Student Engagement: C2L core survey items Source: Eynon and Gambino (2015)

Student's Integrative ePortfolio Experiences C2L core survey items	*% Agree or strong agree*
Building my ePortfolio helped me think more deeply about the content of the course.	62.0%
Building my ePortfolio helped me succeed as a student.	63.3%
Someday, I'd like to use my ePortfolio to show what I've learned and what I can do to others, such as potential employers or professors at another college.	70.0%
Using ePortfolio has allowed me to be more aware of my growth and development as a learner.	65.6%
Building my ePortfolio helped me to make connections between ideas.	70.0%

Table 2 Deep Learning Questions Drawn from the National Survey of Student Engagement: C2L core survey items Eynon and Gambino (2015)

To what extent has your experience in this course. . .	*% Quite a bit or Very much*
contributed to your knowledge, skills, and personal development in in writing clearly and effectively?	73.5%
contributed to your knowledge, skills, and personal development in in understanding yourself?	74.1%
emphasized applying theories or concepts to practical problems or in new situations?	73.6%
emphasized synthesizing and organizing ideas, information, or experiences in new ways?	78.3%

They also note the suggestion of Bass (2014) that integrative ePortfolio initiatives can serve as a catalyst for positive change, and highlighted three layers or dimensions of such a change, the first of which, reproduced below, is important here:

'The shift to a student-organized view of learning, bridging curriculum and co-curriculum, where learners pull from knowledge resources and offerings to construct an increasingly customized educational experience that is both professionally productive and personally meaningful.' (Bass 2014: 30mins in YouTube presentation)

Helping students reflect on and connect their learning across academic and co-curricular learning experiences, sophisticated ePortfolio practices transform the student learning experience. Advancing higher order thinking and integrative learning, the connective nature of ePortfolio helps students to construct purposeful identities as learners. Eynon et al (2014:98)

Emergence of co- and extra-curricular awards

Many universities and colleges have incorporating the idea and practice of lifewide learning and development into their educational practices without using the term in their concepts and descriptions

of what they are doing. The first explicit use of the lifewide concept in UK HE was in 2008 when the University of Surrey developed and piloted a 'Lifewide Learning Award' (Jackson 2011a). Barnett who was contributing to this project introduced the concept of lifewide education (Barnett 2011) to describe an educational approach adopted by an institution when it explicitly supported and recognised students' lifewide development. Jackson (ibid) describes this transformative potential in these terms.

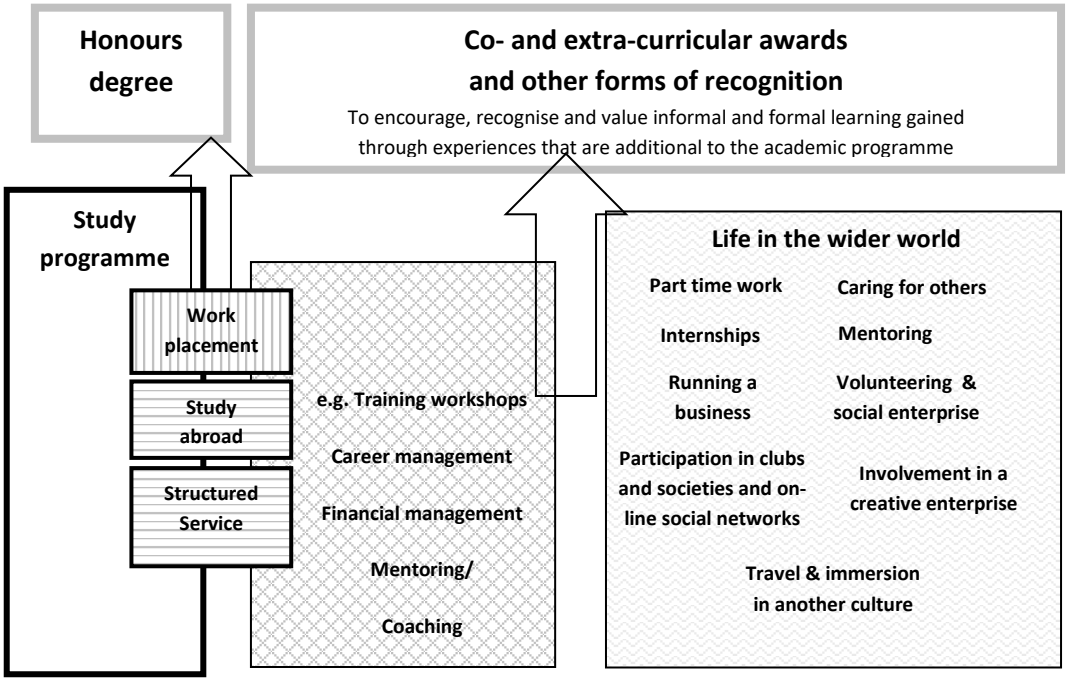
> *When designing educational experiences curriculum designers usually begin with their purposes and the outcomes they want to promote, and then they think about the content, and process, and create and organise resources to support learning. They decide what counts as learning, and finally they evaluate the standards and quality of learning, as demonstrated through one or more assessment methods and tools that they have designed, guided by criteria they create to assist them in making judgements. This is the way teachers generally do things in higher education.*
>
> *[But] what if we were to begin with the learner and his life, and see the learner as the designer of an integrated, meaningful life experience? An experience that incorporates formal education as one component of a much richer set of experiences that embrace all the forms of learning and achievement that are necessary to sustain a meaningful life. (Jackson 2011c:115)*

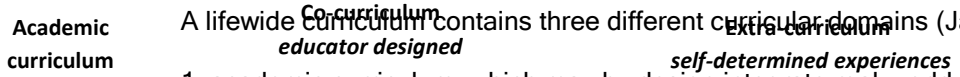
This way of thinking resulted in the concept of a lifewide curriculum (Jackson 2011c) to embrace a concept and educational design that seeks to empower and enable a learner to integrate their learning from any aspect of their life into their higher education experience.

> *the challenge [is] how to design a curriculum that enables learners to integrate their life experiences into their learning and developmental process to prepare themselves for the complexity and uncertainty of their future lives. Such a curriculum shifts the focus from a 'skills, standards and outcomes model of curriculum [to] a reflexive, collective, developmental and process oriented model' (Barnett and Coate 2005:18). It focuses attention on the importance of developing capability, dispositions, knowledge, qualities and confidence for acting in the continuous stream of situations that make up learners lives ... and it shows them that higher education values the choices they are making about how they are choosing to live their lives. In framing the curriculum in this way we are championing the idea that capability is 'essentially one of freedom – the range of options a person has in deciding what kind of life to lead' (Dreze and Sen 1995:11). In revealing his lifewide curriculum a learner is choosing to reveal the life he has chosen to lead: he is revealing how he is authoring his life. (Jackson 2011b:113)*

The concrete expression of a lifewide curriculum as depicted in Figure 4

Figure 4 Lifewide curriculum map adapted from Jackson 2011c:116)





A lifewide curriculum contains three different curricular domains (Jackson 2011b):

1. academic curriculum, which may by design integrate real-world work or community-based experiences;
2. co-curriculum: experiences generally offered by the university, but may be offered by students themselves, that may or may not be credit-bearing and for which learners may or may not receive formal recognition;
3 extra-curriculum: experiences that are determined by the learners themselves and constitute all the spaces that they inhabit outside of 1 and 2 above.

The distinction between co- and extra-curricular has been deliberately blurred in some universities as experiences that would be considered to be extra-curricular in Figure 4 have been incorporated into the co-curriculum. But regardless of the way institutions define their curricular domains this book is primarily concerned with the co-curricular and extra-curricular domains of student experience and achievement and the ways in which student learning and development is being supported and recognised in these domains.

In their 2014 survey of institutional schemes Barnes and Burchell (2014) reveal the range of co- and extra-curricular experiences current schemes include (Table 2). While collectively it is clear that such schemes embrace a wide range of experience and activities it is also clear that many schemes do not recognise learning from potentially important domains of students' experiences.

Table 2 Range of experiences/activities/achievements included in co- and extra-curricular award schemes (based on 68 responses - Barnes and Burchell (2014)

	(n=68)
Volunteering	61
Work experience	49
Placements/Internships	44
Enterprise	49
Career Management Activity	46
Languages	30
Engagement in Student Groups & Societies	55
Participation in sport	39
Community engagement	56
Mentoring	49
Intercultural/international activity	36
Student representation	58
Music	34

Characteristics of support and recognition

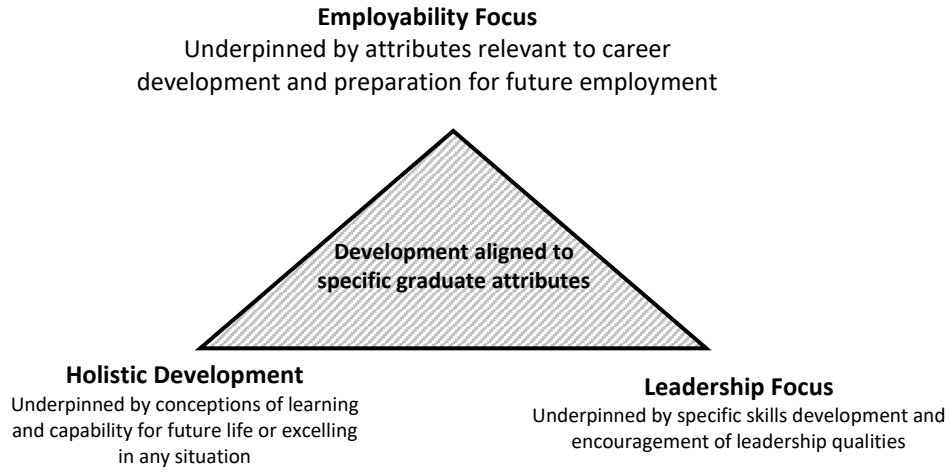
Institutional schemes to encourage, support and recognise student development through their experiences outside the formal curriculum have developed in a highly situated way so it is not surprisingly that there is great variability in their characteristics. Variations occur in:

- their purpose and focus – personal development, professional development, employability skills, lifewide learning
- the qualities and attributes they choose to encourage in development – education, employability, leadership, transferable skills, abilities to adapt and excel
- expectations in the level of student commitment (time and effort involved) in order to achieve an award
- their inclusion criteria – who is included or not included
- scale and level of participation within the student population

- whether students opt in or opt out of the scheme
- types of experiences that qualify for the award – some are more limited than others
- whether the focus is co-curriculum, extra-curriculum or a combination
- whether there are specialist routes or pathways
- whether there are different levels of performance
- how they are assessed, by whom and the criteria used
- how learning is demonstrated – the extent to which critical reflection is encouraged or valued
- recognition: points, academic or general credit, certificates, badges, awards
- how they are organised and who organises and coordinates them
- how they are resourced and who is responsible for managing the scheme
- extent of staff involvement – academic staff, personal tutors, central service staff
- level and types of employer involvement – including sponsorships and endorsements
- extent to which the scheme is an explicit part of the university's concept of the student experience
- how schemes are presented and marketed to students
- how awards are made on completion
- whether such awards feature in transcripts
- the degree to which the institution's Students' Union is involved
- the degree to which devolved customisation is permitted within a scheme
- the extent to which awards are connected to an institution's student achievement transcripts and/or Higher Education Achievement Report (HEAR)

There is strength in such diversity in so far as schemes can be tailor made to align with institutional needs and strategic goals. But such diversity also makes it more challenging to share understandings and practices between institutional schemes, because different schemes are trying to support different things. One of the purposes of this book is to enable the people who are involved in these schemes to share their contexts and purposes as well as their practices.

Figure 5 Different foci and approaches that awards are based around. Many schemes combine these dimensions. Some examples of awards that can be categorised in this way are listed along with others that might be viewed as hybrid approaches (Betts and Jackson 2011)



Institutional schemes to support and recognise students' lifewide development appear to be framed in one of three main orientations (Betts and Jackson 2011 and Figure 5) according to whether the approach emphasises: 1) whole-person development 2) development for employability or 3) leadership qualities. Schemes are usually underpinned by statements of attributes - qualities, skills,

capabilities, values and dispositions that are deemed to be appropriate and relevant which act as prompts for reflection, evidence gathering and the evaluation of achievement and fulfilment of requirements.

The rapid growth of student development awards in the UK is an important educational phenomenon. A decade ago there were only a handful of awards, by 2010 there were about 50 awards (Betts and Jackson 2011), by 2012 this had jumped to nearly 80 awards (AGCAS 2011) and this was confirmed by a recent survey conducted by the Quality Assurance Agency (Barnes and Burchell 2014).

The emergence of this interest and concern for students' development in a more complete sense is fundamentally about making higher education *more relevant* to the lives and future lives of learners and to recognise that there is much more to learning and personal development than studying a subject. With such a rapid growth in these award schemes there is likely to be a multiplicity of reasons some of which are outlined below.

Institutional opportunities and perceptions of a higher education

- *A genuine desire to broaden and deepen the concept of what a higher education means* and to embrace much richer representations of learning that truly embraces the real world beyond the classroom and makes higher education more relevant to students. The traditional single honours course in UK higher education leaves little scope for broader educational considerations especially in research-intensive universities. Student development awards offer a way of embracing forms of development that are not catered for through the academic curriculum.
- *To enhance the opportunities offered by an institution in respect of the fees students are paying.* The rapid shift from public to privately financed tuition fees corresponds to parental and student concerns for best value for the tuition fee. Institutions that can offer such awards can claim more value for the fee income.
- *To maintain competitiveness with peer institutions.* There is fear that an institution might be competitively disadvantaged if their competitors offer such awards and they do not.
- *To offset perceptions and concerns that many students are receiving relatively little contact time*. The drive for efficiency has progressively reduced contact time: in some courses students spend significantly more time doing things other than studying and student development awards provide the means of recognising learning gained outside the academic programme.
- With the introduction of the Higher Education Achievement Report (HEAR) *to demonstrate through the HEAR that students are graduating with more than their academic achievements.* The HEAR is encouraging/ forcing universities and colleges to pay more attention to the ways in which they are supporting and recognising student development beyond the academic curriculum.

Graduate employability & employer involvement

- *To demonstrate institutional concerns for graduate employability.* The employability of graduates is a universal and forceful driver for practice within universities and colleges and an important outcome of a university education. Many award schemes are used to raise awareness of employability and help students demonstrate their employability skills.
- *To provide more opportunities for employer involvement in an institution*. By involving employers in institutional award schemes through sponsorship or perhaps verification of standards, the university can demonstrate its commitment to working with employers and gain credibility for the reinforce institutional, student and parental beliefs that these schemes are linked to employability outcomes
- *To give those students who have to work in order to support themselves opportunities for demonstrating that they are learning and developing while they are working*. Many students have to undertake paid work in order to support themselves through university and there is a ready-made context for demonstrating students' employability skills by recognising that work is a valid context for learning.
- *To demonstrate that students who volunteer are also gaining valuable employability skills.*

Many students care deeply about helping others and contribute significant amounts of time and effort to working as a volunteer, for example ambassadors in schools, raising money for charity or working in the community. Such environments provide students with opportunity to develop a wide range of qualities and skills and demonstrate values that are relevant to employment

- The emergence of open educational resources and practices (OER & OEP) is adding a new dimension to the learning landscape that enhances opportunity for lifewide learners. Furthermore, the development of learners as capable self-managing and self-reflecting learners is building their capacity for engaging in open education in future.

In witnessing this shift from more traditional forms of higher education to a lifewide approach to higher education we are in the early stages of a transforming system: one that pays more attention to individuals' learning ecologies. In achieving this transformation universities and colleges improve the opportunities for students to prepare themselves for the real world of lifelong lifewide learning beyond the classroom.

The added value of the lifewide concept and practice of education is that it gives more and deeper meaning to the fundamental ecology of the everyday learning and development enterprise of individuals. Furthermore, it honours and celebrates individuals' commitment to their own development, rather than simply seeing the higher education experience as a stage of life to progress through on an individual's lifelong journey. It is also likely that changing perceptions of what counts as learning and personal development will help people appreciate more the lifelong-lifewide nature of learning and personal development that is necessary to live a healthy, productive, creative and fulfilled life. Only time will tell us whether we are on the cusp of a fundamental change that will engage universities in a more fundamental way with ideals and necessities of lifelong learning.

Recognising the Lifewide Achievements of Students: Development of the Higher Education Achievement Report (HEAR)

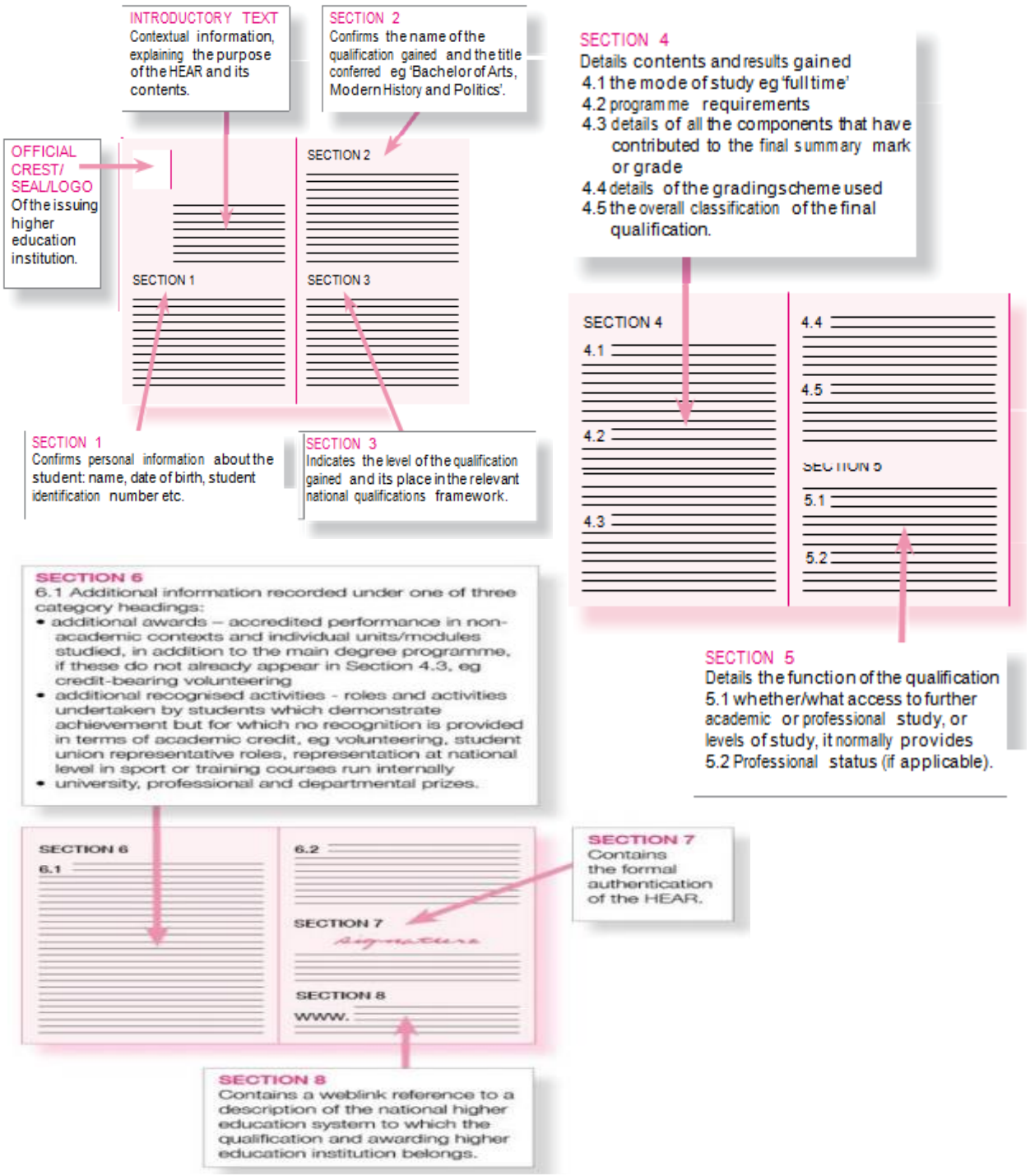
The EU has been an important driver in the formation of the Higher Education Achievement Report. The 2003 Berlin Communiqué from the Conference of Ministers responsible for higher education stated that every student graduating from 2005 should receive the Diploma Supplement automatically and free of charge. The DS is a comprehensive transcript of achievement and containing significant information about the nature of the award and higher education system in which the award was gained. The DS is one of the main tools of the Council of Europe's Convention on the Recognition of Qualifications Concerning Higher Education in the European Region, which was ratified by the UK in 2003 and came into force the following July. All 46 Bologna Process countries are moving towards implementation although at very different rates and to some extent in their own ways.

Continued dissatisfaction with the honours degree classification system post-Dearing combined with political pressures from decisions made in the EU that member states should adopt the Diploma Supplement as the model for reporting the outcomes and achievements from a degree, led to the 2003 Government White Paper 'The Future of Higher Education' which invited higher education to consider the provision of information about student achievement and the honours degree classification - implying that a detailed and comprehensive transcript of achievements with summative grades could, in time replace the classification system and provide the information needed by employers when recruiting graduates.

Universities UK (UUK) and GuildHE (then the Standing Conference of Principals), supported by the Higher Education Funding Council for England (HEFCE) established a Scoping Group Chaired by Professor Bob Burgess to consider whether there was merit in change and in investigating alternatives. Reporting in 2004, The diagnosis presented by the Scoping Group was simple ' the UK honours degree is a robust and highly-valued qualification but the honours degree classification system is no longer fit for purpose. It cannot describe, and therefore does not do full justice to, the range of knowledge, skills, experience and attributes of a graduate in the 21st century.....When they

leave university, graduates deserve more than a single number to sum up their achievements.' (Report).

Figure 6 Structure and content of the Higher Education Achievement Record (source http://www.hear.ac.uk/about)



A Measuring and Recording Student Achievement Steering Group was established to consider, develop and consult on practical proposals which concluded that this wider information could be conveyed through the European Diploma Supplement and an expanded academic transcript. 'We recommend developing what we are calling, at least in the interim, a Higher Education Achievement Report (HEAR) as the key vehicle for measuring and recording student achievement..... We have

identified a clear destination point of academic year 2010/11, by which time the HEAR should be in place most likely alongside the existing honours degree classification system.' (Report

The HEAR was piloted in 2008 with 18 volunteer institutions drawn from across the sector following recommendations that universities needed to be able to provide a more comprehensive record of student achievement. Eight years later 56 higher education institutions are offering the HEAR with another 30 institutions planning to implement the HEAR. Creating the content of the HEAR has required considerable technical development of institutional IT systems but a majority of universities have in 2016 reached the point where they can issue the HEAR.

The HEAR is a concise, electronic document produced by a higher education institution which provides a record of a student's achievement during their time in higher education. A maximum of six pages long (in hard copy terms), it must adhere to a standard template – to ensure consistency – and be verified by the academic registrar or equivalent officer in each institution to confirm credibility. It is updated at regular intervals and can be accessed by the student at any time during their career with the institution (UUK 2012). The content is shown below. From the perspective of recognising students' lifewide development section 6 is the most relevant since it allows information on achievements from contexts that are outside the academic curriculum. Although most of the HEAR complies with the specification of the Diploma Supplement (DS) Section 6 was deliberately changed to bring in the lifewide element. In the DS section 6 was about the learners qualification not the learners wider achievements.

The information contained in section 6 of the HEAR is intended to be verified and validated by the institution under three headings:
1) additional awards – accredited performance in non-academic contexts - such as through employability awards;
2) additional recognised activities – achievement in such areas as volunteering, student union activities or representation at university, county or national level in sport; and
3) University (or College), Professional and Departmental prizes - rewarding both academic and non-academic achievement.

Digital badges

In recent years the idea of digital badges has been imported into the higher education ecosystem from the global open learning ecosystem. Badges are digital tokens that appear as icons or logos on a web page or other online venue. Awarded by institutions, organizations, communities, groups, or individuals, badges signify accomplishments such as completion of a project, mastery of a skill, or gaining experience and developing through the process. Proponents suggest that these credentials herald a fundamental change in the way society recognizes learning and achievement—shifting from a traditional books-and-lecture pedagogy to a model with multiple knowledge streams, including new media, collaboration, interest- and needs-based learning, and experience or project-based learning. As records of achievement, badges can recognize the completion of projects within a traditional educational programme or acknowledge experience gained through personal experience, community interaction and contribution, online learning venues, or work-related projects. A number of HEIs are experimenting with the use of badges as an alternative form of recognition for experiences and learning gained outside the academic curriculum.(see below).

The development of Digital Badges in UKHE is being linked by Redshaw-Boxwell, (in press) with factors such as enhancing employability, and formally recognising informal learning (Glover & Latif 2013) and offer a way of linking this informal learning with the demands of employers (Law et al. 2014) and supporting student motivation though clear timeframes and criteria. An international survey of practice by Redshaw Boxwell, (op cit) elicited 123 responses to the survey from 27 different countries, almost 50% being from the UK. Twenty-four respondents reported issuing badges for

'extra-curricular activities' and forty-three for activities related to 'skills development'. UK practice was somewhat in advance of that seen elsewhere, where the focus was primarily exploratory. See for example the work of the 'digichamps' at the University of Southampton (athttp://blog.soton.ac.uk/digichamps/about-us/) or the Digital Edge at the University of Edinburgh (at http://yourdigitaledge.is.ed.ac.uk/wp/about/). The latter links a co-curricular award explicitly to digital literacy, and includes *'the innovative use of technology, digital and social media for academic (non-credit bearing), extra-curricular or professional and career development purposes, e.g. facilitating workshops on digital profiles, supporting skills development, developing student-facing resources, and managing hackathons.'* https://uoedigitalfootprint.wordpress.com/2015/10/20/edinburgh-award-digital-ambassadors/. Finally progress has been made with implementing Open Badges within the Higher Education Achievement Report at Abertay University (see https://www.youtube.com/watch?v=lxk5qrHgEGw). However only one UK institution in the Redshaw-Boxwell survey (University of Edinburgh) claimed 'full implementation' was under way.

It takes time and considerable effort and commitment to build the know how, capacity and capability, the technical infrastructure and culture of acceptance amongst students as well as staff. A seminar by Ken Swinton on his experience of using badges at Abertay University describes the effort involved (CRA 2016).

Future ecosystem development

We have made the point that ecosystems never stand still, how can they when they inhabit a world in which change is a pervasive and continuous phenomenon. Furthermore, change does not happen in an orderly sequential manner: lots of things are changing simultaneously some encourage change in a particular direction while others encourage change in other directions. Higher education ecosystems have to be agile (able to accommodate change) and resilient (accommodate change in ways that do not damage the integrity of the ecosystem).

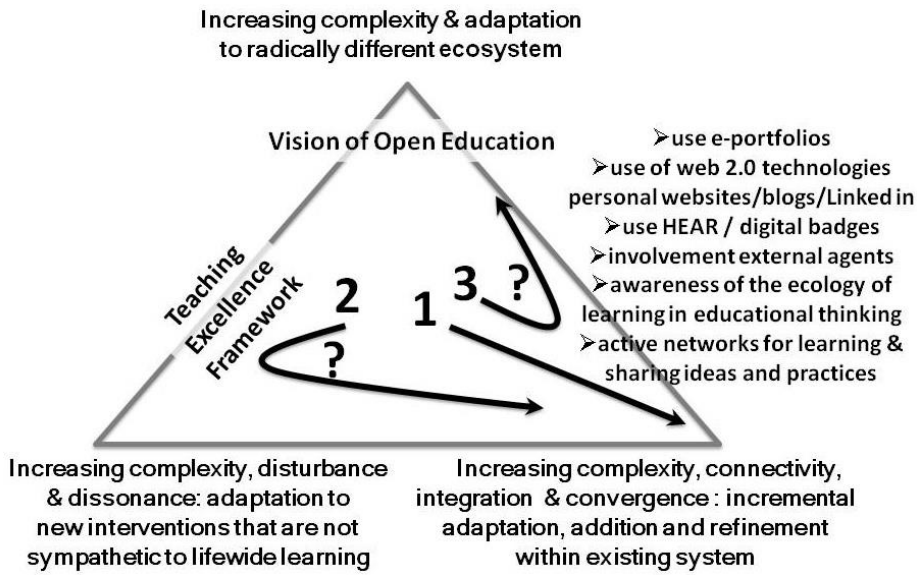


Figure 7 Possible futures for lifewide learning. Explanations are provided in the paragraphs below.

So far we have outlined established and emerging developments in the UK higher education ecosystem that contribute to cultures and social practices that encourage, support and recognise students' development through all aspects of their life, not just those parts that involve them in formal education or training. In this final section we turn to the future and speculate how the ecosystem might evolve. Remembering the maxim that 'the future is usually present somewhere in an ecosystem', at least three perspectives can be offered (Figure 8) namely: 1) incremental organic change more or less in the current direction 2) change that is incremental but is pulled in a direction because of particular interventions or conditions 3) more radical change as the whole ecosystem evolves in a particular way.

Increasing complexity, connectivity, integration and convergence

The perspective first might be to adopt the view that ecosocial systems evolve in the direction of greater complexity. For example in the context of higher education, initial ideas, for example what counts as learning and achievement' are superseded by richer more complex ideas. As these ideas gain traction new elements (eg policies, structures, processes, procedures, frameworks, tools and pedagogic practices) are added to the ecosystem. As the system evolves these become refined, connected and integrated and an ecosystem narrative is constructed that encourages the people in the ecosystem to see how the whole complex enterprise makes sense. The narrative gives meaning to the institutional ecology for learning that has been constructed.

Institutions (the people with responsibility) seek to learn from the best practices that are emerging within its own ecosystem and then try to influence the spread of such thinking and practices. Sometimes they will seek to more systematically embed particular practices through policies and procedures and social interaction. This is the normal pattern of evolution within the higher education ecosystem as a whole and within individual institutional ecosystems.

An example of integration is provided by Anne Qualter and John Couperthwaite who describe recent developments at the University of Liverpool where attempts are being made to link students' own records of learning and development gained through co-and extra-curricular activity in their PebblePad e-portfolio to their digital Higher Education Achievement Report (Qualter and Couperthwaite 2016)

The University of Liverpool is planning to introduce the e-HEAR to all undergraduate students in 2015/16 and this is being connected to and integrated into the university's e-portfolio system (Pebble Pad). The purpose of this aspect of PebblePad – 'a guided development space' is to 1. enable students to reflect on University Verified Activities (UVA's); 2. Enable students to create their own activities; - reviewed by Academic Advisors; - verified by external assessors, if required 3. To enable students to store artifacts and reflections on other activities to support CV/applications

The project has three phases. In the first phase is to show students what affordances there are for learning and developing outside the academic curriculum by providing information on co- and extra-curricular activities that the University/Guild of Students has to offer and that students might utilise. It's a web-based signposting exercise to create a resource that provides the information for current and prospective students (UG,PGR &PGT), as well as alumni.

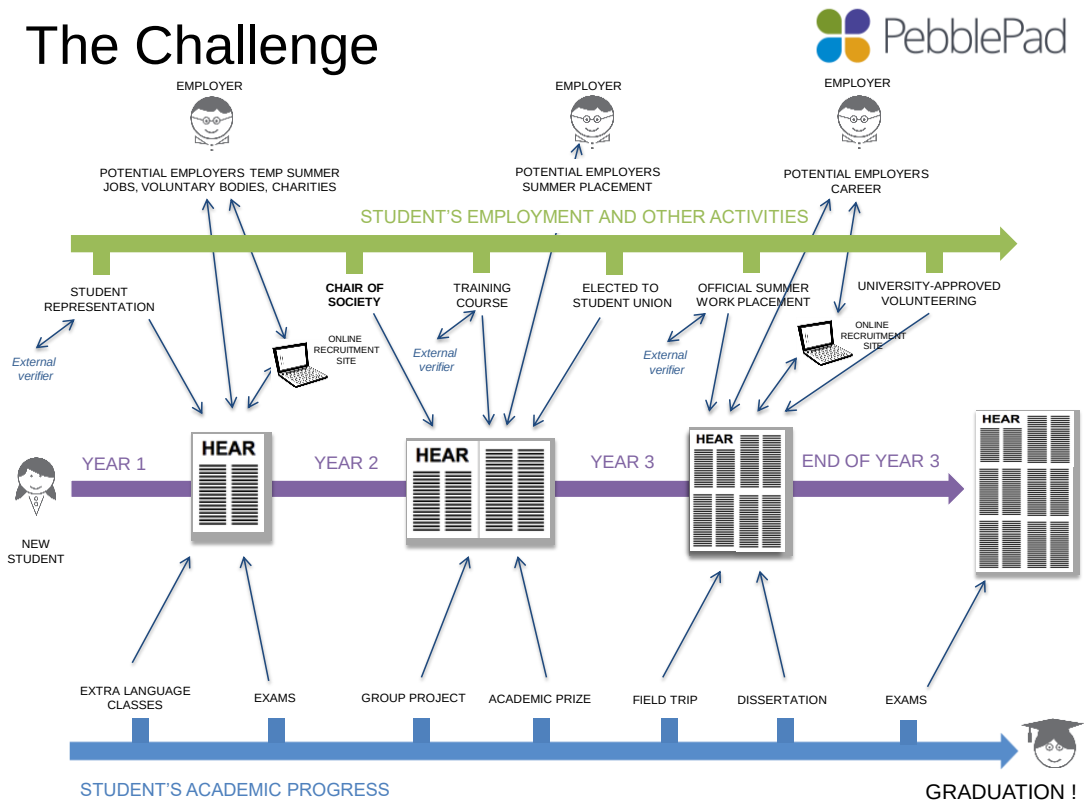
Phase 2 of the project will provide the technical means within the PP e-portfolio to enable students to record their co- and extra-curricular activities and experiences and to reflect on the knowledge and skills they have gained using PebblePad. Each student will have their own Activity/Skills Folder in PebblePad and there are two ways in which they can populate their folder, Firstly, information can be downloaded the people who organise events or activities. These are called verified protocols and there is an optional *reflective skills account* which learners can use to add to the learning and development recognised in the official protocol based on a university 'core skills' list. The second way the activity folder can be populated is through students own statements of learning and development (student written protocols) supported by evidence from external referee (if appropriate) and their reflective skills account.

In the third phase of the project it will be possible to populate section 6.1 of HEAR with activities from the student's Activity Folders. Students choose which activities to add to section 6.1 and the HEAR can be amended to suit particular needs - for example if the students was applying for a particular role certain skills could be highlighted.

If the project succeeds it will provide a model for how students' records and reflections of their lifewide learning, as documented and verified in the institutional portfolio platform can be connected to and

integrated with the Higher Education Achievement Report. Through this mechanism (Qualter and Couperthwaite 2016) imagine that the HEAR could be used as part of a formative process, enabling learners to see throughout their time at university how they are building and developing their official record if achievement in the manner shown in Figure 8.

Figure 8 Illustration of how students own records of learning and achievement documented in the PebblePad e-portfolio platform might be connected section 6.1 of the Higher Education Achievement Report. (slide #10 Qualter and Couperthwaite 2016)



Other examples of connectivity and integration

We might also anticipate that universities will make much better use of freely available Web 2.0 technologies in their social practices that are associated with encouraging, supporting and recognising lifewide learning. For example, Sheffield Hallam University plans to become the first UK LinkedIn University, by adopting the policy that all of its students will not only develop their own professional profile on LinkedIn but will develop the capability to utilise the capacities and resources of the professional networking platform as part of their own lifewide development in preparation for entering the professional world.

Increasing complexity, disturbance and dissonance

But incremental and organic evolution is not the only trajectory within a higher education ecosystem, new conditions might emerge that encourage new behaviours that have the potential to alter the ecosystem in ways that might inhibit the encouragement and support for students' lifewide development. For example, at this point in time (late 2016) we have a new Government intervention - the Teaching Excellence Framework might drive institutional behaviours in a direction that is antithetic

to the types of behaviours that are the primary focus for this article. The thinking underlying proposals for a 'Teaching Excellence Framework', is highly instrumental in its desire to a) create a certain type of graduate for the employment market b) incentivise universities and colleges to adopt the framework by linking it to an institution's right to increase tuition fees. The framework (at the technical consultation stage) emphasises such things as learning contact hours, 'student satisfaction', employment destinations, salary levels and a 'highly skilled employment metric' all of which seem to point to a desire to see higher education as a means to produce a particular type of graduate : one who is able to secure a job with a good salary!

> *[the TEF is] a metrics-heavy model of teaching evaluation, supplemented by as yet undetermined qualitative evidence, and incentivised by increasing fees in line with inflation for 'excellent' universities. In response, it has been argued that the TEF focuses too much on the goal of creating a market in higher education and not enough on actually improving teaching [and students' learning and development] Forstenzer (2016:25)*

> *The most fundamental concern with the proposed TEF is that it risks overly emphasising the development of the skills which will lead to certain kinds of employment and high-salary work options at the expense of the wider social purposes and benefits of undergraduate education. Forstenzer (2016:4)*

The problem is that while society needs people who can cope with the world in 20 or 30 years time we cannot measure someone's preparedness for this distant future. So we focus on what can be measured easily (employment metrics) in order to impose a view of what a good quality education and learning experience entails. So like the assessment of students' learning we focus on what can be measured rather than what ought to be valued.

When confronted by such interventions that have serious resource and political implications, institutions have no choice but to respond but the consequences of their actions are difficult to predict. At a fundamental level this may be considered to be based upon alternative perspectives as to what higher education is for, with a governmental emphasis upon demonstrable economic return upon investment (which may be shared, given the student funding model, by many students). These sentiments are captured extremely well in Josh Forstenzer's critque of the TEF.

> *Encouraging students to think and act like ideally rational economic agents (or self-interested utility maximisers) is a nonsense in the context of education. Education stops being education when it merely focuses on the acquisition of skills to be used in the labour force and it becomes mere training. If higher education is to be reduced to professional training, then private companies, not students, should arguably shoulder the brunt of the financial burden, since they would be the net beneficiaries. Furthermore, while students need their lecturers to do their utmost to enable them to obtain meaningful employment, they also need their lecturers to introduce them to a breadth and depth of experience that enables them to find purpose and self-direction in the complex world we live in. In April 2015, David Brooks, the author and New York Times columnist, drew a distinction between résumé virtues and eulogy virtues: "The résumé virtues are the skills you bring to the marketplace. The eulogy virtues are the ones that are talked about at your funeral – whether you were kind, brave, honest or faithful. Were you capable of deep love?" (Brookes 2015). Although it is understandable and even desirable in these precarious times that university teachers do their utmost to help students develop their résumé virtues in order to gain access to meaningful employment, it is also important that we stimulate our students' minds about the wider public good and eulogy virtues, to help them think about what makes not just their work, but ultimately their lives, meaningful to them and others (Forstenzer 2016:23-4)*

TEF will undoubtedly test the agility of the higher education ecosystem to respond in ways that not only meet Government requirements but maintain commitment to the wider educational, learning and development needs and concerns of students. Given the likelihood that the TEF will become a powerful feature of the ecosystem perhaps the best outcome, from a lifewide learning perspective, is that institutions develop a compelling narrative for why they are investing in the holistic development of students, and supporting their narrative with their own evidence of the value and significance of

these forms of development. For example a number of researchers have identified 'high-impact' learning practices, some of which involve experiential learning in unstructured contexts (Kuh 2009) With time perhaps, these narratives will come to influence the framework and the thinking that underlies it. Given the employability narrative underlying TEF perhaps the narrative that is most likely to succeed is one hat relates a lifewide concept of learning, development and achievement to the demands of challenging professional work environments. Yorke (2011) uses the needs of problem solving in the professional work environment to draw attention to the issue of adopting too narrow a focus on learning within the academic environment (Table 3).

Table 3 Some contrasting features often found in problems set in higher education and in those faced in professional life (Yorke 2011:5)

Problems set in higher education are quite often characterised by	**Problems faced in professional life are quite often characterised by**
• being deliberately formulated • being well defined • having a 'right answer' … • … and a preferred way of reaching it • the availability of most, if not all, of the relevant information • being of limited intrinsic interest • their detachment from ordinary experience • adequate time • being posed to the individual	• 'happenstance' • 'messiness' • multidisciplinarity • incompleteness of information • the pragmatic need to satisfice – i.e. to reach a 'good enough' solution within the time and resources available, rather than a perfect solution • requiring the involvement of more than the individual

Higher education learning environments with their emphasis on structure, stability and clarity are unlikely to afford the sort of environments for learning that Yorke alludes to, whereas the unstructured environments in a student's wider life are more likely to yield these spaces for experience and development. In other words, in a TEF world the lifewide learning narrative that stands the greatest chance of success is one that connects to individual's need to prepare themselves for the complex professional world they are aiming to inhabit. In this way institutions are able to satisfy political demands for demonstrating the excellence of their education and for graduate employability while pursuing educational goals that value the holistic development of learners. We might therefore predict that the tendency will be to drive institutions to orientate (even more) their schemes for supporting lifewide learning towards the employability and leadership parts of the continuum and away from the education goal of holistic development and self-actualisation (Figure 9)

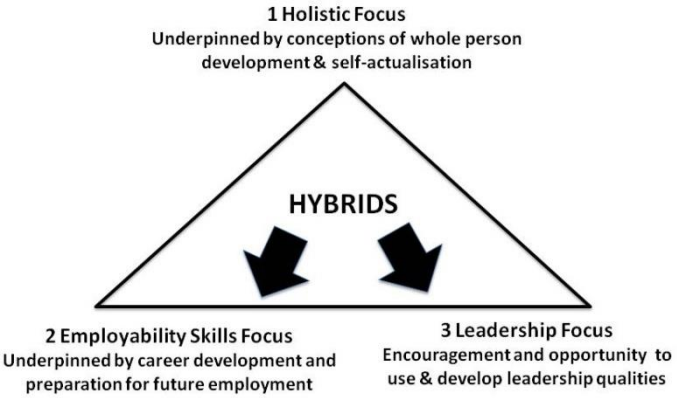


Figure 9 Approaches to recognising and valuing co- & extra- curricular learning Betts and Jackson (2011). The dark arrows show the possible effects of the new (2016) Teaching Excellence Framework on what is valued in students' lifewide learning & development as circumscribed by particular employment metrics.

Towards a different kind of Higher Education ecosystem

To fundamentally change an ecosocial system requires a change in the paradigm that underpins the pattern of beliefs that maintain the ecosocial system. 'A paradigm is a self-consistent set of ideas and beliefs which acts as a filter, influencing how we perceive and how we make sense. A paradigm is a constellation of concepts, values, perceptions and practices shared by a community, which forms a particular vision of reality that is the basis of the way a community organises itself' (Capra 1997:6).

Every ecosystem contains within it strategic thinkers that try to influence thinking particularly amongst key political players and policy makers. In the final part of this exploratory article we turn to the thinkers and researchers who are trying to prepare the higher education ecosystem for the inevitable shift that comes as we enter a new age of learning - which Stodd (2014) terms the Social Age.

In 2009 the EU commissioned a foresight study through the Information Society Unit of the European Commission's Joint Research Centre IPTS. This study aimed to identify, understand and visualise major changes to learning in the future. It developed a descriptive vision of the future, based on existing trends and drivers, and a normative vision outlining how future learning opportunities could be developed to contribute to social cohesion, socio-economic inclusion and economic growth. The vision of future learning emerging from the foresight study was expressed by Redecker et al (2011) in what amounts to a paradigm shift in thinking.

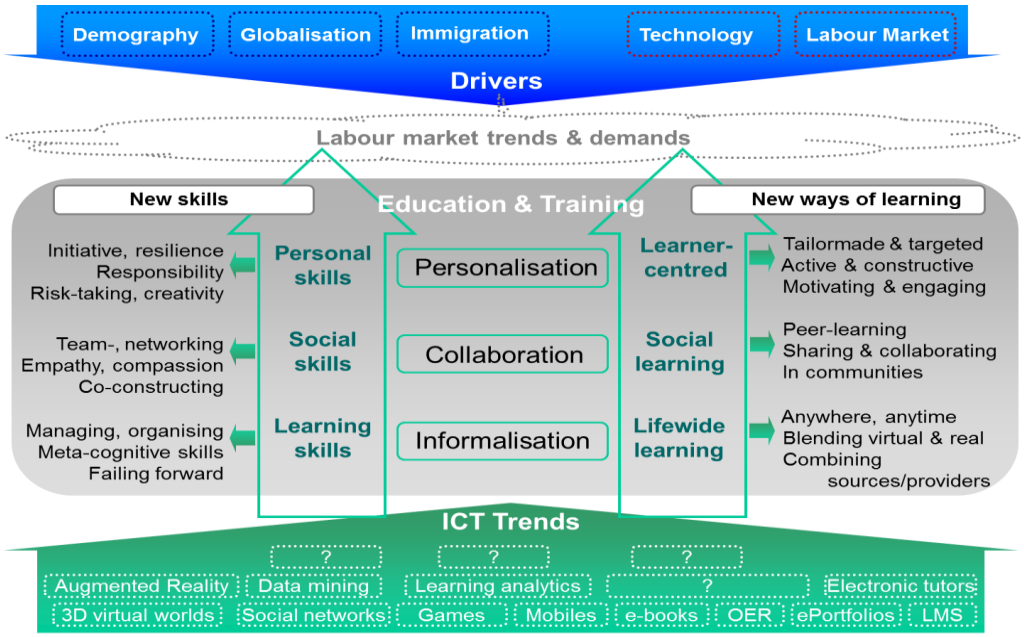
> *The overall vision [for the future of learning] is that personalisation, collaboration and informalisation (informal learning) will be at the core of learning in the future. These terms are not new in education and training but they will become the central guiding principle for organising learning and teaching. The central learning paradigm is thus characterised by lifelong and lifewide learning and shaped by the ubiquity of Information and Communication Technologies (ICT). (Redecker et al 2011:9-10)*

Figure 10 summarises the most important components of this vision through a conceptual map (Redecker et al 2011:9). It is worth drawing attention to the explicit role played by lifewide learning in this vision of future learning. Lifewide learning is connected to the ideas of learning anywhere/anytime by any means and for any purpose. In a digital world our learning is increasingly mediated by the personal technologies for communicating and exchanging information that we carry with us as we go about our daily lives. Lifewide learning embraces learning in formal education environments and informal learning in work and other social spaces. It requires the capabilities to plan, manage and self-regulate our own learning and development (important learning skills on the left hand side of Figure 10.

Such skills, attitudes and capacities will be key to being an effective learner in this vision of future learning. Lifewide learning is 'personal', driven by individual's needs, interests, responsibilities and ambitions, which emerge from the situations they inhabit. As Jackson shows lifewide learning provides a conceptual framework that enables the learner to view themselves, 'as the designer of an integrated, meaningful life experience. An experience that incorporates formal education as one component of a much richer set of experiences that embrace all the forms of learning and achievement that are necessary to sustain a meaningful life' (Jackson 2011b:115).

The foresight study was framed within the idea that our institutions and structures for formal education and learning will provide the foundational infrastructure for future adult learning - all formal, non-formal and informal learning after they have completed their initial education and training whether for professional reasons or for personal reasons (Castano et al 2014: 171). But to achieve this goal they will need to adapt to accommodate and support the diverse needs and interests of adult learners. The study hints at, but does not make explicit, the idea that learners will be pursuing their own self-determined goals and that education will be provided in a customised way to meet the particular needs and interests of particular learners. It's a provider- centred view of the world rather than the learner-centred view in which learner's own ecologies for learning drive the learning, development and achievement process.

Figure 10 Conceptual map of the future of learning (Redecker et al 2011:9)



Source: IPTS (2011): „The Future of Learning: Preparing for Change“,
http://ipts.jrc.ec.europa.eu/publications/pub.cfm?id=4719

This way of seeing learning from the learners' perspective became more apparent in a second foresight study by Munoz et al (2014) who imagined a future world (15-20 years time) of open educational resources and practices. Fundamentally, they imagine a shift towards supporting learners' own ecologies for learning and personal development.

The optimistic vision for open education in 2030 might contain (Castano et al 2014:174):

- an abundance of OER in all languages
- knowledge and content will be free - however participants would pay for services such as support and assessment
- there will be a diversity of providers of OER and OEP (eg state and privately funded providers, experts, business, industry and third sector organisations, communities and specialist networks, publishers, and participating learners themselves)
- adult learners will be situated at the centre of their own learning process which they control themselves when they have the requisite skills
  social learning opportunities in communities and networks will be more abundant than today
- an abundance of data will be harnessed to inform educational designs
- pedagogic practices combined with technological aids will enable learning to be personalised
- learners will be able to move easily between educational contexts enabling them to combine educational opportunities in ways that best meets their needs.
- multiple mechanisms of assessment, recognition and certification will coexist.

Figure 11 provides a vision for open learning and education that is very different to what currently exists. Current practice in the education and training sector is for learners to enrol with a specific educational provider like a school, a university, or a training centre and all the functions and practices relating to the educational opportunity are the responsibility of that provider (Figure 11 left hand side).

The future of higher education learning would be very different if institutions unbundled the functions and practices relating to the provision of educational opportunities (Figure11 right side). In this way learners could design their own learning ecologies by connecting different (learning) opportunities, resources and assessment possibilities available within a system (rather than a single provider) and combining them in a way that enables them to meet their particular learning, development and

recognition needs. Learners would be able to learn what, when, where and how they want to learn (the "4W" of Open Education).

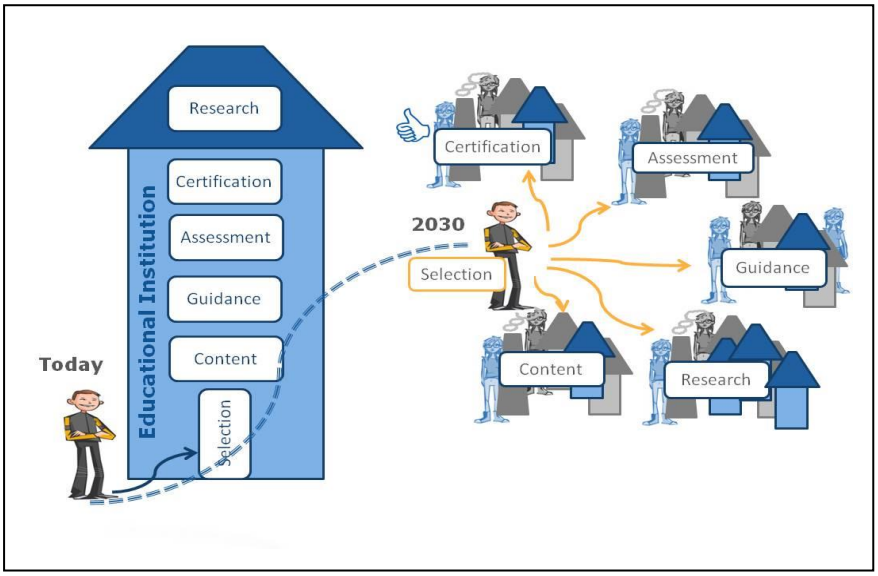


Figure 11 Customising education by unbundling of institutional functions and practices to create the package of affordances a particular learner requires (Redecker 2014)

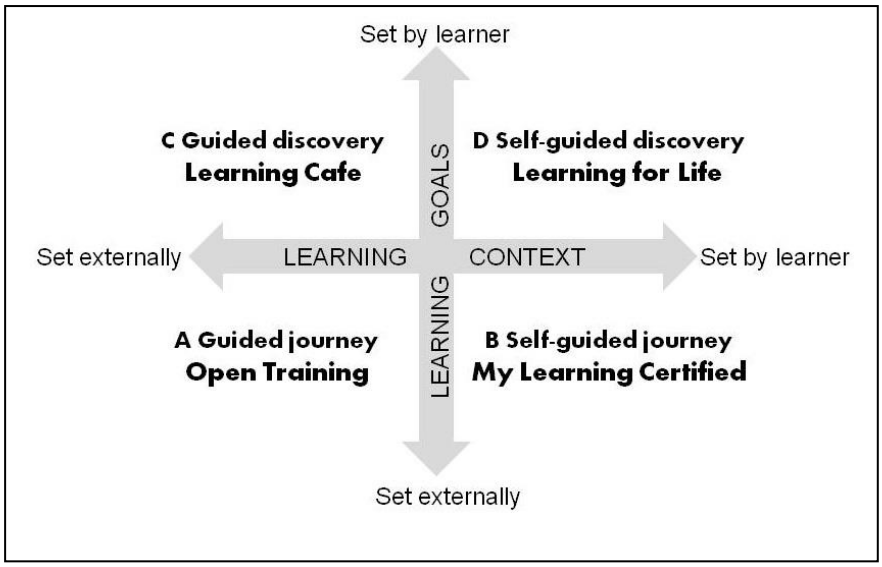


Figure 12 Scenarios for Open Education 2030 (Jackson 2016, adapted from Figure 2 Redecker 2014 and Figure 1 Munoz et al 2014)

Figure 12 provides a conceptual framework within which to consider individuals' learning projects. The four quadrants of the framework reflect whether the learners goals/objectives/ learning pathway is determined or negotiated by themselves or whether these things are determined externally, and secondly whether learning is guided by an agent or is self-guided -through a discovery mode of learning. We might anticipate a number of challenges in moving towards an ecosystem that encourages and supports these practices (Redecker 2014, Jackson 2016).

Challenge 1 From programmes of study to ecologies for learning

The first pre-requisite for a global ecology that supports open learning and education is that learners themselves must have the confidence, skill, capability, motivation and self-belief to be able to operate in such an environment. Such a world of open affordances requires the learner to be not only self-directed and self-regulating but also a designer of their own learning enterprise. It's a shift from the learner being provided with a study programme to the learner creating an ecology for their own learning containing all the components needed for successful study and the application of what has

been learnt (Self-guided discovery Figure 9). Students currently enrolled in higher education will be the adult learners of tomorrow. By developing their capability for self-directed, self-regulated learning they are building their capacity to utilise the open learning ecosystem of the future.

Challenge 2: Provision of guidance

Learners who are less able or willing or able to navigate through a universe of disaggregated learning resources to personalise their own learning journey will need guidance to identify suitable resources, for example through networks and learning communities (Guided discovery Figure 9), and/or enrol more formally in a structured course or class that will navigate them through the learning process, check on progress, provide feedback and motivate them (Guided journey Figure 9). Depending on learners' specific support needs, guidance will take many different forms, from documentation and peer collaboration through to targeted tutoring, mentoring and coaching.

Challenge 3: Learning goals and recognition

Some learners are able to determine learning goals that grow out of their personal interests believing that there is intrinsic value in the learning and they do not need recognition for it. But other learners will want/need recognition for their achievements. For example a learner might need to develop particular knowledge and skill linked to their employability or advancement within a role or profession. In such cases, there is a need to demonstrate the achievement of certain socially recognised and externally set goals and/or standards. There are a range of ways of gaining recognition from formal certification by education and training providers or professional bodies, trade associations etc. But there are also a growing number of experiments to recognise informal learning through peer recognition or endorsement (such as Linkedin endorsements) and open badges (see for example the framework offered by Mozilla http://openbadges.org/.

These challenges to moving towards an open learning and education ecology underlie the conceptual framework provided in Figure 12.

2030 Scenarios for open learning and education

We might imagine four different scenarios to explore the affordances of what an Open Education Ecosystem in 2030 could look like (Figure 12). The four scenarios developed by Munoz et al (2014), spell out different options and manifestations for a common vision of Open Education 2030. In all four scenarios, the learning process is conceived as a personal endeavour that is led and designed by the learner which may or may not be guided and supported by others. The right hand side of Figure 9 requires learners to be capable and confident in directing and self-regulating their learning, while the conceptual spaces in the left hand side of the figure do not require these capabilities.

Scenario A (Guided Journey - or Open Training)

This situation would accommodate people who were not able or willing to plan and organise their learning project by themselves. All the learner needs to do is identify their goal in general terms. With the aid of a guide, mentor or learning agent, they will be helped to sharpen their goal and select from the range of resources and opportunities available. The key characteristics of this scenario are an externally determined context and learning goals. The scenario is similar to what currently happens in education and training except the open learning environment will permit learners to select from a wide range of resources which may be adapted to their particular needs. They will learn according to their preferences and the timing, pace and place of learning, and pedagogic approach will be adjusted to meet their needs (Munoz et al 2014: 179)

Scenario B (Self-Guided Journey - My Certified Learning)

In cases where learners need to acquire and demonstrate competence in certain skills, for example for a particular role they are performing at work or to develop themselves for their future careers, they will want to receive formal recognition in the form of a qualification, certificate or badge. This scenario envisages the case where learners are confident and capable of identifying their learning needs and can plan and organise their own learning project to achieve a well defined goal with the help of open resources that prepare them in a structured and targeted way. Learners set their own goals, choose and implement appropriate learning strategies and learn in a self-regulated way, taking responsibility for self-monitoring, completion of set goals and their evaluation.

Such a process might for example be framed within the context of a MOOC and other open courses or resources that enable learners to achieve and demonstrate a set of competences in a targeted but flexible way. Another example would be a learner using the open resources of a professional body or trade association to prepare for examinations set by these bodies (Munoz et al 2014: 178).

Scenario C (Guided Discovery - Learning Cafe)

In this scenario the learning process is driven by learners' need to understand but with no direct need for recognition or certification. Support and guidance are key to enabling learners to create and accomplish their learning project because they do not possess the confidence and self-regulatory skills, beliefs and attitudes to exploit available resources, and organise and complete their project by themselves. This scenario is for people who are overwhelmed by the information available, and/or are unable to find the specific information they need, who may also be unsure what or who to trust. The role of teachers, mentors, communities and peers who can act as guides and trusted advisors is essential to help learners ask the right questions, identify suitable resources, designing a learning project, monitoring their progress, and validate their learning. In providing such support they are also helping learners develop the social capital and self-regulatory skills and behaviours that will be of benefit in their future learning projects (Munoz et al 2014: 177).

Scenario D (Self-Guided Discovery - Learning for Life)

In this scenario the learning process is completely led by the learner. They identify their learning needs and set their own goals, choose and create their own learning ecology through networking, collaboration, research and knowledge exchange, they monitor their own progress and create mechanisms to validate their learning. In their practices and behaviours they embody the self-directed, self-regulated learner. With or our without the assistance of others, they identify human and material resources for learning, choose and implement appropriate learning strategies which may well involve other people and apply what they have learnt. In the process they will develop their personal learning networks and their own social capital for future learning projects. (Munoz et al 2014: 176-7).

This scenario relates to the idea that the affordances we have for learning, developing and achieving in all the domains of our life expand infinitely if we possess the awareness and capabilities to create our own ecologies for learning.

Concluding remarks

The only certainty about a future higher education ecosystem is that it will be different to the one we now experience. In this article we have tried to argue that shifting to a broader 'lifewide' concept of learning is an inevitable consequence of our changing understanding of the way we have to develop to sustain ourselves in an unknowable future world. It is part of the trend towards greater connectivity and complexity, and the need to develop people who can perform in a world of ever greater complexity, rapid and continuous change and inevitable disruption.

But people are also changing, as social products of the 1950's and 60's, the way Rob and I think is quite different to the way young people think today. Noreena Hertz, the originator of the concept of 'Generation K' (also known as generation Z) studied more than 1000 American and British teenage girls age 13-20 years. The following is an edited passage from Hertz's own website in which she describes the characteristics of Generation K born between 1995-2002 (Hertz 2015).

> Generation Z is the demographic cohort following the Millennials. There are no precise dates for when this cohort starts or ends; demographers and researchers typically use starting birth years ranging from the mid-1990s to early 2000s and ending birth years ranging from the late 2000s to early 2010s. A significant aspect of this generation is its widespread usage of theInternet from a young age. Members of Generation Z are typically thought of as being comfortable with technology, and interacting on social media websites for a significant portion of their socializing.
> https://en.wikipedia.org/wiki/Generation_Z

Hertz stumbled upon two astonishing factors shaping the lives of people between the ages of 13 and 20: that they've been greatly shaped by both "the worst recession the West has faced in decades," and an existential danger that they constantly have access to via their smartphones. Hertz calls this Generation K (for "Katniss" of the Hunger Games book trilogy), and she thinks they're very different from the generation just slightly older (born in the '80s and '90s).

Hertz's definition of a generation is a group of people who share hopes, values, and fears, and one of the things she found most alarming about Generation K is the profound amount of anxiety they seem to have. A lot of this could be brought on by living with and being shaped by things like war, school shootings, and the September 11th attacks, and the most interesting way that Hertz noticed this change was in looking at the books her kids are reading. While she grew up reading Nancy Drew, her kids are reading dystopian fiction about struggling against the state.

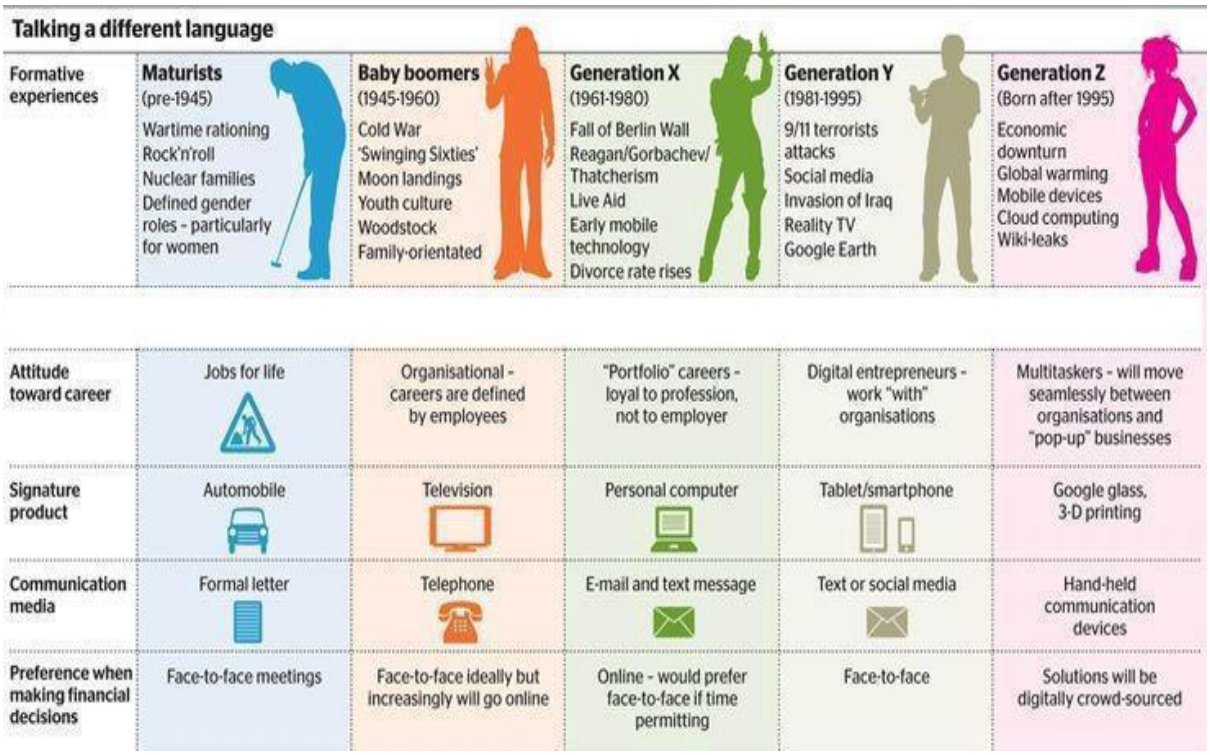
I discovered that unlike those currently aged between 20 and 30, the "Yes we can" generation, who grew up believing the world was their oyster, for Generation K the world is less oyster, more Hobbesian nightmare. This is the generation who've had Al Qaeda piped into their living rooms and smartphones and seen their parents and other loved ones lose their jobs. A generation for whom there are disturbing echoes of the dystopian landscape Katniss encounters in The Hunger Games' District 12. Unequal, violent, hard.

Generation K also has a stunning commitment to social issues; Hertz found that they're worried about terrorism and climate change, stressed out about getting jobs and getting into debt, are more sober than previous generations, and harder working, since "45% percent say they intend to work as hard as it takes to succeed over the next 10 years even if they have to labor day and night."People tend to lump anyone born before the year 2000 together as one group, but Hertz's data shows a fairly clear line of delineation between this younger generation and everyone else.

The people born after 1995 are now entering or moving through the higher education system. What effect has their formational years had on shaping the way they perceive the world, their dispositions to the world and the way they act in the world? Is it significantly different to previous generations? Are they more or less predisposed to valuing the affordances they have across the whole of their lives for learning, developing and achieving the things they value?

Ecosocial systems are populated by people from many different generations (Figure 13). Rob and I are from the 'baby boomer' generation and our thinking has been shaped as we have experienced the ever changing world as we have progressed from the industrial age, to the information age and into the social age. At this stage in our lives we have made most of our contributions to the higher education ecosystem we have been talking about and other's, from generations following ours, are the significant influencers, shapers and practitioners. Their thinking and practice is shaped by the technological changes they have been socialised into and their solutions to the challenges we have been talking about will be different to the ones we can imagine and that is how an ecosystem evolves.

Figure 13 Generalised characteristics of the generations populating the UK HE ecosystem source: http://www.executivevoice.co.uk/communicating-different-generations/



Ecosocial systems are subject to all sorts of influences and one of these influences is the ideas that inspire and help us discover new meaning and purposes. By way of concluding this exploratory article we find it both ironic and inspiring that the best estimates of experts on what a future higher education ecosystem might look like (Redecker et al 2011) is not too dissimilar to that envisioned nearly a century ago by the great adult educator Eduard Lindeman, who offered this inspiring vision for the future of learning in higher education.

> *A fresh hope is astir. From many quarters comes the call to a new kind of education with its initial assumption affirming that education is life – not merely preparation for an unknown kind of future living. ... The whole of life is learning, therefore education can have no endings.(Lindeman 1926:6)*

Are we slowly but surely moving towards an ecosystem that delivers this vision: an ecosystem that not only embraces the whole of a person's life but all the affordances they can find in the world? But if we are going to assert the significance of the kinds of agenda we feel are important we need to develop and share with students a very clear sense of what their future world will be like and how they might be expected to be involved in it, together with a rationale for why higher education needs to be a place that is perhaps not as comfortable, predictable and instrumental as we often make and represent it. While not written in the language that students will understand, Ron Barnett (another baby boomer) expresses this well.

> *'A genuine higher learning is subversive in the sense of subverting the student's taken- for-granted world, including the world of endeavour, scholarship, calculation or creativity, into which he or she has been initiated. A genuine higher education is unsettling; it is not meant to be a cosy experience. It is disturbing because, ultimately, the student comes to see that things could always be other than they are. A higher education experience is not complete unless the student realizes that, no matter how much effort is put in, or how much library research, there are no final answers.' (Barnett 1990:155)*

Unfortunately, the latest intervention in UK HE (Teaching Excellence Framework) paints a very different picture of what a higher education is, and is for.

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