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Changing patterns of working, learning and career development across Europe

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Executive summary

Since 2000 the European Union (EU) has sought to become the most competitive and dynamic knowledge-based economy in the world. In line with this goal, member states committed themselves to increasing European cooperation in vocational education and training (VET) through the Copenhagen process. However, in this process relatively little attention has been given to continuing vocational training (CVT) and, more precisely, how individuals use continuing learning and engage with continuing vocational training to develop and direct their individual careers, particularly in the context of increased labour market flexibility and mobility.

As a response to this research gap a study was commissioned in 2007 to examine continuing vocational training from the perspective of how individual careers are developing across Europe. In particular, the European Commission was seeking to get a better understanding of the different kinds of continuing training workers engage with and the role that work itself plays in individuals' skills and competence development. To date, most research and surveys in this area have focused upon the take-up of formal CVT provision and self-directed individual learning and development. In addition, the emphasis has been mainly on learning and training in the past few months or in the last year. What was missing, however, was some sense of how individuals integrate learning and development into their evolving careers over a much longer period of time. The main objective of this study was therefore to develop an understanding of the different ways individual careers are unfolding over time and the implications such processes have for European policies on CVT.

The study was designed to involve a desk review of qualitative material on work biographies, learning and career decision making styles in the first year, and the implementation of a small-scale international comparative survey in the second year. The desk review and feasibility study, which also included the review of third party surveys, resulted in the generation of hypotheses that provided the basis for developing a standardised questionnaire for survey implementation. The English questionnaire was pre-tested and translated into Dutch, French, German, Italian, Norwegian, Polish, Portuguese, Romanian and Turkish to be implemented in ten European countries. Overall, answers from 1148 respondents, of which 900 questionnaires were fully completed, were used for a descriptive statistical analysis.

The Copenhagen process is due for review in 2010. In this context the study was a timely initiative to shed light on one of the challenges identified in the 'Key competences for a changing world' (CEC 2009): 'implementing lifelong learning through formal, non-formal and informal learning and increasing mobility' by drawing attention to how these different types of learning interact across the life-course and how they may facilitate mobility in the labour market. This executive summary outlines the key findings and issues arising from the research and concludes with a series of recommendations for CVT policy and practice.

Key findings and issues arising from the research:

1.   Complementary role played by different forms of learning in skill development at work

The survey highlighted the variety and depth of learning opportunities in many work settings and the increasing differentiation within and between labour markets in the extent to which learning opportunities are available in work settings (with work itself having become increasingly multi-faceted). However, formal continuing vocational education and training for many workers, particularly in the context of dynamic and/or uncertain labour markets, remains important too. Formal CVT can be used, for example, to up-date existing skills, develop new skills, consolidate and deepen work-related knowledge and understanding and help maintain employability over a longer period of time. Personal professional development often involves complementary forms of learning and development over time, even though much skill development, especially for more highly skilled workers, takes place outside formal training contexts.

2.   The relationship between career development and learning while working

The survey and literature review highlighted how:

- learning while working is important in many contexts, but especially for the highly skilled;

- the lack of engagement with substantive learning and development increases the likelihood of downward career drift;

- employees working in learning-rich work environments are more likely than others to have a positive disposition towards learning and a proactive approach to career development;

- learning to learn and linking continuing learning strategically to career development affects individuals' attitudes to and willingness to engage with continuing vocational learning.

3.   Enhancing skill development at work

The survey and literature review pointed to the importance of a number of factors to bear in mind when seeking to develop policy and practice to support skills development at work. These factors included: the extent of opportunities for engagement with challenging work; different patterns of interactions at work; forms of knowledge used at work; whether there is a culture which facilitates supporting the learning of others at work, encourages self-directed learning, and aligns with evolving identities at work. One way to conceptualise how best to achieve effective skills development at work in different settings could be to apply the following set of principles:

- Skills development policy should have twin foci upon enhancing individual development and organisational performance.

- Effective skills development depends on the learning and development of all those who support the learning of others in the workplace.

- Informal learning is a central component of skills development at work.

- Skills development at work involves both individual and social processes and outcomes.

- Skills development works best when it promotes the active engagement of the individual as a learner.

- Effective skills development at work is dependent upon the timeliness and quality of feedback and support.

- Effective skills development at work requires some aspects of learning to be systematically developed.

- Effective skills development at work recognises the importance of prior experience and learning.

- Effective skills development at work engages with expertise and valued forms of knowledge.

- Effective skills development at work should engage with individuals' broader life goals.

4. Value of a developmental view of expertise in a knowledge-based society

The literature review highlighted how a key focus for moving towards a more knowledge-based society should be upon supporting the use of skills in context rather than just increasing the volume of skills per se. The temptation for policy makers is just to highlight the need for individuals to develop additional skills, knowledge and understanding without paying sufficient attention to the challenges involved in transferring skills, knowledge and experience between different settings. An expansive view of the development of expertise would acknowledge the importance of developing individuals' ability to recontextualise their skills, knowledge and understanding according to the requirements of different settings and support individuals in developing a frame of mind whereby they continually look to improve their own performance through learning and development and support the learning and development of others. Such an approach would also acknowledge the importance of collective approaches to learning from experience and the need for organisational commitment to support employees' continuing development. This more coherent and comprehensive view of the type of learning and development required to support continuing learning at work can interact with a wide range of education and training provision that varies according to subject, breadth, depth and timing. The shift is away from expertise being regarded as mainly concerned with achievement and competence to a more developmental view whereby there is a willingness to consider new ways of meeting fresh challenges and a willingness to recognise that combining and applying existing skills and knowledge in new ways is itself a major developmental challenge.

5. Policy challenges arising from the research

A major challenge for skills development policies and practices is to take account of current, and possible future, patterns of individual skills development across the life-course. The research findings suggest that the following issues need to be tackled:

- although many individuals learn in adaptive ways through challenging work, learning and development which results in substantive changes in attitudes, knowledge or behaviour is often episodic, and the rhetoric of lifelong learning should reflect these two different forms of development: adaptive learning may occur more or less continuously but individuals' transformative learning may follow an irregular rhythm and tempo across the life-course.

- individuals who do not engage in substantive upskilling or reskilling, for say five to ten years, through either formal CVT or learning through work, run the risk of being 'locked into' a particular way of working and are more vulnerable in the labour market if there is a significant change in their job or their circumstances.

- the focus on formal qualifications as a proxy for learning and development does not do justice to the range, depth and variety of forms of learning while working. We should look to promote the latter and consider the most appropriate timing for validation of learning and the use of qualifications in this process.

- there is a need to provide support for people moving between sectors as well as offering development and progression within sectors.

- low skilled work is not a problem per se (and because of high replacement demand many people may 'pass through' such employment) - it is staying in work which lacks challenge or opportunities for development which can erode an individual's broader employability prospects over the long term. It is important to encourage and support people in seeking more challenging work, especially as this is rated as the most effective form of skill development by the low skilled in almost every country in Europe.

- if we want more older people to remain engaged in the labour market – and one of Europe's key future challenges is an improved integration of older employees into the labour market – there is a need to encourage more people to consider mid-career change.

- people need support and guidance to develop coherent career narratives of where they have been; what they are doing now and where they are going.

- a challenging working and learning environment facilitates informal learning and many workers value challenges at work and this in turn produces a positive disposition towards learning. Not all work supplies such challenges, however, and thought should be given as to ways to improve the proportion of high quality jobs.

6. Job mobility and the importance of career guidance

The survey and the literature review highlight the importance of job mobility for individuals in a range of contexts in order to support upskilling, reskilling, employability and the integration of older workers for longer in the labour market. The literature review and survey also stressed how individuals valued support in making career decisions. This support could take various forms, but from a policy perspective access to advice and guidance services for adults at times of transition appears crucial in facilitating positive outcomes both for the individual and for the smooth functioning of the labour market.

7. Richness and diversity of workplace learning: recognition, validation and consolidation of learning leading to personal development (and transformation)

The study results emphasised the richness and diversity of workplace learning (learning through challenging work, interaction, peer learning, etc., but one challenge is to ensure there are facilitating mechanisms like recognition and validation systems that enable such learning to be recognised for the purposes of progression in education, training or employment. Equally, however, there needs to be access to formal education programmes which can consolidate such learning and be used as platforms for further individual development (and in some cases transformation of significant aspects of their life).

8.   Support for groups at risk

Because their work often offers a more restrictive learning environment those individuals with the least initial education and training are also less likely to receive continuing vocational training or to have opportunities to learn while working through engaging in challenging work. Some workers in low skilled employment may feel less motivated to engage in substantive learning precisely because learning does not fit seamlessly alongside their work. However, it was also striking that some people in low skilled employment did have a strong commitment to learning, development and progression – this was particularly likely if they had developed a clear 'narrative' about the development of their career. Guidance could play a key role in this process in helping people establish such narratives. As previously argued, changing employment so you had more challenging work was a powerful driver of skills development for the low skilled, because learning based upon engagement has a positive effect on motivation to learn. Attendance on formal VET programmes was also sometimes seen as a vehicle to improve competences (including in some cases basic skills development), not least because this could involve the recovery and rebuilding of fragile learning identities.

9.   Nature of lifelong learning interventions

Lifelong learning (LLL) itself as a concept has different dimensions including skill growth, personal development and collaborative learning and LLL interventions may be targeted to achieve different ends. Much LLL policy has been concerned with skill development, especially in relation to upskilling, but some emphasis is now being given to the importance of reskilling – developing new skills and updating existing ones in order to apply them in new contexts. LLL policy could also seek to strengthen learning through networks and other collaborative forms of knowledge creation and sharing.

10.   Perspectives for future research and development

Further qualitative developments could be put in place on the basis of what has already been achieved through the survey. It could be useful to design new research activities specifically looking at issues of job mobility, learning across the life-course, how to improve career development services in work environments and in particular career counseling activities designed to support career development for people in work (which are often under-developed at present).

11.   Pivotal importance of opportunity structures

The review of the implications of flexicurity for individual career development highlighted how if the common principles of flexicurity (comprehensive lifelong learning strategies; effective active labour market policies; ease upward mobility and between unemployment or inactivity and work; continuous upgrading of skills) could act to widen the opportunity structures available to people with particular sets of qualifications then movements in this direction could be a useful means of encouraging individual aspirations and occupational mobility. The pathways available and different sets of expectations about career choice and occupational mobility are framed within clear opportunity structures which vary (within and) between countries. The openness to changes in career direction for many individuals in England and Norway (which were at opposite poles of the flexicurity spectrum) showed it was the

opportunity structures available in different national and sectoral contexts which were pivotal for individual career development rather than constellations of flexicurity characteristics. The use of the term 'opportunity structures' itself neatly expressed the tension between openness and flexibility on the one hand and structured pathways on the other. Both are valuable and it is finding an accommodation which works well for most members of a society but also provides opportunities for those who do not fit initially which should be the goal of a CVT policy informed by concerns for individual career development. The principles of flexicurity can be helpful in this respect, but it is extending the breadth and quality of the opportunity structures which should be the goal of policy in this area.

The importance of 'opportunity structures' was reinforced for different sectoral contexts. For example, in ICT both learning and career patterns are highly individualised and as informal learning plays a key role, formal qualifications and career progression are only loosely coupled. Speed of change in the sector means much use is made of continuing (implicit) work-process oriented learning and the gradual development of skills, knowledge and understanding through experience of different work processes. For individuals in this sector the opportunity structures are governed by four main progression pathways: deepening technical expertise linked to their occupational role; broadening skill set in ways linked to original occupational profile (by taking on roles such as project leader, tutor etc.); reskilling: individuals who move to roles where their ICT skills are of secondary importance (for example, being engaged in research, management consultancy etc.); taking on roles that involve substantive upskilling and reskilling – for example, leading major organisational change programmes.

In engineering there is quite a strong linkage between learning and careers in engineering, as formal training has a key role for many in the close coupling between continuing vocational learning and individual career development. There are much more structured career pathways (compared to ICT) and these established pathways (for example, leading through to professional recognition) guide employees in planning and directing their own learning and career. Even with changes in the organisation of work, career development pathways continue to link continuing learning with career progression. Continuing learning is directed partly by differential (specialist) work experience and partly by individuals' own interests. For those working in engineering their particular learning patterns vary according to individual and organisational factors and are less dominated by a major learning pattern (whether individualised as in ICT or organisational as in heath) and the learning demands in different jobs vary considerably. For individuals in this sector the opportunity structures are governed by three main pathways to career progression: deepening technical expertise linked to a continuing organisational role; broadening skill set in ways linked to original occupational profile (becoming a project manager); reskilling (such as a move into general management). In health the linkage between learning and careers was quite complex. In some cases making a career involved vertical mobility, whereas others were happy to continue in a single specialisation or engage in horizontal mobility. There was, however, strong continuity through highly formalised initial and continuing education and training pathways, with a wide range of development opportunities on offer for most people working in the health sector. As a consequence individual career progression was often linked to formal qualifications. Career pathways were therefore strongly framed by organisational opportunity structures in the different national health systems.

Recommendations for continuing vocational training policy and practice:

A.   Recommendations primarily for policy-makers:

1.   Broaden and deepen needs-based adult guidance provision

Access to advice and guidance services for adults at times of transition is useful both for individuals and for the smooth functioning of the labour market. However, indications from the research are that differentiated needs-based services would be the most cost effective way of ensuring that the career development support needs of individuals are appropriate or relevant to particular phases and stages of their career trajectories. For example, workers in undemanding jobs (low skilled employment), those wishing to change sectors or seeking to change intensity of work because of changed responsibilities, and older workers seeking a career change are all groups which could benefit from improved access to information, advice and guidance. Additionally, policy could give greater emphasis to the value of guidance in helping individuals articulate and possibly align goals, expectations, development strategies and outcomes in relation to learning and career development.

2.   Strengthen validation processes

The right for individuals to have major developments in their skills, knowledge and competences recognised is important, and the development of suitable facilitating mechanisms like recognition and validation systems enables such learning to be recognised for the purposes of progression in education, training or employment. However, the potential scale of this right is so huge that it is important that there should be differentiated needs-based provision. For example, a relatively formal review may be appropriate at a point of transition or for a particular purpose. At other times, it may be sufficient for an individual's career development purposes to maintain a portfolio of recognised achievements without further formal accreditation. Equally, however, validation may be valuable in accessing formal continuing vocational education and training (and HE) programmes which can consolidate such learning whereby individuals can use such programmes as a platform for further individual development (and in some cases transformation of significant aspects of their life).

3.   Rebalance resource allocation towards CVT

By far the greater proportion of the overall VET budget is spent on initial VET. So even a small rebalancing towards continuing vocational training could expand opportunities for adult workers significantly.[1] There is particular value in some substantive CVT programmes such as Master's courses and Meister programmes in lifting workers to a new level of understanding and helping them adopt new ways of thinking and practising. In addition to personal development individuals often highlighted that

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[1] In a UK context Tom Schuller and David Watson estimate that 86% of lifelong learning expenditure goes on those aged 18 – 24. Hence even a small redistribution from the initial education and training resource of say 7% would have a major impact on resources for those aged over 25: releasing 50% more resources than are currently allocated. See Schuller, T. and Watson, D. (2009) Learning Through Life: Inquiry into the Future for Lifelong Learning. Leicester: NIACE. http://www.niace.org.uk/lifelonglearninginquiry/docs/IFLL-summary-english.pdf

the social networks they developed on such programmes were also valuable to them in relation to their further career development.

4. Building capacity (numbers and quality) of those able to support the learning of others at work

Managers, supervisors, trainers, mentors, working coaches and 'key workers' may all have responsibilities to support the learning of others at work but may require support to do so effectively.

5. Re-engaging older workers in learning and development

Many older workers in our sample were committed to learning and development, so it is clear that a lack of engagement with learning is not a function of age per se. It is partly about access to opportunities to learn and partly about motivation, so for those who have not engaged in learning for some time then involving them in identifying the type of learning with which they want to engage is critical. This approach underpins both the union learning provision and some state-funded CVT provision. Older workers could also be encouraged to become coaches, mentors or trainers.

6. Refocus public policy support for employees working in contexts where work is highly routinised

Quality of work remains a key factor in determining the extent of continuing vocational learning and skills development. Where individuals are engaged in challenging work they are likely to have opportunities for development in significant ways based upon learning while working. However, a company's field of operation, future horizons, product market strategy and organisation of work may all place constraints on the extent to which workplaces offer 'expansive learning environments.' Where a company offers only limited opportunities for substantive learning while working efforts to encourage employers to offer additional training have had only limited success, not least because employers may think employees would then be more likely to leave. Public policy should therefore instead perhaps focus upon giving workers entitlements to guidance and further learning opportunities.

7. Adapting recommendations to fit particular national contexts

The recommendations outlined so far have been deliberately framed in such a way as to be applicable at the level of principle across Europe as a whole. However, at the level of detailed implementation these recommendations have to be enacted in ways which are responsive to particular national contexts. For example, the most effective way to strengthen adult guidance and validation services will depend at least in part on the existing configuration of services. Similarly, the challenges faced by building capacity to support the learning of others at the workplace are very different between countries such as Germany where such capacity is already well developed and highly formalised as in the *Meister* system and somewhere such as the UK where support for workplace supervisors, mentors and assessors has been much more fragmented. Finally, different patterns of work organisation and sectoral configurations highlight further the need to adapt the implementation of recommendations to fit particular national contexts.

B.   Recommendations primarily for practitioners:

Because of the importance of context it is less easy to make detailed recommendations for CVT practitioners, so perhaps it is more helpful to outline a range of factors to consider in seeking to enhance CVT provision. Practitioners, whether tutors, trainers or others supporting learning at work, might like to consider the following points of leverage in trying to engage more people in work-related learning. It is important to recognise the importance of the personal dimension in generating commitment to continuing learning; to consider the idea of using key transition points to help target provision; and to acknowledge the significance of networks in supporting skill development at work. Additionally, in constructing a model of how to support effective learning and development at work practitioners could consider utilising some of the following drivers of effective learning in CVT provision:

- A focus on individuals' competence development or career progression can be meaningful or personally rewarding, resulting, for example, in an increase in self-esteem, confidence as a learner or self-efficacy.

- Provision resonates with an individual's motivation, where the individual feels a clear drive for achievement and development.

- Active engagement of participants can be a powerful means of challenging or extending current ideas, assumptions, attitudes, constructs, knowledge and understanding).

- Reflection upon experience (and prior learning) can act as a driver of further learning.

- Collaboration between learners can be rewarding: for example, where learners engaged in a collective enterprise (such as performance improvement activities or as members of a study group) or even when learning activity is predominantly individual drawing on the support of significant others in other ways can help individuals consolidate their learning.

- Engagement with particular ways of thinking and practising (including how individuals are connected to particular knowledge cultures associated with an occupation) can include development of particular approaches to critical analysis, evaluation, problem-solving etc.

- Links to vocational progression can be important, either as part of an established progression pathway or through establishing an enhanced personal base from which to seek further career development – for example, through the completion of a substantive further qualification.

- Provision aligned to an individual's career orientation, career goals or which is helpful in developing skills which are useful for career management purposes can have a motivating effect as they contribute to an individual's clear sense of vocational attachment or 'becoming'.

- Provision which provides opportunities for a significant shift in personal perspective (whether values-based or interest-based).

- Provision incorporates timely feedback to learners.

- Provision helps individuals develop greater opportunity awareness, especially as much continuing vocational learning is at least partly dependent upon an individual being aware of and then taking advantage of opportunities for learning and development.

- Provision helps individuals' develop judgement (for example in making choices in relation to values, goals, plans and aspirations); make decisions; self-motivate; and display resilience.

C.   Recommendations for everyone with an interest in CVT:

1.   Recognise the complementarity of different forms of learning across the life-course

CVT development should recognise the complementarity of different forms of learning in support of skill development at work. The research findings provided a strong endorsement for the complementarity of learning through engaging with challenging work and institutionalised learning which is able to help individuals look beyond their immediate context. Such complementary learning has of course underpinned many apprenticeship systems, sandwich degrees and much professional training. However, the survey produced many examples of the value for individuals when they applied such modes of alternance learning across the life-course as a whole: that is, where learning was predominantly work-based but with periods of institutionalised learning interspersed. Learning through challenging work alone may be insufficient and other forms of learning may be necessary to help the employee make a quantum leap in their broader understanding of a particular field.

2.   Enhancing individuals' capability to exercise greater control over their own lives

CVT development could also be linked to the notion developed by Amartya Sen of the importance of developing individual capabilities in a broader sense. Applying this idea to skill development at work the ultimate goal is to increase the freedom for individuals to exercise greater control over their own lives (in relation to what they value being or doing): this includes expanding opportunities to access knowledge, meaningful work, significant relationships and exercise self-direction. Other capabilities (ways of being and doing) could benefit from engagement with other forms of education and training.[2]

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[2] Sen, A. (1999) Development as Freedom. Oxford: Oxford University Press.

1.   European policy context

In 2000 the Lisbon European Council set the goal for the European Union (EU) to become the most competitive and dynamic knowledge-based economy in the world. Education and training, including vocational education and training (VET), were seen as central to achieving this goal. In relation to VET, countries committed themselves to increasing European cooperation through the Copenhagen process, an integrated part of the Education and Training 2010 work programme, which helped to compare VET policies, identify common priorities and agree on common principles and measures. This project was one of a number of studies and analyses funded by the Commission to support mutual learning and experience sharing, an important part of European cooperation in VET, which should lead to more evidence-based and enlightened policy making.[3] The Helsinki Communiqué of 2006 stressed that vocational education and training is an integral part of lifelong learning strategies. "It plays a key role in human capital accumulation for the achievement of economic growth, employment and social objectives. VET is an essential tool in providing European citizens with the skills, knowledge and competences needed in the labour market and knowledge based society". It goes on to say that the skills, competences and mobility of the labour force should be promoted and that training opportunities should be provided for those in working life.[4]

However, emphasis within the Copenhagen process and the work it has initiated concentrated primarily on initial vocational education and training rather than continuing vocational training (CVT). This study was therefore commissioned to examine CVT from the perspective of how individual careers are developing across Europe. The Commission was seeking to get a better understanding of continuing vocational training of workers[5], and in particular the role of work itself in their skills and competence development.[6] Much work in this area has focused upon the take-up of formal CVT provision or

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[3] See: European Commission. Declaration of the European ministers of vocational education and training, and the European Commission, convened in Copenhagen on 29 and 30 November 2002, on enhanced European cooperation in vocational education and training ("Copenhagen Declaration"), November 2002. http://europa.eu.int/comm/education/copenhagen/copenahagen_declaration_en.pdf;
European Commission, Communication from the Commission: European benchmarks in education and training: follow-up to the Lisbon European Council, Brussels, 20.11.2002, COM (2002) 629 final. http://europa.eu.int/eurlex/en/com/cnc/2002/com2002_0629en01.pdf;
European Council. Joint Interim Report. Education and Training 2010: The success of the Lisbon strategy hinges on urgent reforms, Brussels, 2004. http://europa.eu.int/comm/education/policies/2010/doc/jir_council_final.pdf;
The Maastricht Communiqué on the future priorities of enhanced cooperation in vocational education and training (VET), 14 December 2004 http://europa.eu.int/comm/education/news/ip/docs/maastricht_com_en.pdf;
Progress towards the Lisbon objectives in Education and Training 2005, 2006, 2007. http://ec.europa.eu/education/policies/2010/back_indi_en.html;

[4] The Helsinki Communiqué on enhanced European cooperation in vocational education and training, 5 December 2006http://ec.europa.eu/education/policies/2010/doc/helsinkicom_en.pdf

[5] This term is used throughout the document to cover all employees, workers, self-employed and others.

[6] The research comprised a literature review and a small survey and so should be seen as complementary to the statistical data available through Eurostat, the Labour Force Survey and the Continuing Vocational Training Survey, the Eurobarometers on VET and lifelong learning, Cedefop and Eurydice sources, and other OECD (forthcoming PIAAC) and international sources.

individual learning and development in a previous time period (for example, learning activities undertaken in the past month, quarter or year). What was missing, however, was some sense of how individuals are putting learning and development to use in their evolving careers over a much longer time period. This study therefore sought to develop an understanding of the different ways individuals' careers are unfolding over time and the implications for European policies on CVT which are due for review in 2010.[7]

The context in which that review is taking place is framed by the recovery from recession together with the co-existence of relatively high levels of unemployment and skills shortages. This research study looked mainly at the careers of those with medium to high level qualifications, although a number of our sample had also worked at some time in low skilled employment.[8] In relation to the sectoral focus, we were particularly interested in people's evolving careers in engineering, health and information and communication technologies (ICT). The most recent sectoral analysis for health and social work outlined how 'EU employment in the health and social services sector amounted to about 20 million workers in 2006, with employment in the sector growing mainly because of a rise in government budgets which are in turn determined by ageing, growing national incomes and the availability of new therapies and medical technologies. Other major drivers of change are the need to provide more personalized services and a more integrated approach to cure and care. These changes require important new skills. Across all job functions both soft skills and new knowledge will become increasingly important, especially so for high skilled professional job functions. Due to the changing nature of jobs, predefined technical knowledge capabilities will become somewhat less important while skills to adapt and learn new

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[7] See the following: Council Conclusions on the future priorities for enhanced European cooperation in VET (Bordeaux review), 20-21 November 2008 http://ec.europa.eu/education/vocational-education/doc1143_en.htm; Bordeaux Communiqué on enhanced European cooperation in vocational education and training, 26 November 2008 http://ec.europa.eu/education/lifelong-learning-policy/doc/vocational/bordeaux_en.pdf;
The Education Ministers adopted new strategic priorities for the period 2010 to 2020 in May 2009 (http://ec.europa.eu/education/lifelong-learning-policy/doc28_en.htm; Council Conclusions on a strategic framework for European cooperation in education and training ("ET 2020") "Key competences for a changing world" 12 May 2009 http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2009:119:0002:0010:EN:PDF; and "Key competences for a changing world" Draft 2010 joint progress report of the Council and the Commission on the implementation of the "Education & Training 2010 work programme"(November 2009) http://ec.europa.eu/education/lifelong-learning-policy/doc/joint10/com640_en.pdf
For each review of the process a report has been prepared by Cedefop which tries to assess Member States' progress. See: In the finishing straight: From Copenhagen to Bordeaux. Cedefop, 2009. http://cedefop.europa.eu/etv/Information_resources/Bookshop/publication_details.asp?pub_id=515; and Zooming in on 2010, Cedefop, 2007 http://cedefop.europa.eu/etv/Information_resources/Bookshop/publication_details.asp?pub_id=474

[8] This aligns with the analysis undertaken by CEDEFOP (2009) on the Future skill supply in Europe: medium term forecast up to 2020 – synthesis report. 'In 1996, 31 % of jobs needed low-level or no qualifications. By 2020, this proportion is expected to fall to around 18 %...... The results suggest substantial further increases in the supply of people with both high- and medium-level qualifications across Europe. In contrast, the proportion of people with low-level qualifications is projected to decline. These general trends are observed in almost all countries and are in line with the Lisbon agenda, which aims to raise the proportion of people holding higher-level qualifications. One concern for policy-makers is whether the historical trends identified will continue undisturbed by the recent economic crisis, or whether people will make different choices related to their desired level of education' (pp 1-2).http://www.cedefop.europa.eu/etv/Upload/Information_resources/Bookshop/546/4086_en.pdf

competences and life-long learning will be put at a premium. E-skills will become more important.' [9] The most recent sectoral analysis for the electro-mechanical industry identified that it 'is, for the most part, strong, competitive and vital to the health of the EU economy….[and]….while the industry is expected to recover without lasting damage from the current economic crisis, employment levels will continue to decline. The skills of the work force are rising, with a growing demand for highly qualified staff, but there are important differences between Member States, most especially, but not only, between the EU15 and EU12 countries. These differences reflect the nature of the industry in the different countries. The process of acquiring the skills and competencies needed, however, also differs between countries, reflecting the education and training systems in place.[10]

One further policy document which provides a useful contextual background is the European Commission's 'New skills: anticipating and matching labour market and skill needs' adopted on 16th December 2008. This document argues that for economic recovery it is essential to enhance human capital and employability by upgrading skills, an approach which is critical for job growth and engendering a capacity to adapt to change, equity, gender equality and social cohesion. 'Upgrading skills is not just a luxury for the highly qualified in high-tech jobs: it is a necessity for all. Low-qualified adults are seven times less likely to participate in lifelong learning than those with high educational attainment; too little is done to increase and adapt the skills of an ageing workforce ….. Education and training systems must generate new skills, to respond to the nature of the new jobs which are expected to be created, as well as to improve the adaptability and employability of adults already in the labour force …. [and there is] growing demand from employers for transversal key competencies, such as problem-solving and analytical skills, self-management and communication skills, linguistic skills, and more generally, 'non-routine skills' …… New technologies and developments in work organisation seem to result in an important job expansion at the ends of the job spectrum (especially at the higher level). New technologies cannot substitute either the 'non-routine' tasks typical of high-skilled occupations (e.g. cognitive and communication tasks), or low skilled jobs, especially in the service sector (e.g. care or truck driving). However, medium-skilled routine tasks and repetitive work can be replaced by automation and computerization, or outsourced. Such polarisation is perceptible in some Member States. However, it is not a clear-cut phenomenon, and the polarising trend in net job creation should be largely offset by a high replacement demand for middle-skilled workers, though replacement demand will also accentuate the upward trend in skill demand.' [11]

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[9] Comprehensive sectoral analysis of emerging competences and economic activities in the European Union: Health and Social Work. 18/08/2009.
http://ec.europa.eu/social/main.jsp?langId=en&catId=782&newsId=583&furtherNews=yes

[10] Comprehensive Sectoral Analysis Of Emerging Competences And Economic Activities In The European Union: Electromechanical Engineering . 17/06/2009.
http://ec.europa.eu/social/main.jsp?langId=en&catId=782&newsId=529&furtherNews=yes. Also note that a Sectoral Analysis at the European level for ICT has not yet been undertaken.

[11] Brussels, 16.12.2008 COM(2008) 868 final Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. New Skills for New Jobs: Anticipating and matching labour market and skills needs. [SEC(2008) 3058].

Overall then, skills, knowledge and competence requirements of workers in future are continuing to rise and the findings of this research were intended to help to assess how individuals acquire the learning and development (including through CVT) required to perform their work effectively and the role of the workplace in this. Alongside this major goal, this research study sought to identify trends in competence development among workers; ascertain whether trends vary between sectors; consider ways to develop good practice and effective training policies in enterprises; suggest ways to strengthen CVT as part of the lifelong learning strategies and to better revise or adjust how it relates to initial vocational training; and to give direction to European cooperation in VET, in the post-2010 phase.[12] This research study was therefore framed by the idea that CVT is vital for people's employability and adaptability during their working life and for enterprises' competitiveness. The original terms of reference of the project, based partly on the findings of the Maastricht study, emphasised how little we know about learning at the workplace, particularly from the individual's perspective.[13] Much of the literature and policy development in the field of VET, even in the intervening period, deals primarily with initial training, be it school-based or apprenticeship, and how it is structured and executed. Little attention is given to the examination of how individuals fare in working life subsequently, and with what continuing training they engage. Can it be that the challenges, changes and flexibility required in working life, coupled with mobility and job and occupational change, provides part of the answer? What are the challenges for CVT in the changing knowledge economy? Is it becoming more a form of work-integrated learning? What consequences does this have for HRD in companies and for VET providers in general? The project entailed developing a methodology and carrying out a survey of the continuing training habits of individuals working in selected sectors/services (with various sized enterprises) and in selected European countries. The purpose of the research was to study the career and occupational patterns of individuals, starting with their initial training and following on to the types of learning/CVT with which they engage, both inside and outside the workplace. This approach could then shed light on one of the challenges identified in the 'Key competences for a changing world': 'implementing lifelong learning through formal, non-formal and informal learning and increasing mobility remains a challenge' (CEC 2009), by drawing attention how these different types of learning interact across the life-course and how they may facilitate mobility in the labour market.[14]

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[12] In the original terms of reference for the study, CVT was considered as any type of employment-related learning undertaken by individuals subsequent to their initial transition from education and training to working life. However, that interpretation proved to be somewhat confusing in practice, so in this report continuing vocational training (CVT) will be reserved for intentional training interventions, whether on or off the job, while forms of employment-related learning which take place during normal work activities will be described as 'learning while working'.

[13] Leney T. *et al*. (2004) Achieving the Lisbon Goal: The Contribution of VET. Report to the European Commission. The Lisbon-to-Copenhagen-to-Maastricht Consortium Partners, QCA, London. See also: The Maastricht Communiqué on the future priorities of enhanced cooperation in vocational education and training (VET), 14 December 2004 http://ec.europa.eu/education/news/ip/docs/maastricht_com_en.pdf; and Vocational Education and Training: A key to the future, Cedefop, 2004 http://www.cedefop.europa.eu/EN/Files/4041_en.pdf

[14] Commission of the European Communities (2009) "Key competences for a changing world" Draft 2010 joint progress report of the Council and the Commission on the implementation of the "Education & Training 2010 work programme"(November 2009) http://ec.europa.eu/education/lifelong-learning-policy/doc/joint10/com640_en.pdf

2.   Research findings

The research findings draw upon evidence from the survey and literature review and are exemplified with some 'case histories' of individuals as appropriate.[15] Only the key findings are presented here as the more detailed research findings are reported in a complementary series of technical reports linked to this report.[16] A brief summary of the survey is as follows: there were 1148 respondents drawn from 10 countries – they were mainly in full-time permanent employment in their mid-career (aged 30 to 55), having achieved skilled worker or graduate qualifications in engineering, ICT or health, working primarily in health, ICT, education or manufacturing.[17] The ten countries surveyed were France; Germany; Italy; Netherlands; Norway; Poland; Portugal; Romania; Turkey and the United Kingdom.[18] The overall sample, as intended, overwhelmingly comprised people qualified for, and in most cases working in, skilled, associate professional or professional occupations, with a small sub-set of people with few qualifications and/or who worked in jobs requiring few qualifications.

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[15] As well details of individual career histories drawn from over 1100 individuals who participated in the 2009 survey, career biographies form over 800 individuals were available from earlier research conducted by members of the core research in the period 2000 – 2008.

[16] The reports where more detailed findings are reported include: Feasibility Report (2008); Interim Report (2009); Technical Report of implementation of and findings from the survey (2009); and two further sub-reports linked to this final report on 'Flexicurity, economic performance and labour markets in 11 European countries: Basic traits and implications for individual careers and learning' and 'Quantitative Approaches: Interpretation of Relevant Trends based on Third-Party Survey Results'.

[17] The sectors within which the respondents were currently working (or had recently worked) varied quite widely and were not always a guide to occupation. In particular, a number of people with a technical IT background were working in health or education and engineers were found working in a number of sectors. The current sector was also not always the sector within which respondents had spent most of their working life, for example, many respondents had worked mainly in health, engineering or ICT and late in their career had switched to education. Even with these provisos over 60% of the sample worked in sectors where their occupational area was in broad alignment with their occupation and this number rises to over three quarters of the sample if education is included as a common career progression path for the three target occupations. About a sixth of the sample were working in micro units with less than 10 people, about one third were working in small-medium units with between 10 – 99 people, about one fifth worked in medium-size units (100 – 500) and about one quarter worked in large units with over 500 people.

[18] The very few cases of residence outside the sample countries related to special circumstances: temporary work, working in one country while living in another etc. Respondents from the non-European countries of residence only amounted to four individuals in total. In the sample a number of nationals from other countries were living and working in Germany or the UK, but only a handful in the other countries. The total number of nationals from countries outside Europe identified in the sample was 14. The sample was predominantly male, but with country variations (for example, UK sample was predominantly female).

2.1. Learning and skill development at work

Skilled workers in their mid-career acquired the knowledge, skills and understanding necessary to perform in their most recent job in a wide variety of ways (see table Q5 below). That 71% of respondents pointed to the importance of their initial education or training highlighted how this continued to provide an underpinning to their continuing work. The most striking results, however, show the breadth and depth of other forms of learning and development relevant to work. Learning through work by carrying out challenging tasks was seen as an important form of acquiring the knowledge and skills necessary to perform your current job by over sixty per cent of respondents. Initial education and training, even where as with nursing it incorporated substantial periods of learning on the job, is rarely sufficient in order to reach an 'experienced worker' standard – this is likely to require individuals to continue to develop their skills through engaging in challenging work activities over a number of years which extend their skills in a number of respects.[19] There are different performance and task expectations for an experienced worker, at whatever level in an organisation, than for a person who has just joined the organisation immediately after completion of initial education or training (or early career learning). Similarly, an individual's work may undergo significant change when taking on a new challenging role resulting in the need for further upskilling or reskilling.[20]

Q5: How did you acquire your knowledge and skills to perform your current or last job? Please tick all that apply. (in percentages)

your studies or initial training	**71.5**
additional training in your current work	**51.6**
self-directed / self-initiated learning, inside or outside the workplace	**55.7**
learning through work by carrying out challenging tasks	**60.9**
learning through life experience	47.6
learning from others at work	**52.5**
learning from networks, working with clients	32.1
other	5.1
N	1148

Learning through self-directed or self-initiated learning, inside or outside the workplace, was highlighted by 55% of respondents. This acknowledges the role of personal agency in responding to learning opportunities at work and/or in individuals seeking to supplement their learning at work in order to pursue personal learning goals. An example of self-directed learning is where an employee upon promotion asked to visit the head-quarters of the engineering company in another country for two weeks in order to put what she was expected to do in her new role in a wider context of the company as

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[19] Other key processes involved in skills development at work include: Interactions at work; Supporting learning of others; Knowledge at work; Self-directed learning at work; and Developing identities at work (for example, particular ways of working associated with an occupation and/or organisation).

[20] There are 'virtuous spirals' at work here. The learning associated with the successful completion of challenging tasks could lead to promotion or other career development which in turn could give them access to further challenging tasks.

a whole. Another example was where someone working in a care home sought to learn more about cultural diversity on their own in order to deal more effectively with a range of patients, rather than getting their existing experience accredited in order to get an approved national vocational qualification – a process which would not necessarily lead to any additional learning and development.

That over fifty per cent of respondents acknowledged that additional training at work was important for the acquisition of skills and knowledge relevant to effective performance of their current job showed that formal continuing vocational training (CVT) could play an important role in continuing professional development and many people undertook a mix of formal and more informal methods of skill development. Additional training was often associated with new ways of working, undertaking a new role or the introduction of new equipment. Interestingly, in some hospital contexts one person undertook most of the formal training associated with working with new equipment – he or she then cascaded the new way of working to all the other members of the department. These other members were learning from other colleagues rather than through formal additional training, even though the end result was the same. This may have been one of the reasons why learning from others at work was also popular: 52% of the sample had acquired valuable work-related knowledge and skills in this way. Work-related learning and development also occurred through use of networks, engagement with clients etc. for over 30% of respondents. Hence acquisition of valued work-related skilled and knowledge often came through interactions at work. Broader still, for almost 50% of the sample learning through life experience also helped them acquire some of the skills and knowledge necessary to perform their current (or last) job.

Overall then, the survey highlighted the variety and depth of learning opportunities in many work settings. However, formal continuing vocational education and training for many workers, particularly in the context of dynamic and/or uncertain labour markets, remains important. Formal CVT can be used, for example, to up-date existing skills, develop new skills, consolidate and deepen work-related knowledge and understanding and help maintain employability over a longer period of time. Personal professional development often involves complementary forms of learning and development over time, even though much skill development, especially for more highly skilled workers, takes place outside formal training contexts.

The knowledge, skills and understanding to underpin job performance can be developed in different, but complementary, ways. However, although upskilling and reskilling are valuable processes individual achievements often need to be framed by contextualised examples of competence and performance in order for an individual to have a demonstrable mix of skills, knowledge, understanding and experience which employers find so valuable. For some of the survey respondents their learning and development was running ahead of opportunities to display their capabilities. It is clear that respondents are much more likely to feel over-qualified rather than under-qualified to carry out their current (or most recent) duties (see table Q6 below).

Q6: Matching of skills and duties in current or last job (in percentages)

I need further training to cope well with my duties.	17.0
My duties correspond well with my present skills.	40.9
I have the skills to cope with more demanding duties.	37.0
I am new to the job so I need some further training to learn new aspects of my duties.	5.1
Total	100.0
N	1115

Most respondents drew upon their past work experience in performing their current work (see table Q7 below).

Q7: Use of past work experience in current or last job (in percentages)

Almost none	6.9
A little	15.3
A lot	39.7
Almost all	30.7
This is my first job	7.5
Total	100.0
N	1119

Past work experience is seen as very important and used in their current job by about 70% of respondents, compared to 56% who see their formal qualifications as of use in their current or last job (see table Q8 below). Qualifications can also be important in getting an individual a particular job, even if they are not actually directly used in the job (the most striking example being the graduate engineer employed in the finance sector).

Q8: Use of formal qualifications in current or last job (in percentages)

Almost none	11.1
A little	30.4
A lot	34.2
Almost all	22.1
I have no formal qualifications	2.2
Total	100.0
N	1119

Overall, for many people learning from past work experience would seem to complement learning represented in formal qualifications in supporting skill development at work.

2.2. Relationship between career development, formal training and learning while working

The survey results showed that CVT and learning while working were both often significant in many successful careers. Examination of individual career trajectories as detailed in the qualitative answers to the survey reinforced this message time and again. An illustration is given below, but this is a theme which will continue to be developed throughout this report:

Case exemplar: a self-employed management consultant who learned both through learning while working in a series of highly challenging managerial roles in a number of different sectors (local government, education and the third sector) as well as taking formal continuing education programmes every ten years or so interspersed with shorter periods of on and off-the-job training.

Learning while working was improving aspects of Catherine's task and role performance as well as providing opportunities for team working, decision-making, problem-solving and exercise of judgement. Awareness and understanding of other people, contexts and situations and organisations were also developed as a greater range of roles, including those with management responsibilities, were undertaken in her developing career. Some specific formal training was linked to exercise of new responsibilities, for example, for inspection of services. On the other hand, Catherine also used participation in formal continuing education programmes for personal development, to broaden social networks and to situate and deepen her developing professional knowledge and understanding in a wider context. She registered for and successfully completed a post-graduate diploma in the late 1970s, a part-time Master's programme in Public Sector Management in the late 1980s and a part-time PhD in Strategic Management in the 1990s.

The above illustration is an example of a recurring theme in the career biographies drawn both from our survey and previous research of how employees working in learning-rich work environments often have a positive disposition towards learning and a proactive approach to career development.[21] On the other hand, the biographies also give examples of downward career drift where individuals had not engaged in any substantive learning and development since their early twenties – in some cases one consequence had been difficulty in finding new employment after being made redundant, while in others the individuals hoped they would be able to 'hang on' in their current jobs until (early) retirement.[22] The

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[21] See, for example, Bimrose, J. & Brown, A. (2010). 'Older workers' transitions in work-related learning, careers and identities.' In K. Ecclestone, G. Biesta & M. Hughes (eds) Transitions and Learning Through the Lifecourse,Routledge: Abingdon; Bimrose, J., Brown, A., & Barnes, S-A. (2008). Researching careers, learning and identities: Career attachments as anchors or chains?, Perspectives in Education, 26, 3, pp. 71-81; Brown, A., Kirpal, S. and Rauner, F. (Eds.) (2007). Identities at Work, Dordrecht: Springer; Brown, A. (2004). Engineering identities, Career Development International, 9, 3, 245 - 273.

[22] Brown, A. (2004). Engineering identities, Career Development International, 9, 3, 245 - 273.

previous example also showed how continuing vocational learning coupled to career progression could act as a 'virtuous circle' increasing the willingness for individuals to engage in continuing learning. In other cases, however, individuals highlighted how where there was only limited challenge in their work activities engagement with substantive learning and development was seen as a way of upskilling thereby leading to opportunities for engaging with more challenging work: for example, a junior science technician took a further two technical qualifications and progressed through to a clinical technologist.

Where individuals had clearly learned how to learn both at work and in related CVT provision they could be reflexive about their own development and link their continuing learning strategically to career development in a way that further enhanced their positive attitude towards learning as the following example illustrates:

Case exemplar: business change manager who used upskilling and reskilling through short courses and substantive continuing education and training in order to underpin a series of promotions from an administrator through trainer, operations manager, regional trainer to business change manager.

Bella started work in public administration, completed a technician level qualification and then took a degree in professional learning and development. This change helped Bella refocus her career as a trainer. While working in a variety of training and management roles over the next decade Bella completed ten certificated units in aspects of general management and human resources development. From 2007, Bella took further qualifications in training, coaching and performance improvement to underpin her switch from regional trainer to business change manager.

Overall, when the findings from the literature review are coupled with the survey results, the relationship between career development, formal training and learning while working highlights how:

- Learning while working is an established form of learning at work in all contexts (but especially for the highly skilled).

- The lack of engagement with substantive learning and development increases likelihood of downward career drift.

- Employees working in learning-rich work environments are more likely to have a positive disposition towards learning and a proactive approach to career development.

- How continuing vocational learning coupled with career progression is important for the extent to which individuals engage in continuing learning.

- Learning to learn and link continuing learning strategically to career development affects individuals' attitudes to continuing vocational learning.

2.3. Interaction of personal agency and opportunity structures:

From the survey it was clear that the sample was in the main well-qualified and had opportunities for learning and development associated with their jobs, but even so the extent of their engagement with a wide range of learning and training activities was striking: see table Q11 below.

Q11: Learning or training activities participated in the last 5 years, several answers possible (in percentages)	
off-the job training	38.0
on-the-job training	**53.5**
self-directed learning inside or outside the workplace	**55.3**
learning from networks, working with clients	**50.2**
learning through life experience	**59.6**
learning through work by carrying out challenging tasks	**65.0**
learning from others at work	**58.2**
group training in your workplace provided by your employer	33.4
individual training at your workplace provided by mentor/tutor/colleague	30.6
course provided by a training centre/organisation/institution at your workplace	42.9
course provided by training centre/organisation/institution outside your workplace	42.5
additional training in your current work	35.9
seminars, conferences	**59.6**
correspondence course	7.4
training that leads to further qualifications	25.5
Other	2.3
N	895

The rich range of learning activities participated in the last 5 years included both formal education and training activities, with learning through challenging work, networks, from others, experience and self-directed learning also all figuring prominently (over 50%). Interestingly, the reasons they took part in training and learning activities were primarily related to skill development and personal development (see table Q12 below), with over three quarters wanting to develop a broader range of skills and/or knowledge and two thirds wanting to develop more specialist skills and/or knowledge. Eighty per cent of the sample also expected to take part in learning and training activities over the following five years, with the reasons for participating largely mirroring those outlined in table Q12.

Q12: Reasons for taking part in training/learning activities, several answers possible (in percentages)

I wanted to develop a broader range of skills and/or knowledge.	**77.9**
I wanted to develop more specialist skills and/or knowledge.	**67.6**
I wanted to change my career options.	29.2
I thought it would improve my job prospects (i.e. find new job, advance my career, get a promotion, earn better money).	43.1
The successful completion of training activities is required for my occupation.	36.2
My employer requested/required me to do so.	26.7
I wanted to perform new tasks or more demanding tasks in my current job.	45.0
I wanted to prepare myself for a new job or new career.	26.8
I wanted to obtain unemployment benefits that depend on training attendance.	0.4
I took part for my own personal development.	**60.6**
Because of threat of restructuring / redundancies in my area of work.	4.4
Because of rights to training granted by my employer or legislation.	13.6
Other	1.5
N	895

The respondents also had very positive attitudes towards learning, appreciating the challenge of learning for work (see table Q15 below). Although their jobs required them to continue learning new things and employers were generally supportive, most respondents clearly actually liked learning and were prepared to be proactive in terms of their own learning and development.

Q 15: Experiences of training or learning activities (means, 1=strongly disagree… 4= strongly agree)

My job requires that I keep learning new things.	**3.6**
I like learning new things for my job.	**3.7**
I don't like learning new things.	1.3
I learn new things for my job as it is a requirement.	2.9
My opportunities for advancement are good.	2.6
I take the initiative in finding new things to learn.	**3.3**
I am serious about career development.	**3.2**
I think my career is important.	**3.2**
I am too old to learn.	1.3
There are few opportunities for me to learn.	1.7
My employer does not support/offer any training.	1.9
My employer supports my career development/learning activities.	2.8
I enjoy new challenges as they offer opportunities for learning.	**3.5**
N	971

The respondents to the survey therefore almost all had a strong sense of personal agency in their commitment to their own learning and development, but within work environments which in the main had a range of opportunities for learning, including through engagement in challenging work. This positive attitude towards learning was linked to a sense of resilience in seeking to advance their careers, despite individuals having had varying degrees of success in the labour market as their learning and work trajectories resonated with the structural conditions with which they were faced. For example, in Romania and Poland workers over the age of 45 had had to negotiate major shifts in organisational structures as well as in their own work roles in post-transition economies. So, while acknowledging structural conditions imposed constraints upon aspects of career development, it was also clear that a strong sense of personal agency underpinned the career development of many respondents. This finding is in line with previous research: for example, Seibert *et al.* (1999) highlight how individuals intentionally and directly changing their current circumstances, including their social environments, has been found to be positively related to career success, with individuals who are highly proactive identifying opportunities, acting upon them, showing initiative and persevering until they bring about meaningful change. Chiaburu *et al.* (2006) also relate proactivity to career resilience (that is, when individuals are able to demonstrate adjustment and adaptation in an increasingly complex, evolving and competitive environment).[23]

Personal agency is an important driver of individual work and learning trajectories, and answers to the qualitative questions of the survey emphasised that some individuals were reflective and reflexive about how their careers were developing and how their choices and possibilities could be expanded or constrained in different ways:

> My career advanced because I had a track record of success and delivery, I note that many organisations in the latter part of my career are more concerned with academic distinction than substantive evidence of capability.

> I spent 10 years getting my qualifications as an adult and worked part time in the education sector whilst I did it. On graduating I was looking for full time work and found a training position in the NHS. Since then I have changed departments 3 times on different secondment opportunities and now do Project Management and IT.

> I have had numerous changes in my working career, for a variety of reasons, but mostly because I wanted to learn more/improve skills/learn something new or work somewhere new.

> When I left university with my qualifications I didn't have set career in mind. Over the years I have acquired experience by working in different sectors and with different people. All of this has developed my transferable skills and I take forward learning experiences from one work place to the next. I am now in a set career path and believe that the experiences along the way have helped to bring me here.

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[23] Seibert, S. E., Crant, J. M., & Kraimer, M. L. (1999). Proactive personality and career success. Journal of Applied Psychology, 84, 3, 416-427; Chiaburu, D. S., Baker, V. L., & Pitariu, A. H. (2006). Beyond being proactive: what (else) matters for career self-management behaviors? Career Development International, 11, 619-632.

Williams (2001) highlights how when learning is mainly coming through working, rather than formal education and training, then the development of self-consciousness (reflection) and continual self-critique (critical reflection) are crucial to continued competence.[24] Encouragement for more expansive forms of self-directed learning at work and the build up of and reflection upon developing personal knowledge could be undermined by pressures due to a perceived shortage of time and work intensification in some organisations.[25] For example, if informal support for learning by colleagues is undermined by work intensification it may mean that organisations should pay greater attention to the need for learning at work to be supported through the use of more formal mechanisms incorporating both collaborative and self-directed learning. These ideas are in line with the policy of some organisations to encourage individuals to actively reflect and review on their own learning and development in support of both individual empowerment and organisational development.[26]

From the survey it was clear that experience developed through engagement with challenging work is a major vehicle for professional growth, but this needs to be supplemented in a variety of ways and individuals have different degrees of choice in the combination of learning activities (formal, non-formal and informal) with which they engage. Individuals seek a degree of personal autonomy in how their careers develop (and in the meaning attached to career) but, in parallel, they also seek opportunities to exchange experiences with peers, colleagues and experts about possible lines of career development. Union learning representatives have proved to be effective in this respect, particularly as 'they have been increasingly recognised as "trusted intermediaries" that can engage with "hard-to-reach" employees and help stimulate and meet their demand for learning and skills. Their activities encompass giving information and advice, arranging courses and conducting learning needs assessment.'[27] One of our survey respondents was a lorry driver who had switched to part-time working in order to study for a degree. He had then worked as a union project officer helping recruit and develop union learning representatives, taking further short courses in coaching, mentoring, supporting dyslexic workers, identifying learning, working with employers and facilitating access to higher education.

The survey findings offer reinforcement for the idea that individuals are responsible actors in creating their own career pathways through learning and development linked to opportunities in education, training, employment and other contexts. However, at the same time, there is an urgent need to support individuals in navigating their way through increasingly complex work and life contexts and, in particular, helping individuals become more reflective at the individual level through provision of career guidance and counselling as a key component of a lifelong learning strategy.[28] Even within generally successful careers anxieties were expressed about the risks connected to overall dynamics and change

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[24] Williams B. (2001) Developing critical reflection for professional practice through problem-based learning, Journal of Advanced Nursing, 34, 1, 27-34.

[25] Brown, A. (2004) Professionals under pressure: contextual influences on learning and development of radiographers in England, Learning in Health and Social Care, 3, 4, 213-222

[26] Systems of review can work well in facilitating active reflection, but on other occasions the process can be perceived as a bureaucratic burden.

[27] Clough, B. (2009), Unions and Partnership: Union Learning Representatives and the Government's Skills Strategy, Unionlearn Working Paper 1, London.

[28] See, for example, Biesta, G. (2008) Strategies for improving learning through the life-course, London: TLRP. The project studied the learning biographies of 120 adults and found that while informal support was ubiquitous, in a number of instances professional support was 'very valuable', particularly where it was slinked to a major personal change or crisis.

associated with career development and with organisational changes and structural constraints – people recognised that navigating a career path could be fraught with difficulties:

> My career history has been largely determined by living in very rural areas. I became a careers adviser 'by accident' because the employer happened to be based near-by and had a reputation as a good employer. I wanted to work 'with people' but for anything else I would have had to move. I have since moved to even more rural areas and this has meant I have haphazardly taken opportunities whenever they have arisen. This has led me to build up a wide range of skills and I think keeps me highly employable but doesn't necessarily mean that I am specialising in one area of my career. Because of my rural location senior jobs and ones where I might use my skills more fully are much less possible to progress into.

> Employment opportunities in the public sector across Europe are very dependent on the different selection processes (e.g. in Spain you need to sit an exam to get a general post in the health service). Also, a non medical consultant in public health in the UK couldn't get a job at that level in Spain. This is restricted for medical doctors. So career development in this area is pretty much exclusive to the UK, as far as I know.

> I went to university in Canada as a mature student and single mother. I lived in a remote community but was unable to move to follow my preferred career or training. In 2004 I moved to Holland to live with my Dutch husband; my Canadian job did not transfer well, and I have been having problems learning Dutch. In addition, my age has been a barrier to employment, and, along with my non-EU passport, has made retraining too expensive.

> My career development has been chequered, mainly because of part time working when my daughter was small. I was a single parent also, from another country. Now being in a senior position and on reflection I would say I was actively discriminated against in terms of opportunities for promotion etc because of being part time and also by nationality. I feel that because I had a very good education I was able to make progress despite the barriers. I was also determined to succeed! I think I have proved that to my satisfaction, …. [and] I feel I have contributed hugely to this organisation and the public in my 40 years [of work].

Personal agency (pro-activity and responding to opportunities) is important but there is also value in helping individuals develop their own career story of where they have been and where they are going. Many individuals are actively shaping their personal work biographies (and even then they may value help in doing this), while others feel they would like to develop a clear sense of career direction but are struggling to do so without support:

> I don't feel like my career has been very well planned and I don't have a clear plan for how it will develop in the future, which means that it's difficult for me to choose training or learning (particularly long-term or big commitments) to develop my career.

Career options and choices are limited by context, but individuals can use career self-management to negotiate their own position within these constraints. It has been suggested that individuals utilise three types of career self-management behaviour as adaptive responses to career development tasks: positioning through strategic choice of mobility opportunities, strategic investment in human capital, active network development and job content innovation; influence, including self promotion; and boundary management of work and non-work domains through boundary maintenance and role

transition (King, 2004).[29] All these strategies are intended to reduce external constraints that would otherwise prevent people from achieving their desired outcomes.

A study of the relationship between personality and the propensity of individuals to utilise particular career management strategies found that these factors were related, including the predisposition to seek out education and self-development opportunities (Guthrie *et al.*, 1998).[30] Internal and external loci of control were also found to be influential. Employees below supervisory levels are seldom included in organisational career development programmes, but one study examined the career self-management and career experiences of non-supervisory workers in different organisational environments (Hammer & Vardi, 1981).[31] Where personal initiative was encouraged in career development through personnel policies and promotion practices, individuals with an internal locus of control played a more active role in their career progression than those with an external locus of control and had more favourable career experiences.

Overall then, those individuals with a proactive approach to career development are more likely to engage in CVT and lifelong learning and individual traits (such as a proactive personality and self-management behaviour) and experiences of learning influence engagement and persistence with CVT. From the survey and previous research[32] it is clear that formal CVT provision could be highly valued as a form of personal development even without a direct career benefit. People can reinforce their satisfaction (and in some cases even overcome dissatisfaction) with work by engaging in CVET (which people often believe has value in itself – even when not strictly necessary for current or likely future job performance). This sentiment was succinctly expressed by one survey respondent: 'I love learning - for the pure enjoyment of learning something new'. Much continuous vocational learning is influenced by motivational factors, such as the willingness to make the most of learning affordances and opportunities at work (Billett, 2006)[33] and this was illustrated again and again by survey respondents. The following example is unusual only in the level of detail given:

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[29] King, Z. (2004). Career self-management: Its nature, causes and consequences. Journal of Vocational Behavior, 65, 1, 112-133.

[30] Guthrie, J. P., Coate, C. J., & Schwoerer, C. E. (1998). Career management strategies: The role of personality. Journal of Managerial Psychology, 13, 5/6, 371-386.

[31] Hammer, T. H., & Vardi, Y. (1981). Locus of Control and career self-management among nonsupervisory employees in industrial setting. Journal of Vocational Behaviour, 18, 1, 13-29.

[32] Biesta, G. (2008) Strategies for improving learning through the life-course, London: TLRP.

[33] Billett, S. (2006). Relational interdependence between social and individual agency in work and working life, Mind, Culture and Activity, 13, 1, 53 – 69.

Case exemplar: Christian is a Practice Development Adviser involved in the development of a system of care planning for patients in order to improve quality of care and clinical governance. He was previously a nurse supervisor for seventeen years, during which time he studied for a degree in computing and a postgraduate qualification in learning and development. He outlines the range of ways he learns while working in his current job:

• Deputising for and supporting the ward manager in day-to-day management of the ward.

• Promoting and developing clinical leadership by acting as a positive role model with good delegation and supervisory abilities.

• Actively addressing own developmental needs through personal development reviews/plans.

• Actively participating in training and educational activities promoting the development of others.

• Providing structured support (preceptorship), mentorship and supervision for staff, students and junior members of staff.

• Taking a lead role in the unit wide teaching and learning programme.

• Taking on the duty Senior Nurse / Bleep holder role as required.

• Acting as unit co-coordinator and the point of contact for all external bodies providing advice/liaison.

• Identifying clinical needs and prioritising resources.

• Ensuring staff demonstrate commitment to equal opportunities for all and are sensitive to individual needs.

• Acting as a role model in demonstrating the ability to work collaboratively with other professionals.

• Initiating, leading and maintaining positive change within own and other areas.

• Facilitating junior staff's knowledge on various clinical excellence guidelines, policies and procedures.

• Actively participating in Clinical Governance and audits.

• Implementing and promoting evidence-based practice.

By engaging with substantive learning opportunities while working and/or during formal CVT programmes, many individuals have learnt how to actively manage their careers and progress their future plans (either through self-directed learning and/or where formal CVT opens up other potential career pathways as in the above example). One key factor in continued career success for older workers in a changed context is a positive disposition towards learning which partly comes from continuing engagement with substantive learning opportunities in work and/or continuing education and training.[34]

The survey and the literature review emphasised how developing a proactive approach to career development is associated with employees being given encouragement, time and space to engage in

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[34] Bimrose, J. & Brown, A. (2010). 'Older workers' transitions in work-related learning, careers and identities.' In K. Ecclestone, G. Biesta & M. Hughes (eds) Transitions and Learning Through the Lifecourse, Routledge: Abingdon.

self-directed learning and critical reflection[35]; learning from others and through networks[36]; working in organisations that emphasise breadth of competence development[37]; timely and appropriate feedback[38]and support for development of employees' learner identities.[39]

In post-transition economies such as Poland and Romania the shift towards personal responsibility for career development was a major turning point for older workers brought up under centrally planned economies. In Romania one legacy of the earlier system was a feeling in some areas that school-based training resulting in formal certification was the most 'powerful' form of training. On the other hand, the emergent economy was making use of different types of jobs, skills, companies, forms of work organisation and career patterns. In such circumstances older low skilled workers could be part of a 'fatalistic' culture in which they viewed themselves as out of step with the way the economy was evolving, with immobility being linked to demography and getting employment depending on luck and contacts rather than individual merit. Two survey respondents who were in their forties exemplified how if they were in employment they were determined to hang on to their current jobs but saw no prospects of doing anything else. The first person had worked in a large factory for fifteen years but when that was restructured he was made redundant and then, after a spell unemployed, retrained to be a tram driver ten years ago: 'I am satisfied with my job because it is well paid and I can support my family, although it is difficult and stressful. I don't have the formal qualifications to think of a better position in the company. I am fed up with training and courses.' The second person was working as a chef: 'I have no formal qualification. I learned cooking from my mother and I also learned a lot from my colleagues. I think it is a good job in that I can support my children growing up without any other support. The new colleagues that come have certificates but they still ask for my help. For the future, I am waiting for my pension time only.'

Similarly, seeking to make a labour market transition at a time of high unemployment could be constraining as the following example makes clear:

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[35] Williams B. (2001) Developing critical reflection for professional practice through problem-based learning, Journal of Advanced Nursing, 34, 1, 27-34.

[36] Eraut, M (2004). Informal learning in the workplace, Studies in Continuing Education, 26(2), 247-273.

[37] Mills, T., Tyson, S., Finn, R. (2000). The development of a generic team competency model. Journal of Competency and Emotional Intelligence, 7, 4, 37-41.

Sandberg, J (2001). Understanding competence at work. Harvard Business Review, 79, 3, 24 - 28.

[38] Eraut, M., Maillardet, F., Miller, C., Steadman, S., Ali, A., Blackman, C., Furner, J. (2004). Learning in the professional workplace: relationships between learning factors and contextual factors, AERA Conference Paper, San Diego. http://www.tlrp.org/dspace/retrieve/93/AERA_2004.pdf

[39] Brown, A., Kirpal, S. and Rauner, F. (Eds.) (2007). Identities at Work, Dordrecht: Springer.

Case exemplar: interplay of structure and agency

A Library and Information Services Manager in Health Care recalled how initially 'my career was blighted by the recession of the early 1980s. I could not find work after university for four months, and I found the experience of unemployment (and unsuccessful job interviews) very traumatic. Once I had found work (in the book trade) I stayed in that sector for too long, fearful of unemployment again, although I was not happy; it was eleven years before I found my present career as a librarian, in which I am much happier.'

In the survey some qualified workers had made successful transitions or exhibited great resilience in overcoming periods of unemployment, but the extent of over-qualification compared to the jobs available in some contexts meant that expressed interest in learning could be driven by personal development rather than being a tool for career progression. Indeed given the strong emphasis given by survey respondents to the importance of learning for personal development it may be that messages promoting learning through strongly emphasising employability are less effective than those which emphasise personal development, establishing social networks, meeting a wider range of people together with increasing the likelihood of getting employment.[40] That is, messages should emphasise the immediate benefits from being a learner rather than seeing learning primarily being judged by where it leads, particularly if the opportunity structures available to an individual at that time are limited.[41]

[40] David, M. (2009). Effective Learning and Teaching in UK Higher Education: A Commentary by the Teaching and Learning Research Programme. London: ESRC, TLRP.

[41] Roberts, K. (1997). Prolonged transitions to uncertain destinations: The implications for careers guidance. British Journal of Guidance and Counselling, 25, 3, 345-360.

2.4   Continuing learning in different sectoral contexts:

In relation to the sectoral focus, we were particularly interested in people's evolving careers in engineering, health and information and communication technologies (ICT). All three sectors were seen to be vital for the future socio-economic development of the EU. Peer learning or collective learning is not always recognised as part of formal CVET, but it is important in all three sectors, indeed it may be the dominant learning pattern in some work contexts. A buoyant ICT sector was seen as fundamental to the development of a knowledge-based economy. EU employment in the health and social services sector amounted to about 20 million workers in 2006 and is expected to continue growing, with a variety of social, economic and technological drivers of change requiring the development of important new skills. Across all job functions both soft skills and new knowledge will become increasingly important, along with skills to adapt and learn new competences and life-long learning.' [42] The electro-mechanical industry was seen as strategically important, despite falling employment levels, with a growing demand for highly qualified staff, but with important differences within and between Member States in the nature of the industry and in the processes by which the requisite skills and competencies were acquired and developed.[43] [44]

2.4.1 Continuing vocational learning in the ICT sector [45]

Prevailing learning patterns in ICT include:

- self-initiated learning often performed in employees' own time: for example, a research manager with specialist expertise in web development developed his technical skills away from work but these gradually became central to how he did his work.

- self-study, self-directed and self-organised learning are central skills (some individuals obtained jobs in the sector without any substantive qualifications in the area: for example, an e-learning consultant had a science background but his ICT skills had been partly developed at work, but mainly through uncertificated self-directed learning)

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[42] Comprehensive sectoral analysis of emerging competences and economic activities in the European Union: Health and Social Work. 18/08/2009.
http://ec.europa.eu/social/main.jsp?langId=en&catId=782&newsId=583&furtherNews=yes

[43] Comprehensive Sectoral Analysis Of Emerging Competences And Economic Activities In The European Union: Electromechanical Engineering. 17/06/2009.
http://ec.europa.eu/social/main.jsp?langId=en&catId=782&newsId=529&furtherNews=yes. Also note that a Sectoral Analysis at the European level for ICT has not yet been undertaken.

[44] For fuller information on learning and development in these sectors: see, for example, Brown, A., Kirpal, S. and Rauner, F. (Eds.) (2007). Identities at Work, Dordrecht: Springer; and S. Kirpal (Ed) (2004) Career Development International, Volume 9 Issue 3: Special Issue: Work identities in Europe.

[45] For further detail, see: Kirpal, S. (2004) Researching work identities in a European context, Career Development International, 9, 3, 199-221; Dif, M. (2004) Vocational identities in change in the telecommunications sector. Career Development International, 9, 3, 305-322; and Loogma, K., Ümarik, M. and Vilu, R. (2004) Identification-flexibility dilemma of IT specialists. Career Development International, 9, 3, 323-348.

- learning often driven by employees' project-directed learning at work: a number of survey respondents working in IT also had formal qualifications in project management

- product-related learning (i.e. short courses provided by the product suppliers): many respondents working in ICT had participated in courses organised by computer vendors

- learning through frequent job changes (may include periods working as a consultant gaining experience of working in different contexts etc.): a business change manager with an IT background highlighted how much she learned from changing departments and taking advantage of secondment opportunities; while another survey respondent, an IT strategy consultant, emphasised how useful it had been to work in a wide range of contexts in the public and private sectors as well as for an IT consultancy; a project assistant remarked how a background in computing enabled her to work in three very different countries

- learning through engaging in challenging work: one programme manager outlined the demands in 'running a complement of projects to achieve system change and quality improvement. Roles span project management, change management, knowledge management, managing evidence-based practice, and team management across a multi-organisational partnership.'

- learning through interaction (relationships with clients can be particularly important and one respondent stressed the importance of nurturing client relationships; also for some workers there may be a high level of flexibility in how they perform their work and they make particular use of learning through interaction, which may also be web-based)

- learning through networks (including personal networks): this form of learning was almost universal in this sector, and in an exceptional case one worker complained that one key element of his dissatisfaction with his work which lacked challenge was that it did not allow opportunities to learn through networking.

As a consequence, in ICT both learning and career patterns are highly individualised and as informal learning plays a key role, formal qualifications and career progression are only loosely coupled. Speed of change in the sector means much use is made of continuing (implicit) work-process oriented learning, with continuing learning being linked to the gradual development of skills, knowledge and understanding through experience of different work processes. Formal continuing vocational training is sometimes used in relation to technical developments or in support of new roles, where an individual takes on a managerial role. For individuals in this sector there seems to be four main pathways to career progression:

- deepening technical expertise linked to their occupational role associated with their work in organisations as an employee or as a (possibly self-employed) consultant

- broadening skill set but still clearly linked to the occupational profile by taking on roles such as project leader, team leader, unit manager, tutor etc.

- reskilling: individuals who start in a pure ICT role may move to other roles where their ICT skills are of secondary importance (for example, being engaged in research, management consultancy etc.)

- taking on roles that involve substantive upskilling and reskilling – these typically go beyond implementation of ICT and encompass much broader issues around knowledge development and management of strategic change in large organisations (for example, leading major organisational change programmes in the UK's National Health Service).

2.4.2 Continuing vocational learning in the Engineering sector [46]

Prevailing learning patterns in engineering include:

- learning through experience: survey respondents stressed the importance of contextualised work-process knowledge in problem-solving, maintenance and performance improvement activities

- for higher level work learning through engaging in challenging work (often project-based and where the outcome may not be known in advance): one survey respondent argued that this type of learning was so vital that work experience or qualifications were seen as of little relevance in his current role

- learning through interaction (much work is team-based, but may also involve learning through interaction with clients, professional and personal networks or in performance improvement teams where members are drawn from different disciplines, departments, hierarchical levels and organisations)

- importance of supporting the learning of others (this is particularly valued where team work is a central component of (knowledge-intensive) work activities: one respondent stressed this was key when managing a team with very mixed skills)

- self-directed and self-organised learning are important in higher level work

- learning through research and knowledge creation: where increasingly sophisticated work methods are being used, there is a need for continuous improvement of knowledge-creation skills and engineers may need to research particular topics or issues and (sometimes in collaboration with others) create new forms of knowledge

- formal CVT is on offer both for substantive programmes (e.g. Master's programmes; *Meister* qualifications, although these may be taken outside work time in some cases) and short courses.

As a consequence there is quite a strong linkage between learning and careers in engineering, as formal training has a key role for many in the close coupling between continuing vocational learning and individual career development. There are much more structured career pathways (compared to ICT) and these established pathways (for example, leading through to professional recognition) guide employees in planning and directing their own learning and career. Even with changes in the organisation of work, career development pathways continue to link continuing learning with career progression. Continuing learning is directed partly by differential (specialist) work experience and partly by individuals' own interests. For those working in engineering their particular learning patterns vary according to individual and organisational factors and are less dominated by a major learning pattern (whether individualised as in ICT or organisational as in heath) and the learning demands in different jobs also vary considerably.

For individuals in this sector there seems to be three main pathways to career progression:

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[46] For further detail, see: Kirpal, S. (2004) Researching work identities in a European context, Career Development International, 9, 3, 199-221; Brown, A. (2004). Engineering identities, Career Development International, 9, 3, 245 – 273; Eraut, M (2004). Informal learning in the workplace, Studies in Continuing Education, 26, 2, 247-273; Eraut, M., Maillardet, F., Miller, C., Steadman, S., Ali, A., Blackman, C., Furner, J. (2004). Learning in the professional workplace: relationships between learning factors and contextual factors, AERA Conference Paper, San Diego. http://www.tlrp.org/dspace/retrieve/93/AERA_2004.pdf

- deepening technical expertise linked to a continuing organisational role (working as a consultant and / or being self-employed is possible but very much rarer than in ICT)

- broadening skill set but still clearly linked to the occupational profile by taking on roles such as team leader, project manager (projects can vary in size, and running major projects requires a different skill set to running small projects and may involve reskilling as well as upskilling) etc.

- reskilling: such as a move into general management which no longer has an engineering component but may still be making use of technical project management skills.

Interestingly, there were cases of engineers being recruited into other sectors (notably finance in the UK) without spending any time working as an engineer precisely because mastery of a complex technical knowledge base was itself seen as a transferable skill. One of the survey respondents, a young woman, had a Master's degree in engineering but was working as an Equity Sales Trader: 'watching and understanding the stock market, advising clients, working with traders to trade and monitor client trades and source liquidity to unwind traders' risk.'

2.4.3 Continuing vocational learning in the Health sector [47]

Prevailing learning patterns in health:

- learning through engaging in challenging work: much professional work has always been challenging but combining different sets of skills and forging new relationships can be particularly demanding. One survey respondent, a hospital consultant, highlighted how as well as responsibilities for direct patient critical care he also had extensive teaching, training and supervisory responsibilities on a local and regional level as well as leadership and administrative duties in the hospital.

- learning through interaction is particularly important where work is team-based – and in many cases teams are multi-disciplinary; but learning through interaction also occurs with patients, peers and other professionals; and through professional and personal networks;

- learning through co-operation: learning through local communities of practice can be a highly collaborative way of sharing expertise: one particular radiographer in a team may be the first to learn new techniques and then help other team members improve their practice[48]

- importance of supporting the learning of others: this is particularly valued in early career development and where new technologies, procedures or ways of working are introduced[49]

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[47] For further detail, see: Kirpal, S. (2004) Researching work identities in a European context, Career Development International, 9, 3, 199-221; Kirpal, S. (2004) Work identities of nurses: Between caring and efficiency demands, Career Development International, 9, 3, 274-304; Brown, A. (2004) Professionals under pressure: contextual influences on learning and development of radiographers in England, Learning in Health and Social Care, 3, 4, 213-222; Brown, A. and Kirpal, S. (2004). 'Old nurses with new qualifications are best': Competing ideas about the skills that matter in nursing in Estonia, France, Germany and the United Kingdom. In Warhurst, C., Grugulis, I., and Keep, E. The skills that matter, Basingstoke: Palgrave MacMillan, pp. 225 -241.

[48] Professionals under pressure: contextual influences on learning and development of radiographers in England, Learning in Health and Social Care, 3, 4, 213-222

- self-directed and self-organised learning may be required as part of continuing professional development with practitioners expected to keep a record or portfolio detailing at least some learning achieved in this manner
- formal CVT is on offer both for substantive programmes (e.g. Master's and specialist programmes) and short courses for professional updating: many survey respondents working in the health field had completed postgraduate qualifications and professional updating courses dealing with quality improvement, supervision, mentoring etc. as well as clinical practice.

Linkage between learning and careers involved:

- *Making a career* (vertical mobility) was important for some people, whereas others were happy to continue at the same level over time (in a single specialisation or engaging in horizontal mobility).

- Continuity through highly formalised education and training pathways: initial training and continuing vocational training provision are linked with a full range of development opportunities on offer for most people working in the health sector.

- Individual career progression was often linked to formal qualifications.

- Differences between national contexts in, for example, use made of further learning and qualifications and the extent to which they are linked to career development: this could also be linked to the greater mobility in the UK than in Germany, Spain and Italy due to a more flexible labour market. One survey respondent, a Spanish public health consultant working in the UK, highlighted how despite being well qualified for the post she could not perform such a role in Spain, as there such jobs were restricted for medical doctors. Another internationally mobile survey respondent, whose initial nursing qualifications were from South Africa commented: 'I have travelled through Europe to experience different health systems (UK, Germany and Switzerland) but I had to do my degree through the UK Open University as there was no accreditation for my nursing diploma elsewhere, whereas I only had to do 120 level 3 credits in the UK. In order to enter Nurse Education in Germany you need to start from scratch whereas here I was able to build on my top-up degree which only took 2 years.'

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[49] Eraut, M., Maillardet, F., Miller, C., Steadman, S., Ali, A., Blackman, C. and Furner, J. (2004). Learning in the professional workplace: relationships between learning factors and contextual factors, AERA Conference Paper, San Diego. http://www.tlrp.org/dspace/retrieve/93/AERA_2004.pdf

2.5. Intensive periods of (substantive) learning across the life-course

Occasionally an individual might engage with formal education and training for most of their working life, but it is much more common for workers to have bouts of intensive periods of (substantive) learning across the life-course, as the following examples demonstrate.[50] These intensive periods of substantive learning, following initial VET or HE studies, are typically concerned with either upskilling within recognised career pathways or reskilling associated with a significant career change. The upskilling or reskilling could comprise a formal educational programme, CVT, learning while working or a mixture of two or more of these components.

Case exemplar: an intensive period of part-time formal learning (educational upskilling) followed by a later period of formal training coupled with more challenging work leading to further development, upskilling and reskilling

In 1989 Michelle started doing routine administrative work on benefits claims straight from leaving school at 18. In the period 1996 – 2000 she completed a skilled worker qualification and then a degree which led to career development: first, in becoming a trainer, then an operations manager before becoming a regional trainer. She then completed a range of specialist advanced level vocational qualifications in 2005 – 2009 which equipped her to take a job in a new sector (health) as a manager with responsibilities for business change based upon IT systemic change and for measuring the benefits of such deployments.

Case exemplar: initial vocational training and development coupled with completion of two intensive mid-career degree programmes as well as learning while working and through career change: upskilling and reskilling

Mary now works as a Change Manager in Health Care, in charge of Change Management IT projects since 2006, but she started her career by working as a pharmacy assistant for five years after completing initial vocational training in 1973. Subsequently, 'I had at least 10 career changes, including working as a Pharmaceutical Sales Rep from 1985 – 1990. I have had numerous changes in my working career, for a variety of reasons, but mostly because I wanted to learn more/improve skills/learn something new or work somewhere new.' She completed a first degree in Psychology in 1995 and a Master's degree in Industrial Psychology in 2000.

How learning at work is coupled with career progression influences how individuals engage in continuing learning: for example, in some contexts after initial recruitment promotion is almost wholly dependent upon performance at work, which is itself linked to learning through challenging work, interactions and networks at work; whereas in other cases some form of formal continuing professional development would be expected, such as *Meister* qualifications in Germany, as a prelude to promotion. The following example shows how learning at work, periodic participation in major formal Continuing Professional Development programmes and career progression create a mutually reinforcing 'virtuous circle'.

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[50] Substantive learning is here referring to a major change in behaviour, attitudes, aptitudes, skills, knowledge and understanding rather than the small adaptations people make on a continuing basis.

Case exemplar: initial hospital-based (sub-degree HE equivalent) vocational training coupled with completion of two intensive mid-career post-graduate diploma programmes as well as learning while working and through career progression: upskilling

Karen qualified as a radiographer in 1984; in 1991 she completed a Diploma in Management Studies and in 2004 a Postgraduate Diploma in Advanced Practice (Imaging) as she progressed through linked progression pathways as an advanced practitioner, clinical tutor and then a Research Radiographer recruiting patients to clinical trials, promoting & active involvement in radiotherapy research from 2004.

From a policy perspective, it is important that the message about lifelong learning (LLL) does not convey that 'we all need to be engaged in substantive learning all the time'. This message could easily be seen as unachievable – it is out of alignment with the very strong survey evidence of how people actually learn across the life-course. Rather than engaging in continuous learning at an even pace year after year, people are likely to have periods of more and less intensive learning. The key here is to make a distinction between learning which fits into an individual's current set of values, attitudes, competences, networks, behaviour and identities and learning which leads to significant personal development or transformation. Respondents to the survey had little difficulty in identifying the role of learning and development in making significant work-related transitions. CVT policy should therefore recognise that while a focus on performance improvement can help individuals develop their current skills and lead to organisational development, individuals also need opportunities for personal development which transcend their current roles.

So LLL rhetoric about 'learning all the time' may be insufficient, because although continuing adaptation can keep individuals employable in their current roles, it is periods of intensive learning which tend to be decisive for individuals' career direction (that is, most people with successful careers display episodic learning: periods of intensive learning interspersed with 'quieter' times, which nevertheless can involve learning through challenging work etc.). Lifelong learning (LLL) itself as a concept has different dimensions including skill growth, personal development and collaborative learning and LLL interventions may be targeted to achieve different ends. Much LLL policy has been concerned with skill development, especially in relation to upskilling, but some emphasis is now being given to the importance of reskilling – developing new skills and updating existing ones in order to apply them in new contexts. LLL policy could also seek to strengthen learning through networks and other collaborative forms of knowledge creation and sharing. It is also interesting to note that where individuals have had one or more episodes of substantive learning mid-career and these episodes have been used as a platform for career change, then they often feel reinvigorated and are willing to remain in the labour market for a longer period of time. A focus on, and commitment of resources to, reskilling may actually be self-funding in that as consequence people continue working for longer.[51]

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[51] Bimrose, J. & Brown, A. (2010). 'Older workers' transitions in work-related learning, careers and identities.' In K. Ecclestone, G. Biesta & M. Hughes (eds) Transitions and Learning Through the Lifecourse, Routledge: Abingdon.

2.6. Skill development for workers in low skilled work

Brynin and Longhi (2007) in their summary of findings from a major European project (on 'Work organisation and restructuring in the knowledge society - WORKS project') reported on individual-level change using panel data and found that both 'dissatisfaction with work and skill mismatches are widespread, and while tending to be overcome through career switches, thereby contribute to the overall prevalence of work flexibility' (p. 7).[52] So job mobility can be viewed as positive for individuals where it leads to progression, greater satisfaction and personal development or negative if it is considered forced, unrewarding and involves a 'sense of loss' rather than development. Interestingly, in nearly all the European countries surveyed the most common way for people in low skilled employment to update their skills was by changing their jobs. This finding is important in two respects. First, it means that public policy should encourage people to find more challenging work if they are in undemanding work – guidance and counselling could play a key role in this respect. Second, it chimes with a number of 'case histories' of people in our research study whereby their personal development took off as they passed through 'low skilled employment' with the switch to other forms of work opening up opportunities for learning and development whether these were related to training and/or more challenging work.

For example, in Portugal and Poland a number of people worked in assistant or junior positions before finding more challenging work in the same sector or in a different field altogether (after transferring from work in for example hotel and catering). In some cases a shift between different forms of low skilled work could allow for greater development within work: for example, as when one survey respondent switched from being a waiter with no prospects of further advancement to working in an exhaust and tyre fitting centre, where after getting on the job training, learning while working and securing a qualification it was possible to move on to carrying out more demanding forms of work. Another respondent had started working in jobs requiring few qualifications, including as a shop assistant, and then joined the navy and after intensive periods of reskilling and upskilling became a submarine sonar operator; then a technician; then an operating theatre technician.

 One survey respondent in his fifties in the UK had been working as a fork-lift truck driver, following redundancy from a job in computer maintenance, and felt that his skills and life in general were in decline. However, on switching back to more challenging work as he became a maintenance supervisor in a large modern office block he not only rebuilt aspects of his old skill set but developed new ones associated with his supervisory responsibility for a team of twelve. Another respondent commented how he started work as an apprentice painter and decorator over fifty years ago and had since then built up his skills by moving between jobs, he had switched to a job as sales representative in construction and then moved across to working in retail before becoming a manger of a mobile shop. He then became self-employed working first as a grocery shop owner and then as a manager of a travel agency. It was only in this final role that the respondent took any formal vocational qualifications – he had

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[52] Brynin, M. and Longhi, S. (2007). The transformation of work? - Occupational change in Europe, D9.2.4 Publication of the Work organisation and restructuring in the knowledge society - WORKS project: Project number: CIT3-CT-2005-006193, Essex: ISER.

moved on from routine work by seeking more challenging work by changing jobs and thereby widening his skill set. Apart from some training and minor qualifications related to work in a travel agency the driver for development was always self-directed learning, inside or outside the workplace. Being able to apply your skills, knowledge and understanding in a number of contexts can itself act as a considerable spur to development.

There is a paradox here. A number of our survey respondents were engaged in low skilled work at some stage of their lives and such work could give them a foothold in the labour market and their self-esteem was likely to be much higher than if they were unemployed. However, if they stayed too long doing routine work with few prospects of development then their skill sets could decay and their broader employability might also suffer. Individuals with low levels of initial education and training were particularly likely to become 'trapped' in such work and because their work often offers a restrictive learning environment they are also less likely to receive continuing vocational training or to have opportunities to learn while working through engaging in challenging work.[53] Some workers in low skilled employment may feel less motivated to engage in substantive learning precisely because learning does not fit seamlessly alongside their work. However, it was also striking that some people in low skilled employment did have a strong commitment to learning, development and progression – this was particularly likely if they had developed a clear 'career narrative' of where they were going. Guidance could play a key role in this process in helping people establish such narratives.

Overall then, changing from low skilled employment to more challenging work was a powerful driver of skills development for workers in highly routinised jobs, because not only was their learning based upon engagement at work but such engagement was also likely to have a positive effect on their wider motivation to learn. Attendance on formal VET programmes was also sometimes seen as a vehicle to improve competences (including in some cases basic skills development), not least because this could involve the recovery and rebuilding of fragile learning identities.[54] For the low-skilled who could not move easily to other types of jobs there were still examples of programmes of work-based adult basic skills development, although these short programmes needed to build upon the initial enthusiasm they could generate with more substantive learning.[55]

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[53] Fuller, A. and Unwin, L. (2006) 'Expansive and Restrictive Learning Environments', in Evans, K., Hodkinson, P., Rainbird, H. and Unwin, L. (eds) Improving Workplace Learning, London: Routledge.

[54] Gallacher, J., Crossan, B., Field, J. and Merrill, B. (2002) Learning careers and the social space: exploring the fragile identities of adult returners in the new further education, International Journal of Lifelong Education, Volume 21, 6, 493 – 509.

[55] Wolf, A, Evans, K, Aspin, L, Waite, E & Jenkins, A . 2009. 'Enhancing "Skills for Life": Adult Basic Skills and Workplace Learning'. End of award report. Swindon: ESRC. http://www.tlrp.org/news.html?display=1261062113

2.7.   Older workers' careers: dynamic or stable?

Many of the older survey respondents were engaged in active career development in their 40s, 50s and beyond. For example, a programme manager in his sixties was co-ordinating a set of projects to bring about strategic change in a major healthcare organisation, including developing software development and support. His career had been built on a 'track record of success and delivery' which meant he was at the forefront of developments. Another respondent, a woman in her fifties, was also involved in a major change management programme in the health sector. She reflected that she was 'an effective communicator with good networking skills, able to motivate and manage myself and others, with a track record of delivering service improvements and supporting staff to make changes.' She was also able to 'move easily between the 'big picture' of ideas, policy drivers and national context and local application in context, shaping strategic direction and service development.' She represented her personal skills as 'thriving in fast moving environments; demonstrating drive, commitment and enthusiasm; networking, connecting people and supporting partnership working; self-motivated, working on personal initiative and used to meeting agreed timelines.' Both these respondents had dynamic careers, which involved leading change not just adapting to it – anyone further than an image of an older person reluctant to change and develop is hard to imagine. Now the key point here is that where older workers were engaged in challenging work with opportunities to learn while working, then they are much more likely to wish to continue working.

However, some older respondents had much more stable careers and a few had decided that they were not going to engage any further in substantive learning and development above what was required to work effectively in their current job: one respondent represented this as 'coasting' (doing the minimum possible) while waiting for (preferably early) retirement. The respondent did recognise that there dangers associated with 'coasting' in that employability becomes dependent almost solely upon current job. This attitude was sometimes also linked with a lack of reflexivity of individuals to think about their own skills, a reluctance to think in terms of skill sets - rather there was a tendency to rely upon an attachment to an occupational / organisational identity that may be vulnerable to change. In this context, coupled with the demographic shift towards an ageing workforce, it was clear that there could be real cost-benefit advantages in offering mid-career workers guidance which could extend the length of their careers.[56] One benefit could come from an increased willingness to continue working after a career shift for some, while others could also value the guidance process for affirming them in their current path. One problem in some organisations is that career development and learning are often not actively supported by employers for those over the age of 45. One interesting theme which came up with a number of older respondents was how they had moved away from their major career in order to 'follow their dream' – this may have been translated into a leisure pursuit for some, but others were using their unrealised goals as a motivation for part-time work: for example, one woman was teaching part-time fiction writing, 'but my one life long ambition is to become a published fiction author.' Combining work with a deep interest in and desire to make a living in music and the arts is common

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[56] Bimrose, J. & Brown, A. (2010). 'Older workers' transitions in work-related learning, careers and identities.' In K. Ecclestone, G. Biesta & M. Hughes (eds) Transitions and Learning Through the Lifecourse, Routledge: Abingdon.

across the life-course, but it is the revisiting of the 'dream' later in life which may be of interest in exploring the relationship between career, work and identity for older workers.

These findings, taken together, have implications for meeting the challenge of demographic change through the integration of older workers for longer in the labour market. The keys to success in keeping a greater number of older workers in the workforce could lie in offering opportunities for learning and development for workers over the age of 40 as an essential component of an upskilling strategy, while access to guidance could be pivotal for those wishing to pursue a reskilling pathway.

2.8. Career change

Over two thirds of the survey respondents had had at least one career change since starting work (see table Q17 below), with 70% of those who had not changed saying the primary reason was because they were satisfied with their job.[57]

Q17: Career change since starting work

Yes	68.5
No	31.5
Total	100.0
N	1003

Two thirds of the career changers had had 1 – 3 career changes, with a quarter having 4 – 6 (see table Q19 below). Career changers were particularly likely to be in ICT and / or from the UK.

Q19: Number of career changes experienced

	N	Percent
0	6	0.9
1	167	25.3
2	141	21.4
3	144	21.8
4	91	13.8
5	52	7.9
6	19	2.9
7	10	1.5
8	21	3.2
10	7	1.1
12	1	0.2
14	1	0.2
Total	660	100.0

Q21: Consideration of career change over the next five years

Yes	30.6
No	38.3
Do not know	31.1
Total	100.0
N	908

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[57] A 'career change' was defined as: a change in occupational roles (e.g. head of security to stock market trader); a change from one sector to another sector (e.g. from manufacturing to health care); a major role change within the same organisation or sector (this includes both compulsory and voluntary changes, plus geographical location changes) (e.g. a technical editor moving into marketing); or a period outside employment, including unemployment, studying or taking a career break. Some survey respondents also had multiple roles at the same time, necessitating moving between these roles, while others had to adapt to working in different countries.

Just under a third of individuals were actively considering a career change over the next five years, but a more or less an equal number did not know whether or not they would seek a career change in that time (see table Q21), with the major drivers of possible change being a desire for progression, seeking another challenge or time for a change (see table Q22). The importance of challenge in work for many respondents comes up again and again in this survey.

Q22: Main reason(s) why you are considering a career change, several answers possible (top seven)	
I am dissatisfied with my current job/position.	20.5
I would like to retrain and work in another field.	17.6
A change in my personal circumstances (i.e. moved location, needed better salary, new caring commitments) will mean that I may have to consider a career change.	25.5
I feel that it is time for a change.	36.7
I feel that it is time for another challenge.	44.2
I would like to progress (i.e. gain promotion or pay rise).	47.8
I feel that my skills are not valued.	21.2
N	278

The survey and the literature review highlight the importance of job mobility for individuals in a range of contexts in order to support upskilling, reskilling, employability and the integration of older workers for longer in the labour market.[58] The literature review and survey also highlighted how individuals valued support in making career decisions.[59] Those individuals seeking employment in other sectors may be a category in particular need of information, advice and guidance simply because a common assumption is made that the 'natural' progression route for a person is within the sector within which they happen to be working. From a policy perspective access to advice and guidance services for adults at times of transition appears crucial in facilitating positive outcomes both for the individual and for the smooth functioning of the labour market.

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[58] Brynin, M. and Longhi, S. (2007). The transformation of work? - Occupational change in Europe, D9.2.4 Publication of the Work organisation and restructuring in the knowledge society - WORKS project: Project number: CIT3-CT-2005-006193, Essex: ISER; Bimrose, J., Brown, A., & Barnes, S-A. (2008). Researching careers, learning and identities: Career attachments as anchors or chains?, Perspectives in Education, 26, 3, pp. 71-81; Bimrose, J. & Brown, A. (2010). 'Older workers' transitions in work-related learning, careers and identities.' In K. Ecclestone, G. Biesta & M. Hughes (eds) Transitions and Learning Through the Lifecourse, Routledge: Abingdon.

[59] Bimrose, J. and Barnes, S-A. (2007). Navigating the labour market: career decision making and the role of guidance. Coventry: Warwick Institute for Employment Research and Department for Education and Skills.

2.9.   Placing project survey findings in context of third party surveys

A project sub-report has reported on a review of the existence and content of third party surveys.[60] The sub-report provided a basis for contextualising the data from the project survey on individual careers and continuing vocational learning. One way of contextualising the results of the project survey was to have references to the findings from the large scale and sometimes periodic international surveys. The broader and contextualised analysis of other surveys was also used as a means of validating the findings of our own survey. The contextualization exercise facilitated the identification of gaps and how our findings could link to questions already covered in this area. This was important in order to avoid overlap of data generated through the new survey, and was also intended to serve as a basis for suggesting any short-comings within existing survey activities for examining relationships between career changes and learning opportunities. The in-depth consideration of third party surveys provided guidance in terms of our methodology, that is, it helped our own study in the phrasing and standardisation of questions. It was also of interest to see how questions had been translated into other languages. This strand of work was essential but was mainly reflected in the design of the questionnaire itself and that too is covered in a separate technical report. The final purpose of the work with the third party data was to examine ways in which different groups of countries were represented in analysis of findings, particularly in order to look at issues around the concept of flexibility. That work is presented in the following section and here we outline how through looking at the results of our survey and third party surveys it is possible to make some broad generalizations about inter-country differences. At the country level looking at the surveys as a whole the most helpful ways to group the countries in the sample appeared to be:

- countries where study or initial training are perceived of as extremely important sources for development of current knowledge and skills requirements (Germany, Netherlands, Denmark, France and Portugal)[61]
- countries where study or initial training are not considered as important as learning while working, at least in some sectors (Italy, United Kingdom and Poland)
- countries where respondents frequently perceive needs for additional training in order to cope well with present duties (Germany, Denmark Italy, Poland, Romania and Turkey)
- countries with 'medium' such perceptions (France, Netherlands)
- countries with 'low' such perceptions (Norway and United Kingdom).[62]

These groupings did draw attention to two major linked differences as to the relative balance of more formal means of skill development for initial or continuing training as against learning while working. While the numbers involved in our individual country surveys were modest, the differences were important in that they showed the need to contextualise general recommendations about how best to

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[60] For further details see project sub-report on Quantitative Approaches: Interpretation of Relevant Trends based on Third-Party Survey Results.

[61] Although Denmark is not in our sample, it has been retained as a third party comparator because it was important as a model of flexicurity.

[62] It is also possible to group the countries according to the degree of emphasis on employability, flexibility and security in the labour market and this issue will be examined in the next section of this report.

promote skill development in practice according to both country and sector. However, the major strength of our survey was that there was sufficient common ground across sectors and countries for it to be possible to draw up recommendations framed in such a way as to be applicable at the level of principle across Europe as a whole. Indeed the need for contextualisation at the level of detailed implementation is not confined to nation and sector as different regional labour markets and patterns of work organisation draw attention to substantive differences within national and sectoral contexts.

There is also a sense, however, that relative differences may obscure more fundamental similarities. For example, in the UK initial training and study were still seen as very important for career development. It was just that at the margins it was also possible for individuals to 'make their way' in a number of fields without formal qualifications. Additionally, once individuals were in a field then earlier education, training and qualifications often count for less than performance in a job, which in turn may be related to how well they learned while working.

In countries such as France, Italy, Romania, Turkey and Poland one reason why a relatively high number of respondents said they had the skills to cope with more demanding tasks may be because of their limited opportunities for mobility. On the other hand, the existence of well developed continuing education and training programmes in countries such as Germany, Norway and the Netherlands may influence perceptions whereby both initial training and continuous training are seen as important. It is in these areas where the third party surveys are better equipped to pick up on broad trends because of the larger numbers they survey. Even then, however, the different surveys have just a limited number of questions related to learning through work and career issues and they operate with varying concepts of occupational groups and sectors. This lack of relevant data contributes to difficulties when trying to provide systematic cross analyses with country level traits.

However, our findings on learning through work being regarded as a highly important source for skill development in many settings suggests that existing survey programmes should investigate this further. They could subsequently pick up on the relationship between learning while working and more formal continuing education and training provision. This relationship can only meaningfully be explored however if the time frame investigated in the questionnaire is extended beyond the previous quarter or even year. In order to understand these relationships more fully a five to ten year time period may be more useful. Additionally, one implication of our work for the design of surveys aimed at influencing future policy could be to consider the inclusion of questions relating career prospects to learning opportunities and an exploration of evolving 'career narratives', in order to get more of a sense of the drivers of individual career development over time. This approach could be relevant for surveys in the smaller scale format, or in the form of follow-ups of the on-going periodic surveys (excluding ISSP, which is not explicitly periodic, and CVTS, which is targeted at the enterprise level) such as Eurobarometers, EWCS and AES. A process of consultation on possible additions or changes to the existing EWCS and Eurobaormeter questions would be required, but we give an example below of how the recently completed AES (2007) could be supplemented. The existing relevant line of questioning is as follows:

> You stated that you participated in the <<Name of the activity>> because of job-related reasons, could you please specify more precisely what was the main reason: To be less likely to lose my job;

To have more chances in finding a new job; To be able to take greater responsibilities/increase my chances of promotion; To be able to cope with novelties/new requirements in my job; To be able to do my job better; To change profession or job; To start my own business; I was obliged to participate; To get knowledge/skills useful in my everyday life; Obtain certificate; To increase my knowledge/skills on a subject that interests me; To meet new people/For fun (AES 2007, Q NFE4Y).

In order to find out more about the eventual relationship between career change and learning opportunities, the syntax of questions could, however, also be reversed. Taking the cited AES (2007) question as the specific reference, other questions could be as follows:

- "To change profession or job, what do you think you will have to learn", and
- "when changing profession or job, what do you think you will end up having learnt", as well as
- "Based on the experience of having changed profession or job, what did you end up learning?"

Such new questions could supplement the existing open ended questions rather than replacing them. On the other hand, whether trying to lever more questions and themes into existing surveys is the most appropriate strategy is itself a moot point. It may be more useful to commission some smaller linked surveys which also have a stronger qualitative dimension in order to investigate how individuals' careers are developing and their thoughts on their future career direction.

2.10 Flexicurity

In another project sub-report we reviewed the approach to policy and theory focusing on the concept of flexicurity.[63] In addition, we described the studied countries plus Denmark in terms of their economic performance and standard of living by way of characterizing them within a flexicurity typology. Here we summarise the latter purpose, and also supplement the summary by reflecting on some possible policy implications.

Figure 1. Stylized assessment of 11 countries in terms of high v low degree of relative emphasis upon employability, flexibility and security

	Employability	Flexibility	Security
Denmark	High	High	High
Netherlands		Medium	
Norway			
Germany	Medium		
France		Low	Medium
Portugal			
United Kingdom		High	Low
Italy	Low	Medium	Medium
Poland			
(Romania)		Low	Low
(Turkey)			

Figure 1 presents a stylized assessment of the 11 countries in terms of high v low degree of relative emphasis upon employability, flexibility and security. Denmark is the only country which we characterize as having a high degree of employability, flexibility and security simultaneously, although it should be noted that we assess the UK as having a higher degree of flexibility than Denmark. High employability and high security countries with medium flexibility include the Netherlands and Norway, whereas Germany has been classified as high security with medium employability and flexibility. France and Portugal have been classified as medium employability and security, whereas they have a low degree of flexibility. The UK has medium employability, whereas security is low and flexibility, as mentioned, high.

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[63] For further details see project sub-report on Flexicurity, economic performance and labour markets in 11 European countries: Basic traits and implications for individual careers and learning.

Italy stands out as a special case, with its medium flexibility and security coupled with low employability, whereas Poland is another country with a unique constellation consisting of medium flexibility and low employability and security. Finally, we have – although with extreme caution due to insufficient material – classified Romania and Turkey as countries with rather little emphasis upon employability, flexibility and security. Thus we have highlighted that it is possible with an implementation of the flexicurity approach possible to distinguish between rather different cases within present day Europe, and that the project had a variety of flexicurity modes within the selected population of countries.

Reflecting on the implications for individual careers and learning in general, and also implications for contextualizing findings from other parts of the project in particular, we find it necessary to divide the reflections into two parts based on different underlying assumptions. One starting point may be that there can be a variety of contextual factors at national, sectoral and organizational levels which influence the optimal set-up of the employability, flexicurity and security constellations in a given country. Another assumption which is more in line with the on-going policy discourse is universalistic, in the sense that the requirements of the current and future knowledge society necessitates high degrees of flexicurity at the societal level as well as being preferred by individuals.

According to the contextually informed perspective, one can in an analytical sense envision circumstances within a knowledge society where a mis-match between employability, flexibility and security makes sense both in the context of policy formulation as well as from the perspective of individuals. This would be the case where, for example, localised and experience based skills are valued and necessary for continued competitiveness, where *high flexibility* would come at considerable cost and may run counter to efficient operations when seen from the perspective of employers. From the perspective of the employees (and the unemployed), increased levels of labour market flexibility would rather undermine their knowledge assets instead of facilitating career change possibilities. Germany seemed a typical case in this respect where our survey respondents seemed wedded to the idea of an occupation as a vocation (*Beruf*) and rarely seemed to entertain the idea of a significant career shift. Structurally too this would have been hard to achieve as there is often a need to engage in substantive retraining rather than learning on-the-job, although within the ICT area it was still possible to use experience gained while working with ICT as a basis for work with a substantive IT component such as project management. There are individuals in Germany with a flexible orientation to work, but changing jobs still seem in the main to follow broad progression pathways (for example, into management or self-employment), with major shifts of the type experienced by a significant number of English respondents much rarer (Kirpal and Brown, 2007).[64]

On the opposite end of the continuum, societies might operate with *low security levels* with little inclination to move towards higher levels. Institutional and cultural factors may be strong driving forces behind upholding such a situation, in the form of, for example, rationalizing the limited need for additional training outside the employment context or in the form of constituting an economy where a low degree of security is considered as an inherent part of the overall economic system. According to

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[64] Kirpal, S. and Brown, A. (2007) The much vaunted flexible employee: what does it take? In Brown, A., Kirpal, S. and Rauner, F. (Eds.) (2007). Identities at Work, Dordrecht: Springer.

such a perspective, we may expect less incentive for learning intensive periods in connection with external labour market related career changes than in flexicure societies. In both Poland and Romania there was some evidence of people holding on to their current employment while feeling that there would be little to be gained by trying to upgrade their skills as other types of employment were simply out of reach. In this context low employability seemed decisive rather than low flexibility per se. This analysis would seem to be borne out by the way respondents in the UK did show a marked willingness to engage in learning intensive periods because the opportunities associated with high flexibility and medium employability seemed to overcome any possible caution brought on by the threats caused by the lack of security.

Combinations of such institutional and cultural factors including the inability or lack of uniform strategies on behalf of key actors may help explain why different countries are currently composite in terms of the employability-flexibility-security constellations, rather than grouping neatly into coherent groups. Indeed no single grouping of employability-flexibility-security characteristics has more than two members and even then the pairs (Netherlands and Norway, France and Portugal, and Romania and Turkey) have very significant differences in terms of labour markets and sectoral configurations. So a contextual perspective tends to fragment any notion of types when examined in detail. Hence it may be worth considering whether different societies need to focus upon areas where they are weakest and consider ways to ameliorate any possible negative consequences rather than seeking to achieve a single ideal model. The contextual perspective may therefore start to acknowledge some universal trends and introduce contextual variation more when it comes to implementation rather than overall orientation.

The latter, universalistic and more common version of these two perspectives is central to the flexicurity discourse. Many if not all societies as well as individuals will benefit from a high degree of flexicurity precisely due to the win-win rather than either-or relationship between the two dimensions flexibility and security. The relationship may, however, be looked at according to two different starting points even within this symbiotic tradition, namely an avoidance of eventual negative effects on the one hand and the cultivation of potential positive effects on the other.

In order to illustrate the perspective focusing on avoiding any eventual negative effects, we cite the Danish consultant and author of the treatise *Happy Hour is 9 to 5* Alexander Kierulf (2005)[65]. He adheres to the avoidance perspective when he explains the virtues of the Danish system consisting of, primarily, the following mechanism: "when it's easy and safe to quit a job there is much less risk in leaving a job you hate. Even if you choose not to quit, just knowing that you could makes things more bearable. Hating your job *and* knowing that you can't quit makes everything worse." (Kierulf 2009, his emphasis). He goes on to elaborate that: "In countries with very strong labour protection laws, it can be almost impossible to fire anyone – meaning that underperforming employees stay in their jobs and everyone else has to pick up the slack", whereas flexible but insecure countries such as the USA run the risk of job-lock situations meaning that individuals "can't leave their jobs because they feel they can't get the same health insurance benefits on their own or at the next job" (*ibid.*). However, this adverse effect did not

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[65] Alexander Kjerulf (2007) Happy Hour is 9 to 5 - How to Love Your Job, Love Your Life and Kick Butt at Work. Web publication: http://positivesharing.com/happyhouris9to5/bookhtml/happyhouris9to5overview.html

apply to most of those in our sample from the only flexible but insecure country in Europe, the UK, largely because for most of the last fifteen years the labour market was benign where well qualified individuals generally had few problems finding other employment. This condition meant that individuals benefitted from the flexibility but were shielded from the adverse effects of limited security because of the existence of other job opportunities. Indeed individuals in the UK sample were much more mobile than respondents from elsewhere with many individuals reporting frequent job changes. The recession might start to change attitudes but unemployment had only been rising for a few months when our respondents were completing the survey.

The avoidance perspective, however, remains an important element within any discussion about the characteristics of flexicure (and rigid-insecure) systems, but in our context it is equally important to focus on cultivation of positive effects. What are the learning–related incentives as well as constraints in societies with a high degree of flexicurity? In the Kierulf (2009) example cited above, it seems the flexible albeit insecure society has the incentive for learning in the sense of requiring intensive learning if one wants to quit a (hated) job. According to the logic of flexicurity, however, an incentive for learning remains in the form of materializing vertical or horizontal mobility, while at the same time as the incentive towards taking the additional risk (which investment in learning implies) during or after the transitionary period in order to gain even better security than before. The respondents from the UK did embrace a very positive approach to learning in a variety of forms as being a vehicle for both vertical and horizontal mobility and a Spanish respondent working in the UK remarked that securing vertical mobility into professional employment from an associate professional position was inconceivable in her home country. Conversely, the secure albeit inflexible system may be perceived as being rather constraining towards entering into learning intensive periods in connection with career changes, since the incentives towards mobility as well as the means for achieving mobility by way of learning are absent. This picture was recognisable from many German respondents where they reported few job changes and only relatively rarely did they engage in periods of intensive learning, rather they generally seemed content with keeping up to date but not engaging in more learning than would be expected when following a particular occupational pathway (or *Beruf*).

In relation to our survey one key question was whether career patterns might be expected to vary amongst different employability-flexibility-security constellation types. However, as argued above the types broke down to individual country cases, while the more important influence on career patterns was the structure of opportunities available in the different labour markets. Hence the very high mobility experienced by many in the UK sample was more a function of the structure of the labour market and organisation of work than attributable to the particular constellation of employability-flexibility-security characteristics. Indeed the high mobility itself created many more job opportunities which in turn fed further high levels of mobility. It is notable that within each of the three sectors (engineering, ICT and health) in the UK there are the dual expectations that people will have a relatively high number of jobs within the sector and that movement between sectors is comparatively common. Neither of these assumptions held to anything like the same degree in any other country. On the other hand, the much reduced set of opportunities for entry to and movement between permanent positions in the labour markets of Italy, Portugal, Romania and Turkey in engineering and health seemed to

produce greater job stability among those in employment, although the position in ICT was more fluid. France and Germany have very large numbers of jobs in the chosen sectors but entry routes and progression pathways tend to be much more clearly delineated, with the result again of limited mobility. For example, in the French context most nurses with permanent positions remain within a single specialism and often a single hospital, with flexibility coming from temporary nurses attached to a 'supplementary pool' who will work in a number of different contexts.[66]

For these reasons it is clear that the opportunity structures within particular labour markets are far more relevant to individuals' career choices than particular configurations of employability-flexibility-security. The latter characteristics influence the volume and type of opportunities available at any one time but the pathways available and different sets of expectations about career choice and occupational mobility are framed within clear opportunity structures which vary between countries. Perhaps the most obvious example is the way over the last decade most engineers graduating in the UK were aware that a career in merchant banking was not only possible but was a common pathway. The opposite case also applies where Swiss banks only offer progression routes for front-office staff through apprenticeships and to those completing high school only in Switzerland and recruit only graduates in the UK. Indeed from this perspective the UK and Norway were the most alike in having, for different reasons, the most open opportunity structures in terms of the range of paths an individual with a particular qualification could follow. If flexicurity was the decisive variable then the expectation would have been that UK and Norway represented the two 'extreme' cases: with career choices in low security but high flexibility societies (i.e. the United Kingdom) being notably different from those in high employability/security coupled with medium flexibility societies such as Norway and the Netherlands).

The debate about different forms of flexicurity has, however, partly been overtaken by responses to the financial crisis and subsequent deep recession. As the Cedefop briefing note 'Learning in a crisis' (November 2009)[67] makes clear there has been 'a consensus among governments and social partners to try to keep people in work. Enterprises often had problems in finding skilled workers before the crisis and are keen to keep the skills they need for the recovery. Many Member States are following 'flexicurity' principles by providing public funds, supported by the European Social Fund, to enable firms to combine short-term work with training.' For example, countries may adopt measures such as supporting people at risk of redundancy by helping fund training to enable employers to adapt to changes in production and new technologies. 'Member States are also using resources to help young, older and unemployed people who are often badly affected by recessions as recruitment falls.....Several Member States have also increased funding to help those recently made redundant during the crisis and those who were trying to find a job before it hit. In France, government and social partners agreed, in April 2009, to spend EUR 100 million to expand existing training and other programmes for unskilled and unemployed people.....Many measures centre on work-based learning. Belgium, Portugal, Slovenia and Finland, are among those who have increased funding to encourage employers to take on young

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[66] Kirpal, S., Brown, A. and Dif, M. (2007) Identification with work in a European perspective. In Brown, A., Kirpal, S. and Rauner, F. (Eds.) (2007). Identities at Work, Dordrecht: Springer.

[67] Downloadable from: http://www.cedefop.europa.eu/EN/Files/9017_en.pdf

people....In Austria, qualification and skills training grants provide tailored training opportunities at the workplace to people older than 45.'[68]

Many of these measures, especially for those still in work, can be seen as short-term responses to the crisis. However, they can also be taken as evidence of a shift towards a wider acceptance of the tenets of flexicurity, with ensuring individual skills development a key aspect of flexicurity.[69] The idea is to ensure people stay in or are supported in finding new employment, even though they might need to be geographically or occupationally mobile and/or engage in upskilling or reskilling activites. The European Commission (November 2009) Consultation document on the future 'EU 2020' strategy argues that 'New jobs requiring new skills will be created. Transition between jobs, between training and jobs will have to be managed. This is where flexicurity should be deployed to the full. The challenge is to find the best way to enhance on the one hand, the flexibility of labour markets both on work organisation and on labour relations, and on the other hand, the security provided by lifelong learning and appropriate social protection'.[70] Flexicurity policies are intended to be universal, covering all occupational levels and employment sectors. However, this review is primarily focused upon higher skills development and 'in the longer term there is a clear trend in Europe towards knowledge- and skill- intensive occupations. Across all sectors more jobs will require medium and high-level qualifications'[71] and people in those jobs will need to continue to develop their expertise through the types of skill development at work outlined in the next section.

The conclusion of this review of the implications of flexicurity for individual career development are that, insofar as the common principles of flexicurity (comprehensive lifelong learning strategies; effective active labour market policies; ease upward mobility and between unemployment or inactivity and work; continuous upgrading of skills) widen the opportunity structures available to people with particular sets of qualifications then movements in this direction can be a useful means of encouraging individual aspirations and occupational mobility. The pathways available and different sets of expectations about career choice and occupational mobility are framed within clear opportunity structures which vary (within and) between countries. If an individual is unsure what he or she wants to do or wants to change career direction then England and Norway with their wide range of general opportunities and openness to career change provide the greatest breadth of opportunities, particularly

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[68] Cedefop (2009) briefing note 'Learning in a crisis'. http://www.cedefop.europa.eu/EN/Files/9017_en.pdf

[69] The common principles of flexicurity are: comprehensive lifelong learning strategies; effective active labour market policies; ease upward mobility and between unemployment or inactivity and work; continuous upgrading of skills. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. Towards common principles of flexicurity: more and better jobs through flexibility and security (2007).
http://ec.europa.eu/social/main.jsp?catId=102&langId=en&pubId=188&type=2&furtherPubs=yes

[70] European Commission (November 2009). Commission working document: Consultation on the future 'EU 2020' strategy. Brussels. http://ec.europa.eu/dgs/secretariat_general/eu2020/docs/com_2009_647_en.pdf.
Consultation site can be visited at: http://ec.europa.eu/eu2020/.

[71] Cedefop briefing note 'Learning in a crisis' (November 2009)
http://www.cedefop.europa.eu/EN/Files/9017_en.pdf

for graduates. However, if an individual has a clear sense of career direction and wants to follow an established progression pathway, particularly below graduate level, then the structured opportunities available within the German and French systems might be attractive. The use of the term 'opportunity structures' itself contains the tension between openness and flexibility on the one hand and structured pathways on the other. Both are valuable and it is finding an accommodation which works well for most members of a society but also provides opportunities for those who do not fit initially which should be the goal of a CVT policy informed by concerns for individual career development. The principles of flexicurity can be helpful in this respect, but it is extending the breadth and quality of the opportunity structures which should be the goal of policy in this area.

3. Key messages for the organisation and development of CVT

3.1. Role played by different forms of learning in enhancing skill development at work

Our survey highlighted the explosion of learning opportunities in work settings and the increasing differentiation within and between labour markets as to the variety of learning opportunities available in work settings (in a world in which work itself has become an increasingly multi-faceted phenomenon). Formal continuing vocational education and training for many workers, particularly in the context of dynamic and/or uncertain labour markets, for example through updating existing skills or developing new skills via training, remains important. Skill development in such contexts is often a factor in maintaining employability over a long period. However, to view participation in such training as necessarily decisive for personal professional development overlooks the fact that much skill development, especially for more highly skilled workers, takes place outside formal training contexts.

The six key processes in skills development at work, detailed below, are: Engagement with challenging work; Interactions at work; Knowledge at work; Supporting learning of others; Self-directed learning at work; and Developing identities at work.[72] An interesting aspect of skill development is that it is often not the prime focus of the activity undertaken, which might be to solve a problem, improve performance etc.

3.1.1 Engagement with challenging work

Engagement with challenging work can be a major form of skills development at any stage of a working life: work performance involving a complex combination of tasks and duties may require the development of higher levels of skills, knowledge and understanding at work. Similarly, any work role, involving (complex) decision making, problem-solving, (advanced) communication skills, supervisory or managerial responsibilities and the application of skills, knowledge and understanding in different contexts requires the development of higher levels of skills, knowledge and understanding at work. Activities such as exercise of judgement, creativity, developing situational awareness and understanding, involvement in continuing improvement activities or performance improvement teams, supporting the learning of others, changing the ways work is done also require the development of higher levels of skills, knowledge and understanding at work. Workers at any level of an organisation can be engaged in activities that are more or less challenging. The extent to which individuals have the opportunity to develop higher levels of skills, knowledge and understanding at work varies between different settings. In contexts where work itself is challenging, then much continuing vocational learning takes place through a mixture of formal and informal learning outside formal training programmes. Additionally, there is a need for employees not only to update their technical skills but also to develop further a range of more generic skills, including planning, problem solving, communication, IT and management skills and much skill development in these areas can come through informal learning while working coupled with short periods of explicit formal learning and reflection upon experience.

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[72] Brown, A. (2009). Higher skills development at work: A Commentary by the Teaching and Learning Research Programme. London: ESRC, TLRP.

3.1.2 Learning through interactions at work

Working and learning are social activities and work relationships, interactions and learning influence current and future opportunities for the development of work-relevant skills, knowledge and understanding. It is an open question whether interactions at work do lead to substantive learning and development. One particularly important way informal learning plays a role in skill development for employees working in learning-rich jobs is by 'learning by interacting' – that is learning through interacting within communities and networks is a fundamental way for constantly re-building personal cognitive approaches both to specific issues and re-constructing the sense of the whole work experience. For workers engaged in a range of networks learning by interacting often helped with different aspects of their work-related learning and development, only some of which were explicitly linked to the organisation for which they worked. On the other hand, in those settings where access to a broad set of interactions was restricted then opportunities for learning as part of their everyday work were consequently much poorer than for those whose work and contacts were more expansive.

It may be that it is social capital, developed through participation in work-related networks, which plays a role in helping individuals sustain their employability (Brown, 2005)[73]. Those individuals whose work regularly took them to other workplaces, or changed jobs frequently early in their career, often developed strong networks as well as experiencing challenging work in a variety of contexts. These processes honed their skills in a number of respects, including the development of tacit skills which could be applied in a range of contexts. In such circumstances the informal learning of technical, social and networking skills could be very helpful for an individual's skill development at work. In other cases what workers who started their career with high level qualifications often needed to become more effective at work was practical experience gained while working rather than formal skills or knowledge updating through formal training programmes, so again learning while working could be very important. The informal learning associated with personal networks was often important in many contexts over a career, from hearing about job opportunities and gaining initial entry to work through to many aspects of continuing career development, including choices about different ways of updating skills, knowledge and experience. Progress in work is often supported by spontaneous forms of learning in which informal work-based learning and self-managed competence development converge and both are often at least partly dependent upon the quality of support from personal networks (Brown, 2005)[74].

Workers may engage in highly routine activities with little challenge, and yet take on additional responsibilities as, for example, health and safety representatives, shop stewards or union learning representatives or as part of performance improvement teams. These duties require the exercise and development of higher level skills, knowledge and understanding and could also be the platform for further learning and development in education, training or employment. On the other hand, Eraut *et al.* (2004) highlighted how some highly qualified graduates were employed as professional engineers but,

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[73] Brown, A. (Ed) (2005). Learning while working in small companies: comparative analysis of experiences drawn from England, Germany, Greece, Italy, Portugal and Spain, SKOPE Monograph No 7, ESRC funded Centre on Skills, Knowledge and Organisational Performance, Oxford and Warwick Universities.

[74] Ibid.

given a dearth of challenging projects, were given routine work. The lack of the promised professional interactions, in turn, compromised their opportunities for professional development.[75] Overall then, interactions at work can be a source of higher skills development through learning while working. They can also signal when additional learning is required at the individual and/or organisational level.

3.1.3 Knowledge at work [76]

Developing higher levels of skills, knowledge and understanding at work means engaging with a substantive knowledge base, either prior to starting work, while working, through career development activities away from work, or through a combination of all three. Higher Education often contributes to these processes through involving an induction into particular 'ways of thinking and practising'.[77] One critique of this approach is that disciplinary study and emphasis upon mastery of a knowledge base is out of tune with changes in the forms and speed of knowledge production and other process-oriented skill sets are more important. However, this critique seems to overlook the point that mastery of a knowledge base is itself often seen, not least by major employers, as a transferable skill as the example given in a previous section makes clear: engineers being recruited into other sectors (notably finance in the UK). It was the mastery of a complex technical knowledge base which was valued, with the employer seeing working in finance and studying disciplines such as engineering, economics or mathematics requiring similar ways of thinking.

The transfer of appropriate knowledge between contexts is not a straight forward process as it depends upon: understanding the new situation, a process that often depends on informal social learning; recognising which areas of knowledge are relevant to the new situation; focusing more precisely on what knowledge is needed for a particular decision or action; interpreting and/or transforming that knowledge to suit the new situation and context; and integrating the relevant aspects of knowledge prior to or during performance.[78] The transfer of knowledge, skills and understanding between people is often seen as unproblematic, but there are significant challenges to transfer between individuals, within teams and within organizations. The links between knowledge developed in different contexts such as Higher Education and work are themselves complex and contextualised.

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[75] Eraut, M., Maillardet, F., Miller, C., Steadman, S., Ali, A., Blackman, C. and Furner, J. (2004). Learning in the professional workplace: relationships between learning factors and contextual factors, AERA Conference Paper, San Diego. http://www.tlrp.org/dspace/retrieve/93/AERA_2004.pdf

[76] This factor concentrates expressly upon the importance of developing a substantive knowledge base related to the performance of work duties. Some aspects of knowledge development and creation of new forms of knowledge may be developed through engagement with challenging work and self-directed learning, but developing knowledge at work merits identification as a separate factor because focusing upon the development of skills alone may be insufficient to generate substantive learning and personal development.

[77] Entwistle, N. and Peterson E. (2004). Conceptions of learning and knowledge in higher education: Relationships with study behaviour and influences of learning environments, International Journal of Educational Research, 41, 6, 407-428.

[78] Eraut, M. (2009) Learning at Work during placements and after graduation: what needs re-contextualisation and what is completely new? Paper presented at TLRP workshop on 'Careers and Learning: Higher Skills Development in a Life Course Perspective', University of Warwick, March 18th, 2009.

The search for knowledge of individuals working in technical areas in ICT, health and engineering was nevertheless often broad, going well beyond just the development of technical skills. The search could incorporate aspects of technical know-how (how to apply technologies), know-what (where and when technologies and knowledge could be applied), know-who (including an active search for people who would be valuable as members of a personal network), and know-why (a fuller understanding of work processes including, in some cases in health, a deeper scientific understanding).[79] Individuals also often needed the ability to utilise different types of distributed knowledge available in texts, technologies, artefacts or organisational routines.[80]

3.1.4 Supporting the learning of others

Learning by interaction and from colleagues is important for skill development at work. Its effectiveness depends upon how well colleagues are able to support the learning of others. In knowledge-intensive work and settings involving complex teamwork, many organisations explicitly use a developmental view of expertise that goes well beyond expecting technical proficiency and a commitment to continuing improvement. These organisations pay particular attention to ensuring that their teams possess people able to support the learning of others.[81] Giving feedback on aspects of individual performance over time can be useful, including: immediate comment on aspects of a task given on the spot; informal conversations away from the job; formal roles such as mentor or supervisor involving responsibility for a learner's short to medium term progress and regular formative feedback; review designed to give employees feedback on personal strengths and weaknesses and ascertaining views on learning opportunities and expectations.[82] Organisations could create mechanisms to enhance peer support, mentoring and knowledge sharing in order to develop a culture of support for learning and development.[83]

3.1.5 Self-directed learning at work

Learning and development at work depends partly on whether work offers an expansive learning environment.[84] However, it is also dependent upon individual actions. People vary in their self-awareness about their goals, aspirations, motivation, personality, inter-personal skills and resilience.

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[79] Lundvall, B.-Å. (2002) Growth, Innovation and Social Cohesion: The Danish model, Cheltenham: Elgar.

[80] Dosi G. and Grazzi, M. (2010) On the nature of technologies: knowledge, procedures, artifacts and production inputs, Cambridge Journal of Economics, 34, 1, 173-184.

[81] Brown, A. (2009). Developing expertise - moving beyond a focus on workplace competence, assessment and qualifications - Beyond Current Horizons report. London: DCSF/Futurelab.

[82] Eraut, M., Maillardet, F., Miller, C., Steadman, S., Ali, A., Blackman, C. and Furner, J. (2004). Learning in the professional workplace: relationships between learning factors and contextual factors, AERA Conference Paper, San Diego. http://www.tlrp.org/dspace/retrieve/93/AERA_2004.pdf

[83] Bryant, S. & Terborg, J. (2008) Impact of Peer Mentor Training on Creating and Sharing Organizational Knowledge, Journal of Managerial Issues, 20, 1, 11-29

[84] Fuller, A. and Unwin, L. (2006) 'Expansive and Restrictive Learning Environments', in Evans, K., Hodkinson, P., Rainbird, H. and Unwin, L. (eds) Improving Workplace Learning, London: Routledge.

They also differ in their appreciation of learning opportunities, contextual understanding and their ability to develop relationships and networks to support their learning and development. Capabilities for critical analysis, critical reflection, visualisation and organisation, and the ability to switch between context and generalisation, all help individuals to make the most of their learning opportunities.[85] Learners who applied organised effort to their development and had the time management skills to concentrate and focus their attention had a skill set which is valued in many work contexts and helped them in their own development.[86] In other work contexts which do not necessarily make heavy cognitive demands, and require the development of other forms of skills, knowledge and understanding individuals could still build on their commitment to personal development.

At work, being self-directed in terms of taking advantage of learning opportunities is helpful for individual development.[87] It can involve willingness to engage in a wide range of activities such as asking questions; getting information; locating key resource people; listening and observing; learning from mistakes; giving and receiving feedback; trying things out; independent study; and working for a qualification.[88]

3.1.6 Developing identities at work: anchors and chains

In most circumstances a strong attachment to work brings considerable benefits, including a sense of career stability and having a career 'anchor.' But it might also hold an individual 'in chains' and prevent them from attempting a career transition: the former computer maintenance technician mentioned previously took several years to come to terms with the loss of his occupational identity and only then was he able to consider how his skills could be used in another setting. Those individuals who see that their skills can be transferred to other contexts had significant advantages in changing career direction over those who defined themselves almost exclusively by their occupational and organisational attachments.[89] People can learn from their lives through the stories they tell about them. This is important for their identity and agency and their willingness to engage in skills development, as is exemplified by one survey respondent who explained 'I see my career history as a steady upward progression, but periods where this progression tends to slow down. When this happens I take steps to find new challenges and orientations.' [90]

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[85] ibid.

[86] Entwistle, N. and Peterson E. (2005). Conceptions of learning and knowledge in higher education: Relationships with study behaviour and influences of learning environments, International Journal of Educational Research, Volume 41, Issue 6, 2004, Pages 407-428

[87] Bimrose, J. & Brown, A. (2010). 'Older workers' transitions in work-related learning, careers and identities.' In K. Ecclestone, G. Biesta & M. Hughes (eds) Transitions and Learning Through the Lifecourse, Routledge: Abingdon.

[88] Eraut, M. (2009) Learning at Work during placements and after graduation: what needs re-contextualisation and what is completely new? Paper presented at TLRP workshop on 'Careers and Learning: Higher Skills Development in a Life Course Perspective', University of Warwick, March 18th, 2009.

[89] Bimrose, J., Brown, A., & Barnes, S-A. (2008). Researching careers, learning and identities: Career attachments as anchors or chains?, Perspectives in Education, 26, 3, pp. 71-81;

[90] The case exemplars outlined in section 2.3 also reinforce this point.

3.1.7 Summary:

Learning through challenging work is often a key form of skills development at work, while another valuable skill to be developed relates to learning to become more self-directed in your approach to learning at work and this can lead to significant work-related learning. Use of personal networks can be an effective way to critically reflect upon work and hence can be an important source of work-related learning. Learning how to support the learning of others (especially for those with management and supervision responsibilities) is vital to improve the likelihood of significant learning while working, but can help in the development of your own skill set as well as those of others. Learning how to organise knowledge effectively and apply it appropriately are vital for technical and professional workers' development and these skills are, par excellence, those that can be developed effectively through informal learning coupled with more formal reflective and deliberative learning.

Overall, it is clear that different forms of learning play a significant role in skill development at work, particularly when informal learning is combined with imaginative complementary formal learning opportunities. This means that the focus of strategies for skill development should be upon supporting learning in a variety of forms, and when considering the role of formal off-the-job CVET thought should be given to how this relates to other forms of work-related learning and development, and greater attention should be given to helping employees become more effective in supporting the learning of others at work.

It is also apparent that innovation and learning within and across organisations are essentially social processes and both personal networks and cross-company networks need to pay attention to building relationships to support development as well as focusing upon substantive issues. There is also a need to consider the interaction between formal and informal approaches to learning, skill development and knowledge creation as a particularly effective way forward not only for enhancing personal professional development but also as a means to improve organisational effectiveness.

If employers do not endorse an approach to organisational development that involves upgrading the learning content of the jobs on offer and/or presents opportunities for workers to upskill or reskill, then public policy interventions should be addressed to helping people acquire the skills which could allow them to leave their unsatisfactory and precarious jobs and to self-design a new vocational future in the same sector or even outside it.

While acknowledging the value of learning while working, a number of survey respondents also realised such learning was an insufficient basis for personal professional development and that this could be enhanced through participation in additional learning activities, which could include more formal CVET. They seemed to be well aware that learning does not grow only 'by doing' (accumulating experience through performing work processes) or 'by using' (particular tools and techniques), but there were also advantages to a more systematic approach to learning and development, whether this utilised some or all of the following: the systematic exploitation of the web, participation in specialist networks, relationships with technologically advanced customers or colleagues, more general participation in innovation activities, or using opportunities for formal education and training. Learning from others with

acknowledged expertise too was sometimes facilitated through particular activities (e.g. work shadowing), sometimes through explicit knowledge development and sharing activities and at other times is built into the organisation of work activities (e.g. in the construction of project teams).

Collaboration was deemed to be a support for learning and development in a wide range of situations, a natural environment for informal exchanges of information and knowledge, and a stimulus to enrich one's competencies. Being a member of a team and/or of a wider community was often important for individual skill development. Indeed in the instances where individuals were trapped in low quality jobs one of their major grievances was that they had few opportunities to collaborate and this restricted further their opportunities for personal development.[91]

Overall, much learning undertaken at work is concerned with 'sense making' for individuals, both in relation to technical processes and work process knowledge more generally. That is, for many workers developing a 'vision' of how work process knowledge fits in with their work activities and those of the company more generally is an important driver of learning. Many workers want to make sense of their experience of work as a whole and in order to achieve this goal they draw upon a range of approaches to learning that comprise both formal and informal learning. The overall approach could be interpreted as representing a desire for learning through working and interacting and self-directed learning leading to contextual understanding interspersed with periods of more formal learning and development that allow for more considered reflection, a linking (and integration) of what has been learned by experience and informal means, and more rounded professional and personal development.

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[91] Brown, A. (Ed) (2005). Learning while working in small companies: comparative analysis of experiences drawn from England, Germany, Greece, Italy, Portugal and Spain, SKOPE Monograph No 7, ESRC funded Centre on Skills, Knowledge and Organisational Performance, Oxford and Warwick Universities.

3.2. Principles for enhancing skill development at work [92]

One way to conceptualise how best to achieve effective skills development at work in different settings could be to apply the following set of principles:

1. Skills development policy should have twin foci upon enhancing individual development and organisational performance. Skills development policy should recognise two key realities. First, engagement with challenging work is the most effective form of higher skills development at work. Second, in almost every country in Europe, the most effective way individuals in work with little challenge upgrade their skills is through changing their job. Therefore skills development policy should have twin goals and not elide the two – trying to reconcile the two within sector-based, employer-driven skills policies is difficult.

2. Effective skills development depends on the learning and development of all those who support the learning of others in the workplace. Supporting the learning of others is a key competence in organisations concerned with organisational learning and team development. In some knowledge-intensive industries there is explicit recognition of people who are effective at supporting the learning of others. Making sure teams include such people is seen as important in facilitating group performance.

3. Informal learning is a central component of skills development at work. Much is learned in the course of interactions and performance of challenging work activities without there necessarily being any explicit acknowledgment of the learning dimension – learning being regarded as essential component of working. It is helpful, however, to recognise that just as much informal learning occurs on formal education and training programmes, so much formal learning occurs in work contexts. An example of the latter is when you ask a colleague how to do something and he or she demonstrates and then supports you while you try to follow their approach.

4. Skills development at work involves both individual and social processes and outcomes. Skills development at work has a clear social dimension, as when individuals learn through interaction with colleagues, clients or customers or participate in work-related networks, communities or activities such as coaching or mentoring. There is, however, also a role for personal agency and the extent of learning will also depend on how well an individual is able to marshal resources for learning, how much effort is put into learning and the frequency and type of reflection upon experience which occurs.

5. Skills development at work works best when it promotes the active engagement of the individual as a learner. One goal of skills development at work should be support for the individual to become a more self-directed learner. This involves engaging employees actively in their own learning, and ensuring that they acquire a repertoire of learning strategies and practices, develop positive learning dispositions, and become agents in their own learning.

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[92] Brown, A. (2009). Higher skills development at work. London: ESRC, TLRP.

6. Effective skills development at work is dependent upon the timeliness and quality of feedback and support. Assessment of learning and/or performance at work may sometimes be summative, for example in order to obtain a licence to carry out certain operations or as part of a formal review process associated with the achievement of qualifications. However, assessment of learning at work is often formative, comprising feedback designed to support the learner in a more informal way. It may be helpful to give different types of feedback at different times, depending on the context and the nature of the activity.

7. Effective skills development at work requires some aspects of learning to be systematically developed. Much can be learned while working in the course of interactions and performance of challenging work activities, but often it would be helpful to design additional activities in order develop separate learning trajectories in order to improve particular aspects of Task Performance; Role Performance; Situational Awareness and Understanding; Teamwork; Personal and/or Group Development; Decision Making and Problem Solving; Academic Knowledge and Skills; Judgement. While some development may just require active monitoring and occasional intervention, on other occasions activities should be designed as part of a programme of systematic development, for example, in order to learn a new technique, undertake a major new role or in response to a major change in how work is performed.

8. Effective development at work recognises the importance of prior experience and learning. One key factor to consider before deciding how an individual should develop their skills, knowledge and understanding at work is an assessment of their current capability. There also needs to be recognition, however, that this does not involve a simple reading across of what an individual has achieved in other education, training or employment contexts with an expectation that transfer of learning will be unproblematic. Ideally, deciding upon a strategy as to what types of knowledge, skills and practices are to be developed through a mix education, training or work activities would be informed both by prior experience and how these activities link to an individual's career development goals.

9. Effective skills development at work engages with expertise and valued forms of knowledge. Developing skills, knowledge and understanding at work for individuals and groups requires engagement with ways of thinking and practising, conceptual understanding, attitudes and relationships associated with particular areas of expertise.

10. Effective skills development at work should engage with individuals' broader life goals. While skills development at work takes place within a particular organisational context, it is framed by patterns of individual actions, engagement, motivation and identity. Also it is important that individuals regard themselves as possessing skill sets that are capable of being used in a variety of other contexts rather than becoming over-attached to occupational or organisational identities.

3.3. Value of a developmental view of expertise in a knowledge-based society

National (and European) policies have tended to emphasise aggregate targets for increasing the supply of skills as reflected in, for example, targets for increasing the supply of graduates or people with qualifications at a certain level in order to achieve a more knowledge-based society. Such goals are predicated upon the idea of moving people through to higher and well-defined levels of skills, knowledge and understanding. Such approaches have an exhortatory function in terms of encouraging more people to engage in education and training. However, such approaches relying on increasing the sheer volume of skills are insufficient in that progress also depends on how skills are used in context and for this it is appropriate to use a developmental measure, which looks to develop the skills, knowledge and understanding necessary to be effective in (the work) context, irrespective of the level to which some skills have been developed. That is, a complementary approach to a move towards a more knowledge-based society is for as many people as possible, whatever their highest overall 'level' of skills, to believe that they should continue to develop their skills, knowledge and competences in a number of ways. Importantly, this may mean that skills, knowledge and competences may need developing at levels below as well as at or above their current highest 'level' qualification. Evidence from our survey shows that this is precisely what significant numbers of people already do – for example, their experience of challenging work and interactions with other people may lead individuals to recognise they need to hone their ability to understand the perspectives of others or learn more about handling their emotions.

A developmental approach to expertise could provide the conditions in which a commitment to continuous improvement at work could flourish, as most people would believe that they needed to develop in a number of ways (at a range of 'levels') in order to improve their performance. This approach of continuing to expect people to continue to develop a range of skills would offer some protection against the development of 'skilled incompetence' (where organisations and individuals continue to focus largely upon what they currently do well without paying due regard to what they need to do to be successful in the future).

This approach would also overcome the trap of thinking that a more highly qualified workforce automatically equates to a more highly skilled and more knowledgeable workforce. A more sophisticated model of skill development and expertise is required to underpin meaningful movement towards a more knowledge-based society than one which relies on the percentage of people receiving qualifications at a particular level as the key indicator of progress. Paying more attention to what skills are in demand and the extent to which skills continue to be developed in particular contexts being two challenges that using a developmental model of expertise could overcome. A developmental view may also allow achievements and progress to be seen as markers for learners (or milestones) with individuals deciding which are the most significant and whether or at what stage of the journey they could be turned into 'qualifications' through validation and/or used as a platform for further development.

Moving sideways (or even downwards) between levels may make sense at an individual level and add to the general stock of skills, knowledge and understanding of the workforce and make sense in terms of

the broad Lisbon goals (for a more highly skilled workforce), even if they do not contribute directly to the Lisbon targets in terms of people becoming more qualified. This approach could help us move away from using 'more highly qualified' as a proxy for 'more highly skilled'. An example of this was a materials scientist with a PhD who admitted his contribution to a performance improvement team was greatly hampered by his inability to communicate effectively with people without his level of expertise. Brown *et al.* (2004) outline a number of 'case stories' from automotive and aerospace supply chains that show how substantive and effective work-based learning may involve learning and development of skills, knowledge and competence at a variety of levels, with learning and development being principally regarded as processes designed to effect improvements in organisational effectiveness, with only a minority of workers involved taking up the opportunity to take formal qualifications.[93] Most workers reasoned that their substantive development from involvement with performance improvement activities would be recognised within organisational competency frameworks and/or be incorporated within a CV or personal portfolio. Significantly, however, those workers who were interested in making a career transition did seek formal recognition of the skills they had developed.

The developmental approach outlined here could provide the conditions in which a commitment to continuous improvement could flourish, as not only would most people believe that they needed to develop in a number of ways (at a range of 'levels') in order to improve their performance, but also because it could encourage the development of the skills of supporting the learning of others and these skills often act to leverage further learning and development in the workplace. This more expansive view of the development of expertise would pay particular attention to the need to address issues of transfer of skills, knowledge and experience between different settings; how to support individuals in developing a frame of mind whereby they continually look to improve their own performance through learning and development and to support the learning and development of others; and to recognise that in any organisation a commitment to continuing growth and development of its members is strategically important. Overall, this argument about the need to pay greater attention to learning at the workplace is not an argument for a particular type of education and training programme. A more coherent and comprehensive view of the type of learning and development required to support continuing learning at work can interact with a wide range of education and training provision that varies according to subject, breadth, depth and timing. An expansive view of the development of expertise draws attention to how in any job there may be aspects of performance which could be developed and one way of thinking about such development would be to consider what learning trajectories could be followed to develop these aspects of performance. These aspects of performance are outlined in Table 1.[94]

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[93] Brown, A., Rhodes, E. and Carter, R. (2004). Supporting learning in advanced supply systems in the automotive and aerospace industries. In H. Rainbird, A. Fuller and A. Munro (Eds.) Workplace Learning in Context. London: Routledge (pp 166 - 182).

[94] The table is reproduced from Brown, A. (2009). Higher skills development at work. London: ESRC, TLRP. The table expands on ideas developed in Eraut, M. (2009) Learning at work during placements and after graduation. Paper presented at TLRP workshop on Careers and Learning, University of Warwick, 18th March 2009.

Table 1: Aspects of performance which may need to be developed through particular learning trajectories (developed from Eraut 2009)

Task Performance	Role Performance
Speed and fluency	Prioritisation
Complexity of tasks and problems	Range of responsibility
Range of skills required	Supporting other people's learning
Communication with a wide range of people	Leadership
Collaborative work	Accountability
Awareness and Understanding	Supervisory role
Other people: colleagues, customers, managers etc	Delegation
Able to understand the perspectives of others	Handling ethical issues
Contexts and situations	Coping with unexpected problems
One's own organization	Crisis management
Problems and risks	Keeping up-to-date
Priorities and strategic issues	**Teamwork**
Value issues	Collaborative work
Personal Development	Facilitating social relations
Self evaluation	Joint planning and problem solving
Self management	Ability to engage in and promote mutual learning
Handling emotions	Ability to support the learning of others
Building and sustaining relationships	**Decision Making and Problem Solving**
Disposition to attend to other perspectives	When to seek expert help
Disposition to consult and work with others	Dealing with complexity
Disposition to learn and improve one's practice	Group decision making
Accessing relevant knowledge and expertise	Problem analysis
Ability to learn from experience	Formulating and evaluating options
Academic Knowledge and Skills	Managing the process within an appropriate timescale
Use of evidence and argument	Decision making under pressure
Accessing formal knowledge	**Judgement**
Research-based practice	Quality of performance, output and outcomes
Theoretical thinking	Priorities
Knowing what you might need to know	Value issues
Using knowledge resources (human, paper, web)	Levels of risk
Learning how to use relevant theory in a range of practical situations	

3.4.   Current challenges

Bearing in mind the famous quote by William Gibson that 'the future is already here, it's just unevenly distributed' it is likely that a belief in a developmental view of skill development and expertise in the workplace will extend beyond current pockets of 'good practice' and be much more prevalent in 2020 and beyond. Current policies focusing on issues concerned with competence, assessment and qualifications as proxies for work-related skill development will be widely recognised, as they are at present in knowledge-intensive companies, as insufficient in developing a genuine commitment to continuing learning and development at both the individual and organisational level. It is interesting to note that such companies which rely on innovation and creativity are interested primarily in substantive skill development which drives these processes and the role of formal qualifications in these processes is seen as a second order issue.[95]

The implications for supporting workplace learning are clear, but whether there will be a 'backwash effect' into initial education and training is unclear. The two most challenging aspects for education and training providers would be whether much greater emphasis should be given to encouraging individuals to support the learning of others and for this to be seen as a higher level of achievement than individual technical proficiency and to encourage individuals to think about alternative ways in which activities could be tackled. Such activities may currently be considered as 'off-task' in formal education settings and would need to be encouraged rather than censored – whether such a future is possible, probable or preferable to a focus on individualistic achievement of specified learning objectives and moving through prescribed levels depends on value judgements about what should be learned within formal education and what may be best developed in other settings.

A major challenge for skills development policies and practices is to take account of current, and possible future, patterns of individual skills development across the life-course. The research findings suggest that the following issues need to be tackled:

- although many individuals learn in adaptive ways through challenging work, learning and development which results in substantive changes in attitudes, knowledge or behaviour is often episodic, and the rhetoric of lifelong learning should reflect these two different forms of development: adaptive learning may occur more or less continuously but individuals' transformative learning may follow an irregular rhythm and tempo across the life-course.

- individuals who do not engage in substantive upskilling or reskilling, for say five to ten years, through either formal CVET or learning through work, run the risk of being 'locked into' a particular way of working and are more vulnerable if there is a significant change in their job or their circumstances.

- the focus on formal qualifications as a proxy for learning and development does not do justice to the range, depth and variety of forms of learning while working. We should look to promote the

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[95] Brown, A., Rhodes, E. and Carter, R. (2004). Supporting learning in advanced supply systems in the automotive and aerospace industries. In H. Rainbird, A. Fuller and A. Munro (Eds.) Workplace Learning in Context. London: Routledge (pp 166 - 182).

latter and consider the most appropriate timing for validation of learning and the use of qualifications in this process.

- there is a need to provide support for people moving between sectors as well as offering development and progression within sectors.

- low skilled work is not a problem per se (and because of high replacement demand many people may 'pass through' such employment) - it is staying in work which lacks challenge or opportunities for development which can erode an individual's broader employability prospects over the long term. It is important to encourage and support people in seeking more challenging work, especially as this is rated as the most effective form of skill development by the low skilled in almost every country in Europe.[96]

- if we want more older people to remain engaged in the labour market – and one of Europe's key future challenges is an improved integration of older employees into the labour market – there is a need to encourage more people to consider mid-career change.

- people need support and guidance to develop coherent narratives of how their careers are developing.

- a challenging working and learning environment facilitates informal learning and many workers value challenges at work and this in turn produces a positive disposition towards learning. Not all work supplies such challenges, however, and thought should be given as to ways to improve the proportion of high quality jobs.

As a result of recent labour market changes, many individuals will experience a number of career transitions – perhaps moving jobs and/or employers several times during their working lives. Knowledge and understanding of these transitions provide powerful insights to the ways in which learning and qualifications can be used to support individual progression and development across the life-course. Two or three decades ago, many individuals leaving education tended to focus on making a successful career transition into a job in which they expected to be employed for most of their working lives. Perhaps they would change their employer, or follow a clear development pathway, but often they expected to stay within a broad occupational area. Now, for many, things are very different, but we know relatively little about how people make sense of how their learning and career evolve, and the balance between what is learned through engaging with challenging work, learning though interactions at work etc. and what is learned in more formal education and training 'episodes', and how these different types of experiences and attainments are or are not reflected in qualifications. In our sample there were many examples where achievement of mid-career qualifications played a significant role in individual development (particularly for those with relatively few qualifications and/or undertaking less demanding work), but the whole relationship between learning, qualifications and employment was much more nuanced for many others and the findings outlined here could usefully feed into discussions on the review of European policy in this area.

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[96] Brynin, M. and Longhi, S. (2007). The transformation of work? - Occupational change in Europe, D9.2.4 Publication of the Work organisation and restructuring in the knowledge society - WORKS project: Project number: CIT3-CT-2005-006193, Essex: ISER.

Lifelong learning (LLL) itself as a concept has different dimensions including skill growth, personal development and collaborative learning and LLL interventions may be targeted to achieve different ends. Much LLL policy has been concerned with skill development, especially in relation to upskilling, but increased emphasis is now being given to the importance of reskilling – developing new skills and updating existing ones in order to apply them in new contexts. This change is in line with the arguments presented here about the importance of individuals developing and recognising they have skill sets which can be applied in different contexts. LLL policy could also seek to strengthen learning networks and other collaborative forms of knowledge creation and sharing. Ideas for support for lifelong learning have often focused upon how individuals can access different types of offer (for example, work-based programmes to support basic skills development). In the light of the complexity of people's learning trajectories perhaps greater emphasis should be given to individual agency in which the effects of reflection, reflexivity and 'personal epistemologies' are taken into account.[97] Such an approach would see a key task of LLL policies being to encourage people to be more reflexive about individual and collective learning and development.

Self-learning and self-empowerment could act to increase individual capabilities to lead lives of their own choosing and also act as a motor to underpin change towards a more knowledge-based society.[98] LLL can be supported by a multiplicity of actions and interventions and while these include traditional actions such as those involved in formal CVT programmes, it is also the case that space exists for new forms, such as innovation support networks or action research aimed at both people empowerment and organisational development, and for existing forms, such as guidance and counselling, to be adapted to instantiate a more extensive reflective/reflexive underpinning of individual learning and development. The recommendations made here for tackling issues holding back skills development across the life-course have been framed primarily from a personal development perspective. However, it is apparent that these ideas could also play an important role in contributing to national and European economic recovery.[99] This view is reinforced when considering the European Commission (November 2009) Consultation document on the future 'EU 2020' strategy.[100] The focus of the document is upon empowering people in inclusive societies, while recognising that, in the post-crisis economy, many of

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[97] Personal epistemologies concern an individual's views about her or his own knowledge and learning. See for example Billett, S. (2009). Personal epistemologies, work and learning, Educational Research Review, 4, 3, 210-219.

[98] Sen, A. (1999) Development as Freedom. Oxford: Oxford University Press.

[99] The European Commission in its communication for the Spring Council 'Driving European recovery' (European Commission, 2009) outlined several elements that should help Member States design and implement appropriate and effective employment policies. Three key priorities were defined: maintaining employment, creating jobs and promoting mobility; upgrading skills and matching labour market needs; increasing access to employment. European Commission (2009). Driving European recovery. Communication for the Spring Council. Volume 1. Brussels, 4.3.2009. COM(2009) 114 final.
http://ec.europa.eu/commission_barroso/president/pdf/press_20090304_en.pdf

[100] European Commission (November 2009). Commission working document: Consultation on the future 'EU 2020' strategy. Brussels, 24.11.2009 COM(2009)647 final.
http://ec.europa.eu/dgs/secretariat_general/eu2020/docs/com_2009_647_en.pdf. Consultation site can be visited at: http://ec.europa.eu/eu2020/.

the jobs that have been destroyed will not be replaced. The intention is to effect a transformation of the EU into a smarter, greener, more competitive economy which will boost new job creation and reduce high levels of unemployment. But the argument is that 'while this transition is taking place, major efforts will be essential to prevent people falling out of the system, being excluded, and to ensure social cohesion. In fact, new patterns are emerging where there are several entries in and exits from the labour market during a working life, instead of the traditional sequence (education, work, and retirement), offering more opportunities to people. This requires a framework to organise these transitions and support them, possibly building on some of the measures adopted during the crisis (e.g. short time work combined with training). New jobs requiring new skills will be created. Transition between jobs, between training and jobs will have to be managed.' (p. 6).[101]

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[101] Ibid.

3.5. Job mobility and the importance of career guidance

The survey and the literature review highlight the importance of job mobility for individuals in a range of contexts in order to support upskilling, reskilling, employability and the integration of older workers for longer in the labour market. The literature review and survey also highlighted how individuals valued support in making career decisions and such support could help them develop resilience in coping with change.[102] This support could take various forms, but from a policy perspective access to advice and guidance services for adults at times of transition appears crucial in facilitating positive outcomes both for the individual and for the smooth functioning of the labour market. In an ideal world there would be universal access for people of all ages to a wide range of advice and guidance services.[103] However, in practice political choices have to be made about priorities and types of provision. Indications from the research literature are that differentiated needs-based services would be the most cost effective way of ensuring that the career development support needs of individuals are appropriate or relevant to particular phases and stages of their career trajectories.[104] For example, workers in undemanding jobs (low skilled employment), those wishing to change sectors or seeking to change intensity of work because of changed responsibilities, and older workers seeking a career change are all groups which could benefit from improved access to information, advice and guidance. Additionally, policy could give greater emphasis to the value of guidance in helping individuals articulate and possibly align goals, expectations, development strategies and outcomes in relation to learning and career development.

For workers feeling they need a new challenge after fifteen or twenty years working in the same occupation the economic case for giving them access to information, advice and guidance is very strong: many of the survey respondents who felt they needed a new challenge and changed careers in their forties and fifties felt as a consequence they were likely to remain in the labour market for longer – it often seemed to give people a new lease of life. Interestingly, examples included a number of people who left jobs in the public sector to become self-employed consultants while some other respondents moved into the health sector after working in other industries, for example, in engineering or ICT.

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[102] Cedefop (2008). Career development at work: A review of career guidance to support people in employment. Thessaloniki: CEDEFOP. http://www.cedefop.europa.eu/EN/Files/5183_en.pdf

[103] Cedefop (2008). From policy to practice. A systemic change to lifelong guidance in Europe. http://www.trainingvillage.gr/etv/Upload/Information_resources/Bookshop/505/5182_en.pdf. Also note the three main conclusions from the CEDEFOP (2008) review cited above with implications for the future development of career guidance policy and practice are: the lack of an effective strategy for providing career development support to the majority of the employed workforce; the increasing role for intermediary organisations in the provision of career development support; and the importance of individuals being able to acquire the skills necessary for successful career management. Cedefop (2008). Career development at work: A review of career guidance to support people in employment. Thessaloniki: CEDEFOP.

[104] Bimrose, J. (2009). Careers guidance, identity and development. Beyond Current Horizons: Technology, Children, Schools and Families. London: Futurelab & DCSF. http://www.beyondcurrenthorizons.org.uk/wp-content/uploads/ch4_bimrosejenny_carreersguidance20090116.pdf; Fairweather, N., Goven, D., & McGlynn, M. (2006). The Development of Careers Scotland's Service Delivery Framework. Centre for Guidance Studies, University of Derby. http://www.careers-scotland.org.uk/nmsruntime/saveasdialog.asp?lID=9847&sID=1164; Sweet, R. (2001). Career information, guidance and counselling services: Policy perspectives. Australian Journal of Career Development, 10(2), 11-14. http://www.oecd.org/dataoecd/36/29/2698179.pdf

Whatever the direction of travel respondents were likely to express satisfaction with their decision and their new position: here is a woman in her late fifties reflecting that she was working in the book trade in her early forties but had 'stayed in that sector for too long, fearful of unemployment again, although I was not happy; it was eleven years before I found my present career as a librarian, in which I am much happier.' [105] Indeed mid-career career reviews would be very useful for all.[106] Several respondents mentioned that they recognised they had not engaged in any substantive learning and development for some time, but felt that they could 'coast' through to (early) retirement. There were real dangers in this approach, whereby employability becomes dependent almost solely upon current job; these individuals were not reviewing their skills and not thinking in terms of their skill sets. Rather they were relying upon a restrained attachment to an occupational / organisational identity to see them through to retirement even if that identity may be vulnerable to change.

Access to information, advice and guidance can also be very important for the least well qualified. The Matthew effect means that those with least education are also likely to receive less training.[107] Not only are they often offered fewer training opportunities, but they are also less likely to engage in learning at work because their work offers a more restrictive learning environment.[108] Some workers in low skilled employment may feel less motivated to engage in substantive learning precisely because learning does not fit seamlessly alongside their work. However, findings from the survey also made it clear that some people in low skilled employment did have a strong commitment to learning and development and had achieved significant career progression – this was particularly likely if they had developed a clear 'career narrative' of how their career had been progressing and might develop in future.[109] Guidance could play a key role in this process in helping people establish such narratives. As previously argued, changing employment so you had more challenging work was a powerful driver of skills development for the low skilled, because learning at work based upon engagement with work keeps motivation to learn high. Attendance on formal VET programmes was also in such cases sometimes seen as a vehicle to improve competences (including in some cases basic skills development), not least because this could involve the recovery and rebuilding of individuals' fragile learning identities.[110]

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[105] In contrast, where a search for a new challenge was not met in the occupational sphere, respondents seemed to focus on other areas of their life and/or look forward to doing something different after (early) retirement.

[106] Individuals working in large organisations often have (annual) career reviews, but these reviews invariably focus on career progression within the organisation, although occasionally organisations encourage out-placement. The issue here, however, is access to impartial information, advice and guidance at time of the individual's choosing.

[107] The Matthew effect highlights the accumulation of advantage or disadvantage, based on Matthew (13;12): "For unto everyone that has, shall be given and he shall have abundance; but for him that hath not shall be taken away even that which he has".

[108] Fuller, A. and Unwin, L. (2006) 'Expansive and Restrictive Learning Environments', in Evans, K., Hodkinson, P., Rainbird, H. and Unwin, L. (eds) Improving Workplace Learning, London: Routledge.

[109]See section 2.3 on 'Interaction of personal agency and opportunity structures' for examples of this trend.

[110] Gallacher, J., Crossan, B., Field. J. and Merrill, B. (2002) Learning Careers and the Social Space: Exploring the Fragile Identities of Adult Returners in the New Further Education. International Journal of Lifelong Education, 21, 6, 493-509.

3.6. Richness and diversity of workplace learning: recognition, validation and consolidation of learning leading to further personal development

Our research emphasised the richness and diversity of workplace learning (learning through challenging work, learning through interaction, peer learning etc.), and one challenge is to ensure there are facilitating mechanisms like recognition and validation systems that could enable such learning to be recognised for the purposes of progression in education, training or employment. Equally, however, at different stages of their career individuals may need access to formal continuing vocational education and training programmes (and HE) which can consolidate such learning, enhance and extend the reach of their social and professional networks, offer fresh perspectives, and act as a platform for further individual development (including, in some cases, transformation of significant aspects of their life).[111]

At a European level a set of common principles on identifying and validating non-formal and informal learning were adopted by the Council of Ministers in 2004. More recently, CEDEFOP (2009) have published a set of European guidelines for validating non-formal and informal learning.[112] These guidelines provide expert advice for stakeholders at national and local levels with the intention to contribute to the development of diverse and high quality, cost-efficient validation approaches in Europe, thus supporting lifelong and life-wide learning. These processes emphasise the importance of making visible and valuing learning that takes place outside formal education and training institutions, for example at work, in leisure time activities and at home. Hence there is a wider remit than that being discussed here, which is mainly concerned with the recognition of learning while working which is not currently validated.[113]

In any case one major challenge is to develop cost-efficient approaches to validation. The right to have major developments in skills, knowledge and competences at work recognised is important, but the potential scale of this right is so huge it is important that this should be most explicitly encouraged at a point of transition or for a particular purpose. That is, it is important to recognise that having reached 'experienced worker standard' or having a portfolio of recognised achievements in many cases is sufficient for career development purposes. Additionally, many enterprises already have systems, such as competency frameworks or performance systems, to document the knowledge, skills and competences of employees. On the other hand, at times of transition or as part of a career plan an individual should have the right to validation processes – CEDEFOP (2009) underlines that the centre of

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[111] Entwistle, N. and Peterson E. (2004). Conceptions of learning and knowledge in higher education: Relationships with study behaviour and influences of learning environments, International Journal of Educational Research, 41, 6, 407-428; Brown, A. (2009). Higher skills development at work: A Commentary by the Teaching and Learning Research Programme. London: ESRC,TLRP.

[112] CEDEFOP (2009) European guidelines for validating non-formal and informal learning. Luxembourg: Office for Official Publications of the European Communities, 2009. http://www.cedefop.europa.eu/EN/Files/4054_en.pdf

[113] For example, validation should be seen as an integral part of the national qualifications system and a formative approach to assessment is important as it draws attention to the identification of knowledge, skills and wider competences as a crucial part of lifelong learning. Summative validation needs to have a clearly defined and unambiguous link to the standards used in the national qualifications system (or framework). Ibid.

the validation process should be the individual. Everyone should have access to the validation process and individuals themselves should have opportunities for deciding about the future direction of their process, with the process being supported by access to impartial information, advice and guidance.[114] One of the survey respondents offered an extended analysis of her experience of support for seeking a new career direction in France after completing a DESS (equivalent Master's) qualification in Euromédias (communication and media studies):

> I was able to do the DESS as a mature student on paid sabbatical from my company, thanks to the French 'Congé Individual de Formation' scheme whereby employers contribute to a training fund and are then reimbursed the cost of an employee's salary while he or she is absent on training. I see my career history as a steady upward progression, but with periods where this progression tends to slow down. When this happens I take steps to find new challenges and orientations. The most recent is what in France is called a 'Bilan de Compétences', which I carried out with a consultant in January / February 2009. The result of this was a new 'career plan' which involves further training (a second masters degree). However for financial and personal reasons I am not yet able to start this training. The current options are not compatible with my situation: a) full-time formal face to face training means I would have no income for a year, and so far have not found alternative funding for this; b) a distance or blended course (2 years) while continuing to work is too great a commitment - many people I know who have attempted this kind of training have dropped out or seen their personal lives suffer due to the huge time commitment it involves. In general the French organisations funding 'Congés Individuel de Formation' (paid sabbatical) do not recognise distance learning, nor training offered outside France (important in my case, as the course I want to do is in Belgium). However, I recently took a short (1-week) training course paid for by my employer which has opened up new avenues in my current job and which is enabling me to find new challenges, while at the same time looking for other ways in which to further my career.

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[114] ibid.

3.7. Perspectives for future research developments

Further qualitative developments could be put in place on the basis of what has already been achieved through the survey. There are two strands that could be usefully developed. First, new qualitative initiatives in this field should be based on a robust set of hypotheses regarding the agency/structure conditions of the groups and strata that are to be analysed. On the *structure* side it would be very important to carry out background studies (based on already existing updated documentation) concerning the situation in given sectors. (This is very important: what would be the meaning of studies on careers in sectors like fashion or design in Italy without taking into account that the representation of 'made in Italy' is itself changing shape?) On the *agency* side it would be fundamental to explore both individual dispositions and cultural attitudes in given sectors towards work, unemployment, work and spatial mobility, etc. An in depth understanding of specific working conditions is also needed (taking account of, for example, work organisation, opportunities for growth, organisational culture, communities of practice, experiential learning, etc.).

Secondly, it could be useful to design new research activities specifically looking at issues of job mobility, learning across the life-course and how to improve career development services in work environments (compare, for example, Cedefop report (2008) on this issue) and more specifically the job/career counseling activities which are often rather under-developed to support career development for people in work.[115]

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[115] Cedefop (2008). Career development at work: A review of career guidance to support people in employment. Thessaloniki: CEDEFOP. http://www.cedefop.europa.eu/EN/Files/5183_en.pdf

4.   Recommendations for CVT policy and practice.

4.1   Recommendations primarily for policy-makers:

1.   Broaden and deepen needs-based adult guidance provision

Access to advice and guidance services for adults at times of transition is useful both for individuals and for the smooth functioning of the labour market. However, indications from the research are that differentiated needs-based services would be the most cost effective way of ensuring that the career development support needs of individuals are appropriate or relevant to particular phases and stages of their career trajectories. For example, workers in undemanding jobs (low skilled employment), those wishing to change sectors or seeking to change intensity of work because of changed responsibilities, and older workers seeking a career change are all groups which could benefit from improved access to information, advice and guidance. Additionally, policy could give greater emphasis to the value of guidance in helping individuals articulate and possibly align goals, expectations, development strategies and outcomes in relation to learning and career development.

2.   Strengthen validation processes

The right for individuals to have major developments in their skills, knowledge and competences recognised is important, and the development of suitable facilitating mechanisms like recognition and validation systems enables such learning to be recognised for the purposes of progression in employment, training or employment. However, the potential scale of this right is so huge that it is important that there should be differentiated needs-based provision. For example, a relatively formal review may be appropriate at a point of transition or for a particular purpose. At other times, it may be sufficient for an individual's career development purposes to maintain a portfolio of recognised achievements without further formal accreditation. Equally, however, validation may be valuable in accessing formal continuing vocational education and training (and HE) programmes which can consolidate such learning whereby individuals can use such programmes as a platform for further individual development (and in some cases transformation of significant aspects of their life).

3.   Rebalance resource allocation towards CVT

By far the greater proportion of the overall VET budget is spent on initial VET. So even a small rebalancing towards continuing vocational training could expand opportunities for adult workers significantly.[116] There is particular value in some substantive CVT programmes such as Master's courses and Meister programmes in lifting workers to a new level of understanding and helping them adopt new ways of thinking and practising. In addition to personal development individuals often highlighted that

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[116] In a UK context Tom Schuller and David Watson estimate that 86% of lifelong learning expenditure goes on those aged 18 – 24. Hence even a small redistribution from the initial education and training resource of say 7% would have a major impact on resources for those aged over 25: releasing 50% more resources than are currently allocated. See Schuller, T. and Watson, D. (2009) Learning Through Life: Inquiry into the Future for Lifelong Learning. Leicester: NIACE. http://www.niace.org.uk/lifelonglearninginquiry/docs/IFLL-summary-english.pdf

the social networks they developed on such programmes were also valuable to them in relation to their further career development. In addition to personal development individuals often highlighted that the social networks they developed on such programmes were also valuable to them in relation to their further career development.[117] In other cases workers who had not engaged in formal learning for some time were encouraged by union learning representatives to re-engage with formal CVT in ways that transformed their attitudes towards learning.[118]

4.   Building capacity (numbers and quality) of those able to support the learning of others at work

Managers, supervisors, trainers, mentors, working coaches and 'key workers' may all have responsibilities to support the learning of others at work but may require support to do so effectively.[119]

5.   Re-engaging older workers in learning and development

Both our survey and the literature review show many older workers are committed to learning and development, so lack of engagement with learning is not a function of age per se.[120] It is partly about access to opportunities to learn and partly about motivation, so for those who have not engaged in learning for some time then involving them in identifying the type of learning with which they want to engage is critical. This approach underpins both the union learning provision and some state-funded CVT provision.[121] Older workers could also be encouraged to become coaches, mentors or trainers.

6.   Refocus public policy support for employees working in contexts where work is highly routinised

Quality of work remains a key factor in determining the extent of continuing vocational learning and skills development. Where individuals are engaged in challenging work they are likely to have opportunities for development in significant ways based upon learning while working. However, a company's field of operation, future horizons, product market strategy and organisation of work may all place constraints on the extent to which workplaces offer 'expansive learning environments.'[122] Where a company offers only limited opportunities for substantive learning while working efforts to encourage

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[117] Brown, A. (2009). Higher skills development at work: A Commentary by the Teaching and Learning Research Programme. London: ESRC, TLRP.

[118] Clough, B. (2009), Unions and Partnership: Union Learning Representatives and the Government's Skills Strategy, Unionlearn Working Paper 1, London. The success of such initiatives also links to the value which workers may place on informal sources of educational encouragement, guidance and support.

[119] Eraut, M., Alderton, J., Cole, G. & Senker, P. (2002) Learning from other people at work. In R Harrison, F. Reeve, A Hanson & J. Clarke (eds) Supporting lifelong learning, Vol 1 Perspectives on Learning, London: Routledge.

[120] Bimrose, J. & Brown, A. (2010). 'Older workers' transitions in work-related learning, careers and identities.' In K. Ecclestone, G. Biesta & M. Hughes (eds) Transitions and Learning Through the Lifecourse,Routledge: Abingdon.

[121] Clough, B. (2009), Unions and Partnership: Union Learning Representatives and the Government's Skills Strategy, Unionlearn Working Paper 1, London.

[122] Fuller, A. and Unwin, L. (2006) 'Expansive and Restrictive Learning Environments', in Evans, K., Hodkinson, P., Rainbird, H. and Unwin, L. (eds) Improving Workplace Learning, London: Routledge.

employers to offer additional training have had only limited success, not least because employers may think employees would then be more likely to leave.[123] Public policy should therefore instead perhaps focus upon giving workers entitlements to guidance and further learning opportunities.

7. Adapting recommendations to fit particular national contexts

The recommendations outlined so far have been deliberately framed in such a way as to be applicable at the level of principle across Europe as a whole. However, at the level of detailed implementation these recommendations have to be enacted in ways which are responsive to particular national contexts. For example, the most effective way to strengthen adult guidance and validation services will depend at least in part on the existing configuration of services. Similarly, the challenges faced by building capacity to support the learning of others at the workplace are very different between countries such as Germany where such capacity is already well developed and highly formalised as in the *Meister* system and somewhere such as the UK where support for workplace supervisors, mentors and assessors has been much more fragmented. Finally, different patterns of work organisation and sectoral configurations highlight further the need to adapt the implementation of recommendations to fit particular national contexts.

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[123] ESRC Society Today Press Release (November 2009) Workplace literacy schemes are too short to improve skills http://www.esrc.ac.uk/ESRCInfoCentre/PO/releases/2009/november/literacy.aspx

4.2 Recommendations primarily for practitioners:

Because of the importance of context it is less easy to make detailed recommendations for CVT practitioners, so perhaps it is more helpful to outline a range of factors to consider in seeking to enhance CVT provision. Practitioners, whether tutors, trainers or others supporting learning at work, might like to consider the following points of leverage in trying to engage more people in work-related learning:

- It is important to recognise the importance of the personal dimension in generating commitment to continuing learning. Many of the key elements that underpin effective learning and development at work relate to personal aspects such as supporting the development of self-understanding; coherence of career story; being reflexive about their approach to learning, effectiveness as learners and different ways in which they learn; acknowledging the diversity of their experiences; sense-making in relation to their own learning, career development and future aspirations; identifying what they have learned and achieved; recognition of importance of transformative dimension of continuing vocational learning in helping people change important aspects of their lives.

- it may be helpful to consider the idea of using key transition points to help target provision: research evidence on the value of support in helping establish successful transitions is clear; scaffolding support can provide individuals with more structure for taking advantage of learning opportunities; and also provide support to help individuals resituate their knowledge, skills and understanding in different contexts.[124]

- and to acknowledge the significance of networks in supporting skill development at work and encourage people to participate in personal networks; social networks; networks of interest; communities of practice etc. Technology can play an important role in facilitating some of these networks.[125]

Additionally, in constructing a model of how to support effective learning and development at work practitioners could consider utilising some of the following drivers of effective learning in CVT provision:

- A focus on individuals' competence development or career progression can be meaningful or personally rewarding, resulting, for example, in an increase in self-esteem, confidence as a learner or self-efficacy.

- Provision resonates with an individual's motivation, where the individual feels a clear drive for achievement and development.

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[124] Eraut, M., Maillardet, F., Miller, C., Steadman, S., Ali, A., Blackman, C. and Furner, J. (2004). Learning in the professional workplace: relationships between learning factors and contextual factors, AERA Conference Paper, San Diego. http://www.tlrp.org/dspace/retrieve/93/AERA_2004.pdf

[125] Brown, A. (2009). Higher skills development at work: A Commentary by the Teaching and Learning Research Programme. London: ESRC, TLRP.

- Active engagement of participants can be a powerful means of challenging or extending current ideas, assumptions, attitudes, constructs, knowledge and understanding).

- Reflection upon experience (and prior learning) can act as a driver of further learning.

- Collaboration between learners can be rewarding: for example, where learners engaged in a collective enterprise (such as performance improvement activities or as members of a study group) or even when learning activity is predominantly individual drawing on the support of significant others in other ways can help individuals consolidate their learning.

- Engagement with particular ways of thinking and practising (including how individuals are connected to particular knowledge cultures associated with an occupation) can include development of particular approaches to critical analysis, evaluation, problem-solving etc.

- Links to vocational progression can be important, either as part of an established progression pathway or through establishing an enhanced personal base from which to seek further career development – for example, through the completion of a substantive further qualification.

- Provision aligned to an individual's career orientation, career goals or which is helpful in developing skills which are useful for career management purposes can have a motivating effect as they contribute to an individual's clear sense of vocational attachment or 'becoming'.

- Provision which provides opportunities for a significant shift in personal perspective (whether values-based or interest-based).

- Provision incorporates timely feedback to learners.

- Provision helps individuals develop greater opportunity awareness, especially as much continuing vocational learning is at least partly dependent upon an individual being aware of and then taking advantage of opportunities for learning and development.

- Provision helps individuals' develop judgement (for example in making choices in relation to values, goals, plans and aspirations); make decisions; self-motivate; and display resilience.

4.3   Recommendations for everyone with an interest in CVT:

1.   Recognise the complementarity of different forms of learning across the life-course

CVT development should recognise the complementarity of different forms of learning in support of skill development at work. The research findings provided a strong endorsement for the complementarity of learning through engaging with challenging work and institutional learning which is able to help individuals look beyond their immediate context. Such complementary learning has of course underpinned many apprenticeship systems, sandwich degrees and much professional training. However, the survey produced many examples of the value for individuals when they applied such modes of alternance learning across the life-course as a whole: that is, where learning was predominantly work-based but with periods of institutional learning interspersed. Learning through challenging work alone may be insufficient and other forms of learning may be necessary to help the employee make a quantum leap in their broader understanding of a particular field.

2.   Enhancing individuals' capability to exercise greater control over their own lives

CVT development could also be linked to the notion developed by Amartya Sen of the importance of developing individual capabilities in a broader sense. Applying this idea to skill development at work the ultimate goal is to increase the freedom for individuals to exercise greater control over their own lives (in relation to what they value being or doing): this includes expanding opportunities to access knowledge, meaningful work, significant relationships and exercise self-direction. Other capabilities (ways of being and doing) could benefit from engagement with other forms of education and training.[126]

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[126] Sen, A. (1999) Development as Freedom. Oxford: Oxford University Press.