

PUTTING SKILLS TO WORK

It's not so much the WHAT or even the WHY, but HOW...*

Final report of a study supported by

The Commercial Education Trust

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Fuller Case Studies are available in a separate document

*Title of study adapted from Evans, K., Guile, D. & Harris, J. (October 2008) *Putting Knowledge to Work: integrating work-based and subject-based knowledge in intermediate-level qualifications and workforce upskilling*. Teaching and Learning Research Briefing/E.S.R.C.; and incorporating a question posed by the UK Commission for Employment and Skills (February 2009) in *The Employability Challenge*, page 9

1. EXECUTIVE SUMMARY

The Commercial Education Trust (CET) has a vision of society in which people have the know-how, skills and opportunity to succeed in work, thereby creating a thriving UK economy. It supports sustainable wealth creation through making a positive contribution to effective commercial education that seeks to: equip people with the skills and commercial awareness to grow, develop and lead in business; embed the means by which people can apply their learning to work; encourage people to be enterprising and innovative in their approach to business.

CET funded this study which ran from November 2016 to December 2017 to: identify how programmes that incorporate commercial education can develop the skills and the know-how necessary for young adults to succeed at work; explore the feasibility of evaluating such programmes, including tracking participants into the labour market.

The purpose of this report is to stimulate debate on issues relating to education-to-work transitions and share some examples of effective practice in preparing young adults for 'putting skills to work'. Following review, it was updated in June 2018.

1.1 The problem

An initial scan of the literature relating to education-to-work transitions indicated that there has been a long history of identifying skills needed to perform well in the labour market. Various government initiatives and programmes in compulsory and post-compulsory education have sought to prepare young adults for work through, for example, developing employability and enterprise skills. However, over the same period, employers have been persistent in voicing concern that those leaving education are not 'work ready': they are said to lack the skills and 'know how' required.

1.2 Approach to the study

In exploring the gap that some perceive to exist between the skills young people develop in education and employer demands, the study explored: what types of skills are commonly identified as important in the workplace and why they are important; how these skills can be developed to enable young adults to apply them effectively in new contexts; and the feasibility of finding out what interventions can make a difference.

In addressing these questions, the study conducted a further literature review and developed some case studies of practice through a workshop and semi-structured telephone interviews with CET grantees from six organisations that manage programmes which incorporate commercial education. An online survey of leavers from three of these programmes was also piloted by Education and Employers Research. A Business Advisory Group was convened by CET to gain the perspectives of employers and entrepreneurs from different sectors and examples of practice from the workplace. Contributions were also made by academics who have published widely on related topics.

Data were analysed using a framework developed by Evans *et al* (October 2008) during CET-supported research to explore how different forms of knowledge, including skills, are contextualised and re-contextualised by people as they move between different sites of learning. The framework has provided the structure for reporting findings in relation to: programme design; teaching and facilitating environments; and workplace environments.

1.3 Key findings from the study

Findings from the literature review suggested that although young adults are ‘collectively more qualified than ever, they face struggles to succeed in the early labour market due to its complexity, increased competition for entry-level employment and the changing requirements of employers’. Young people need to ‘navigate ever-more fractured and prolonged transitions’ which can involve ‘u-turns, detours and moving in and out of work’, a situation that can be exacerbated by variability in the quality of careers information and guidance. Young adults’ experience of the transition to work can be ‘heavily dependent on where they live, their school and socio-economic background’.

At the recruitment stage, it was reported that there can be a mismatch between the expectations of employers and those of young adults. This mismatch can be ‘made worse by the difficulty some young applicants have in evaluating their own capabilities and articulating the skills they possess in relation to the job, and lack of significant work experience which can help employers assess their suitability’. Some employers may be ‘unrealistic about what young people can offer in terms of their experience, capabilities and levels of confidence’. Recruiters may demand higher-level qualifications and levels of performance than needed to do the job which can result in potential being untapped.

Policy documents revealed a stream of government interventions over the years to improve young people’s preparation for work. Recent examples include: establishment of the Careers and Enterprise Company; the Careers Strategy and statutory guidance on excellence in careers provision; reform of technical education; the Teaching Excellence Framework for Higher Education. Destinations of leavers from schools, colleges and universities is a headline performance measure and data held by different government departments are being made available to gain a better understanding of how young people move through education into work.

The Industrial Strategy Commission recommended that: ‘ensuring better utilisation of people’s skills should be core to a new strategy’. Workers able to ‘better use their skills are said to be more likely to have greater job satisfaction and benefit employers by being more productive and innovative’. However, some commentators have observed that ‘with the majority of UK research and policy initiatives largely focusing on skills demand and boosting supply, this has left a gap in terms of research and interventions to address the need to improve the utilisation of skills in workplaces’.

What skills are considered important and why

It is argued that young adults increasingly need personal, people, creative and problem-solving skills to access the labour market, meet its changing demands and take advantage of new flexibilities in patterns of work; ‘self-employment, freelance and temporary work are part of a significant trend’. As well as a foundation of basic skills in literacy, numeracy and ICT, in the future it is suggested there will be ‘increased demand for data-based decision-making, personal and social skills, and cognitive skills such as creativity, logical reasoning and problem sensitivity’. These generic-type skills are said to have wider applicability and a longer shelf-life than job-specific technical or practical skills.

Although some contest all the claims made for them, there is some evidence in the literature to indicate that generic-type skills can benefit both individuals and the UK by, for example, contributing to increased life-time earnings (primarily of those from higher socio-economic groups) and growth in Gross Value Added to the UK economy.

How skills can be developed to facilitate their application in new contexts

To ‘put skills to work’ is not ‘unproblematic, a simple matter of transfer, but a continuous, transformative process’ which is dependent on collaboration between learning partners. It is the ‘way these skills are taught and learnt, how they are contextualised, that are crucial’. Young people need to develop know-how, meta-cognitive strategies, to be able to re-contextualise skills: adapt their skills to suit different situations, tasks and problems; and ‘career adaptability skill’ to manage transitions along their career pathways.

Common features of effective practice in the case study programmes include:

- ensuring teachers understand the nature of skills and are equipped to develop and assess them
- strong involvement of business in designing programmes and bringing the realities of the world of work into the classroom by, for example, providing authentic materials and problems
- elements of commercial education to provide insights into business, trade and commerce, and develop learners' ability to make judgements on economic issues
- making skills, and their relevance to work, explicit to learners through, for example, skills-specific learning objectives, skills discussions and co-teaching and mentoring by business partners
- a variety of teaching and learning approaches (in particular, 'learning by doing') that allow for gradual release of responsibility from 'teacher' to learner in contextualising skills across subject areas and wider activities, including direct experience of workplace environments
- encouraging learners to engage in self-assessment, reviews and reflection, with feedback to inform further development; and validation of learners' skills assessment by teachers and business partners.

Opportunities to tackle projects or multi-disciplinary problems in real work or realistic simulated environments in which learners need to adapt to unpredictable, changing circumstances and pressures, do presentations and work in teams, appear to be particularly motivating and effective.

The feasibility of finding out what interventions can make a difference

The case study organisations have shown that it is feasible to evaluate programmes during and shortly after their completion through, for example, before and after skills assessments and surveys. Evaluations are more informative where they involve teachers and business partners as well as learners in skills assessment and consider wider factors that impact on the effectiveness of such programmes, to inform improvements. But, the full extent to which interventions are achieving their objectives may not become apparent until well after participants have left the programme.

The pilot survey gave some indication that programmes undertaken by respondents had been successful in raising their awareness of the skills needed both to gain and perform well at work. But, it can be more problematic for organisations to track programme participants for an extended period beyond school or university. Resources need to be available to sustain efforts over time and achieve reasonable response rates to surveys. It helps to brief participants before they leave the programme on reasons for tracking and gain their consent to surveys.

There is some evidence that centralised systems and a strategic approach to data management can help in keeping workloads manageable and in promoting and recognising, in a consistent way, skill development over time. Building an alumni network can be effective in encouraging 'buy-in' and providing reasons for keeping in touch, as well as a potential source of business volunteers.

1.4 Conclusions

It is acknowledged that the limited scale of the study has precluded detailed examination of all the factors that can impact on education-to-work transitions. It has focused on the generic skills commonly required across occupational sectors. Nevertheless, in reviewing the literature, and re-visiting CET-supported research on 'putting knowledge to work' (Evans *et al*, 2008) and some examples of current programmes and workplace practices, it does offer pointers for taking forward the work.

Although there is no one definitive list, there are indications as to WHAT types of skills should be developed and WHY they are important. But there has been less policy attention given to HOW such skills can be better recognised and utilised in the workplace. For young adults to 'put skills to work' the quality and nature of the learning process is important in developing meta-cognitive strategies, career adaptability skill and understanding of work environments. Appropriate recruitment and HR practices in the workplace, and support for those in other forms of work, are also essential to tap into young adults' potential and make full use of their skills.

There are examples of approaches that education providers can use, with support from business partners, to help young adults learn how to 'put skills to work' in new ways. Alongside skills, commercial education can provide insights into business practices, trade and commerce, and develop learners' ability to make judgements on issues with an economic dimension. Work-based examples of practice from the CET Business Advisory Group suggest that some businesses are willing to adapt their recruitment and HR practices to better identify and match young applicants' capabilities in relation to actual job requirements, and help new recruits settle into the workplace and reach their full potential.

However, while effective practice does exist, and there has been no shortage of government policy initiatives to increase the value placed on skills and better prepare young adults for work, there is variation in access to quality provision across the UK. This is often exacerbated by deficiencies in information available to inform career decision-making. Not all young people have the same opportunities. While not easy to arrange in some localities, lack of appropriately crafted and managed on-site experiences of work, especially that available pre-16, can be a serious gap in provision. This is a missed opportunity for young people to gain an understanding of workplace realities and, by talking from experience when applying for jobs, help employers identify what they can offer.

Destinations are a key performance measure for educational institutions, but while data are collected and now more readily available, it is still early days in making full use of these data, and Local Labour Market Intelligence, to inform programme design and careers decision-making. There have been relatively few longitudinal studies that include a specific focus on young adults' use of skills along different career pathways, or evaluations of interventions that can make a difference.

The overall conclusion is that in a period which sees the launch by the Government of its new industrial strategy, with skills plans and opportunities for innovation at a local level, and the imminence of Brexit, effective commercial education will be increasingly important. There is an opportunity to adopt a fresh approach to engaging the interest and stimulating the joint action of stakeholders involved in education-to-work transitions in tackling some of the issues highlighted in this report, for the potential benefit of individuals, businesses and the UK.

1.5 Recommendations

In reflecting on findings, it is suggested that a shift in thinking is required from a primary focus on skills supply to serious consideration of how skills can be best utilised in workplaces and the inter-relationships required for a co-ordinated and partnership approach to supporting young adults in preparing for and making transitions between education and work. Such support is needed in education from an early stage and continue well into young adults' career, together with longitudinal studies to identify what interventions can really make a difference in the longer term.

A co-ordinated approach is needed to 'build skills for work, encourage firms to invest in skills and ensure skills are fully used (through better activation and matching of skills)'; and to provide easier access to appropriate professional development for workers who are self-employed, freelance or temporary.

It is recommended that:

Employers who do not already do so are invited to:

- review recruitment and HR practices to help ensure young adults' potential can be identified and skills better matched to job requirements and foster a culture, with leadership, encouragement, opportunity and support to enable new recruits to effectively utilise their skills; sign up to the cross-party Social Mobility Pledge to support disadvantaged people
- engage with education providers for mutual benefit, to: optimise young adults' chances of success in the competition for employment by developing skills and providing insights into how recruitments processes and workplaces operate; provide professional development for

employees through working with young people; offer teachers opportunities to develop/update their knowledge of workplace practices, job opportunities and career pathways.

Education providers who do not already do so are invited to:

- develop a whole organisation approach that promotes a culture that values skills and learning about business, trade and commerce, with support for teachers in making skills explicit and developing students' ability to develop and apply skills across the curriculum and wider activities
- monitor and keep under review how they are ensuring **all** their students have opportunities from an early stage of their education for developing skills and other capabilities required to meet the challenges of different forms of work, building on their passions and interests
- ensure teachers can access resources and professional development, including experience of workplaces, so they can lead skills development from a position of real understanding of skills and how different types of businesses operate, and keep up to date with current practices
- ensure teachers are data capable and equipped with resources and skills to evaluate the effectiveness of their interventions, and optimise use of national data and LMI
- build and sustain effective relationships with business partners and alumni who can support commercial education by bringing the world of work into classrooms to show the relevance of skills and subject learning to work and providing direct experiences of workplaces.

Government and its agencies, working in partnership could support key stakeholders by using opportunities presented by the Industrial Skills Strategy to sustain a focused, long-term and co-ordinated approach to skills policy and initiatives, including, for example:

- facilitating consistency in the collection, comparability and sharing of data, including aligning skills accountability and quality measures; and disseminating and rewarding effective practice to inform and stimulate improvements to the skills system
- providing incentives for leadership and innovation at a local level, underpinned by robust Local Labour Market Intelligence, to build relationships between key stakeholders that can: support better skills utilisation in the workplace; address gaps and improve access to opportunities for **all** young people, including the self-employed/freelancers/temporary workers, to learn about business, trade and commerce, and develop the required skills
- addressing with some urgency the inequality of access to quality work experience, including such experience pre-16 and teacher work placements
- ensuring teachers' initial training and continuing professional development include a strong focus on teaching and learning for skills development and a consistent approach is adopted by support agencies in training the trainers and cascading effective practice to teachers
- commissioning, funding and disseminating research on skills utilisation, including longitudinal studies, as a matter of priority.

Suggestions for further research

Ideally the inter-relationships between skills supply, demand and utilisation in one or more local networks of educational institutions and businesses should be researched drawing, for example, on the work of Evans, Guile & Harris (October 2008), Anderson & Warhurst (2012), Keep (August 2016), and Green *et al* (2017). This should include tracking young adults in this network in moving from education along their different career pathways, to collect specific data on what and how skills are being utilised in the workplace and the factors and conditions that support this. Findings should be shared and feed into policy development work to encourage wider application of lessons learned.

Smaller-scale studies could be conducted in workplaces that have recruited students from local schools, colleges or university to explore the education, job application and workplace experiences of these young adults in terms of their skills development and utilisation, and employer views and practices. Chambers of Commerce, Local Enterprise Partnerships and other business umbrella organisations could be approached to help identify workplaces and disseminate effective practice.

2. INTRODUCTION

The mission of the Commercial Education Trust (CET) is to advance ways in which commercial education can contribute to sustainable wealth creation: equip people with the skills, know-how and commercial awareness necessary to succeed in work; provide the means to be embedded for people to apply their learning to work; enable people to be enterprising and innovative in their approach, and grow, develop and lead in business.

This study was supported by CET to explore: how programmes that incorporate commercial education can develop the skills and know-how necessary for young adults to succeed at work; and the feasibility of evaluating such programmes. It ran from November 2016 to December 2017.

The objectives of the study were to:

- identify the skills and know-how necessary to succeed in the world of work, including business perspectives on what is required
- identify how commercial education can help individuals apply these skills and know-how in new contexts
- explore practical evaluation methods, including tracking project participants to see whether commercial education has equipped them to move successfully from education into work.

The purpose of this report is to stimulate debate on issues relating to education-to-work transitions and share some examples of effective practice in preparing young adults for 'putting skills to work'. Following review, it was updated in June 2018.

2.1 Approach to the Study

An initial scan of the literature relating to education-to-work transitions indicated that there has been a long history of identifying skills needed to perform well in the labour market. Various government initiatives and programmes in compulsory and post-compulsory education have sought to prepare young adults for work through, for example, developing employability and enterprise skills. However, over the same period, employers have been persistent in voicing concern that those leaving education are not 'work ready': they are said to lack the skills and know-how required.

In exploring the gap that some perceive to exist between the skills young people develop in education and employer demands, the study explored: **what** types of skills are commonly identified as important in the workplace and **why** they are important; **how** these skills can be developed to enable young adults to apply them effectively in new contexts.

It has focused primarily on generic skills¹. These skills were reported as becoming 'more critical in a dynamic labour market as technological and structural economic change takes shape' (Painter & Shafique, 2017²). They are central to commercial education alongside other skills, knowledge and understanding of business, trade and commerce.

¹ These skills are those most commonly found across occupations and are variously labelled, for example: core, key, common, essential, employability, enterprise, transferable or 'soft' skills

² Painter, A. & Shafique, A. (2017) *Cities for Learning in the UK. Prospectus*. London: RSA & Digitalme

2.2 Study methods

The study adopted a mixed method approach including:

- a review of the literature to put the study into a wider context
- development of case studies of practice informed by a workshop and semi-structured telephone interviews with personnel who volunteered to contribute from 6 CET projects that incorporate commercial education into their programmes
- an online survey that was piloted to find out the views of programme leavers on the skills they had developed, those they felt to be important in gaining and performing well at work and how skills were being used in the workplace. Email invitations to participate in the survey, with links, were sent out to 573 young adults who had participated in 3 case study programmes while at school or in higher education.

It was not within the scope of the study to visit workplaces. However, a business advisory group was convened by CET to provide business perspectives and examples of practice. Its members included those with experience of working in large corporate organisations, small and medium enterprises, or as entrepreneurs, in occupational sectors that included: Banking/Finance, Compliance, Construction, Creative & Cultural, Energy, Engineering/ Manufacturing, Information & Communication Technologies, Property Management.

Other expert contributions were sought from Professor Karen Evans, UCL and Professor Prue Huddleston, University of Warwick, both of whom have published widely on related research. Dr Elnaz Kashfepakdel and Jordan Rehill, Education and Employers Research, were commissioned to design and report findings from the online survey.

2.3 Analysis of data and reporting of findings

Data were analysed using a framework developed by Evans *et al* (October 2008³) during research supported by CET. This research focused on different forms of knowledge and the ways in which these are 'contextualised' and 're-contextualised' as people move between different sites of learning in colleges and workplaces.

The framework has been used in analysis and the reporting of findings in relation to:

- the programme design environment (content re-contextualisation): the extent to which programmes were designed to integrate work-based skills and knowledge in their content
- the teaching and facilitating environment (pedagogical re-contextualisation): the strategies, methods and work-related activities used to help learners develop know-how alongside their skills and learn how to apply them in new contexts
- the workplace environment (workplace re-contextualisation): the extent to which young adults were being supported in workplaces to put their skills to work
- learners themselves (learner re-contextualisation): the processes for contextualising their skills to suit new situations, different tasks and problems.

The methods used by the case study organisations to evaluate their programmes and track leavers were also analysed, to assess the feasibility of evaluating the extent to which commercial education can support successful moves from education into work.

3. STUDY FINDINGS

3.1 The Problem

Young people as a group are four times more likely to be unemployed than older groups, many struggling with the transition between education and employment. Employers regularly voice concerns over the lack of work readiness and young people themselves have [said]...that the gaps between education and employment are daunting. In terms of social mobility, young people from disadvantaged backgrounds are more likely to be unemployed, without the skills they need to achieve the same outcomes as their peers.

This is not a new challenge, but one that has been recognised for many years and the current approaches to solving this problem do not seem to be working, at least not universally so that all young people can benefit.

(Youth Employment UK, June 2017: 2³)

3.1.1 The problem explored

Education-to-work transition is a major focus for government policy, together with a continuing interest in skills. For example:

- preparing young people for adult life is a specific objective of the Department for Education: it wants young people to develop the necessary 'skills and character, ...to leave school ready to succeed in modern Britain, to be able to get a great job and to contribute to the security of our country's economy' (DfE, updated August 2016⁴). The move comes 'amid concerns from business leaders that too many children leave school with a string of academic qualifications but without many of the "soft skills" needed to thrive in adult life'
- the Post-16 Skills Plan (BIS/DfE, July 2016⁵) recognises the need for many more people with the 'skills, knowledge and behaviours necessary for skilled employment in their chosen field, as well as the transferable skills that are needed in any job such as good literacy and numeracy, and digital skills'
- following recommendations by the Sainsbury Panel⁶, the Government's ambition is to offer young people: a 'reformed technical education option', with 'clearly identified routes into work that students can easily understand and that enable them to make informed decisions about their futures' (Justine Greening, 14 November, 2016⁷)
- the 'Teaching Excellence Framework for Higher Education' is intended, in part, to ensure a 'better match of graduate skills with the needs of employers and the economy' (BIS, May 2016⁸)
- destinations of leavers from schools, colleges and universities is a headline performance measure (e.g. DfE, August 2016⁹); and information held by different government departments is beginning to be shared and used to 'get a better understanding of how young people move through education and into work' (DfE, updated August 2016).

³ Youth Employment UK (June 2017) *The Youth Employment UK Employability Review*

⁴ Department for Education (updated August 2016) *Single Departmental Plan 2015-2020*

⁵ Department for Business, Innovation & Skills/Department for Education (July 2016) *Post-16 Skills Plan*

⁶ Department for Business, Innovation & Skills/Department for Education (April 2016) *The Report of the Independent Panel on Technical Education* (known as the Sainsbury Review). London: BIS

⁷ Justine Greening, Secretary of State for Education, *Debate on the Technical and Further Education Bill*, 14 November 2016

⁸ Department for Business, Innovation & Skills (May 2016) *Teaching Excellence Framework: Technical Consultation for Year Two*

⁹ Department for Education (August 2016) *School and College Performance Tables, Statement of Intent*. London: DfE

There have also been various programmes over the years in compulsory and post-compulsory education that have sought to prepare young people for work through, for example, developing employability and enterprise skills. Many schools, colleges and universities offer such programmes, providing rich and motivating learning experiences, with opportunities for employer engagement in the process and experiences of work.

But...

...despite government initiatives and such programmes, employers continue to highlight difficulty in recruiting young adults with the necessary skills and know-how to be 'work-ready'. For example:

- 88% of firms surveyed by the British Chambers of Commerce (2014¹⁰) felt that school leavers were unprepared for work; 54% felt the same about graduates. This was thought to be mainly due to a lack of: work experience; and soft skills, such as communication, teamwork and resilience
- half (50.3%) of employers surveyed by the Ernest Young Foundation (June 2017¹¹) were reported as believing young people do not have the core, non-technical skills they need for entry level jobs when they leave education. They also were said to lack knowledge about the job market and the diversity of routes into work, all of which undermined their ambition
- AGR (2017¹²) reported that employers 'still did not think that graduates generally have the essential workplace skills they need when they are first hired – they struggle with teamwork and problem solving'.

The inference is that education providers are not adequately preparing young adults for work, not teaching them the skills needed in the workplace. However, a variety of other factors can impact on young adults' ability to move successfully into work, including individual motivations and socio-economic background, the extent to which there is access to, and incentives to provide, high quality programmes and careers guidance, the complexity of the labour market and what employers themselves do in recruiting young people and supporting them in the workplace.

Inequality of access to provision

Young adults' experience of the transition to work can be 'inconsistent and heavily dependent on where they live, their school and socio-economic background' (Ernest Young Foundation/CMI, 2016:912F¹³). Programmes that prepare young people for work can be 'one-off events, delivered at the margins of the curriculum, and reliant on keen, enthused individuals rather than clear policy support' (RSA/RBS, 2013:13F¹⁴). The means for young people to gain the skills needed to succeed at work may not be 'embedded in an effective way alongside or within the curriculum' or available to all (House of Lords Select Committee on Social Mobility, April 2016:14F¹⁵). For example, since withdrawal in 2015 (recommended by Wolf¹⁶) of the statutory requirement for schools to make provision for work-related learning for *all* students at Key Stage 4 (aged 14-16), the extent to which the curriculum is used to prepare pre-16 pupils for the world of work has been 'largely dependent on whether school leaders consider it to be a priority' (Ofsted, November 2016:16F¹⁷).

¹⁰ The British Chambers of Commerce (2014) *Workforce Survey 2014* (2,885 responses from businesses across the UK)

¹¹ Ernest Young Foundation (June 2017) *A Framework for Success: Connecting Young People with Employers from School to Work* (survey of 500 SMEs)

¹² Association of Graduate Recruiters (2017) *AGR Development Survey 2017*. (Based on 174 employer responses from over 18 sectors with 18,227 graduate hires). AGR is now renamed as Institute of Student Employers

¹³ Ernest Young Foundation/ Chartered Management Institute (CMI), (2016) *An Age of Uncertainty*

¹⁴ The Royal Society of Arts/Royal Bank of Scotland (2013) *Manifesto for Youth Enterprise. Making the UK a better place for young people to start up a business*. London: RSA

¹⁵ House of Lord's Select Committee on Social Mobility (April 2016) *Overlooked and left behind: improving the transition from school to work for the majority of young people. Report of session 2015-16*. London: The Stationery Office

¹⁶ Department for Education (February 2015) *The Wolf Report: recommendations and final progress report*. DfE

¹⁷ Office for Standards in Education, Children's Services and Skills (November 2016) *Getting Ready for Work*. Manchester: Ofsted

There is evidence that work experience placements during undergraduate study are highly effective in helping students in their future careers (e.g. McCulloch, 2013¹⁸). Work experience for 16-to 19-year olds is a government priority' (DfE, December 2017b¹⁹). However, opportunities for work experience pre-16 are reducing:

'Work experience is essential. It helps young people to develop the attributes they need to succeed in the workplace. Yet not much is available at age 14– 16, and even less is available in rural areas or for students studying at lower levels. Young people are often expected to arrange their own placement and tend to get any work experience through their informal networks. Their experience is therefore limited to what is available through those networks. This means that within the current system aspirations remain fixed. Upwards social mobility is limited.'

(House of Lords Select Committee on Social Mobility, April 2016: 80).

Furthermore, the quality of careers provision across the country has been reported as variable, with 'students from disadvantaged groups, and those who are unsure of their aspirations, ...shown to be the least likely to receive careers guidance' (e.g. DfE, December 2017a; The House of Lords Select Committee on Social Mobility, April 2016).

In a drive to improve provision, the Government has funded the Careers and Enterprise Company (CEC²⁰) to be the 'strategic coordinating function for employers, schools, colleges, funders and providers in providing high impact careers and enterprise support to young people (aged 12-18)'. The Department for Education has now published a Careers strategy to deliver significant improvements to careers education, information, advice and guidance for people of all ages:

For young people, the aim is to ensure they: 'understand the full range of opportunities available to them, learn from employers about work and the skills that are valued in the workplace, and have first-hand experiences of the workplace'...For example, secondary schools should: 'offer every young person at least seven encounters with employers during their education, with at least one encounter taking place each year from years 7-13' [age 11-18], supported by the CEC's network of Enterprise Coordinators and Advisers and their Investment Funds...'

(DfE, December 2017a: 10-15²¹)

Statutory guidance (DfE, January 2018²²) sets out how schools can meet all eight of the *Gatsby Benchmarks* (2014) that define excellence in careers provision, one of which concerns 'experiences of workplaces': 'every young person should have first-hand experiences of the workplace through work visits, work shadowing and/or work experience to help their exploration of career opportunities and expand their networks'.

'Work experience/internships can work – can help young people become more realistic about career options, identify jobs that suit their skills... although some businesses are put off by the bureaucracy involved in being compliant with legal and company regulations'.... 'There is a need to increase the supply of work experience – a day a week, day a month – for individuals to learn about working cultures and work with employers to encourage them to take responsibility for addressing the problem of mismatch'... 'Internships are for graduates, but we also need to engage young people at an earlier stage in the journey of self-discovery...a pipeline...'

(Members of the CET Business Advisory Group)

¹⁸ McCulloch, A. (2013) *Learning from Futuretrack: The impact of work experiences on higher education student outcomes*. Department for Business, Innovation and Skills, London

¹⁹ Department for Education (December 2017b) *16-18 Accountability measures: technical guide. For measures in 2017 and 2018*

²⁰ The Careers and Enterprise Company: <https://www.careersandenterprise.co.uk/> (Accessed 6 November 2017)

²¹ Department for Education (December 2017a) *Careers Strategy: making the most of everyone's skills and talents*

²² Department for Education (January 2018) *Careers guidance and access for education and training providers Statutory guidance for governing bodies, school leaders and school staff*; Holman, J. (2014) *Good Career Guidance*. Gatsby Charitable Foundation. See also: The Careers & Enterprise Company (2017) *Careers & Enterprise Provision in England's Schools: State of the Nation 2017*. London: CEC

Challenges in entering the labour market

Kashefpakdel & Percy (2016²³) report that: ‘many scholars and policy-makers believe that changes in the education system and labour market over recent decades have created a complex world for young people’. ‘Collectively, they have never left education more highly qualified, with more years of schooling behind them and yet they are facing unprecedented struggles to succeed in the early labour market’ (Mann *et al*, January 2017²⁴). They are having to ‘navigate ever more fractured transitions from education to sustained employment’ resulting from three key changes:

‘...the growing complexity of the labour market; increased competition for entry level employment; changing requirements of employers who increasingly seek new employees well placed to be personally effective in applying knowledge and skills in changing situations’.

(Mann & Huddleston, 2016: 4²⁵)

Of course, employers are not a homogeneous group and their demands can depend on the size of company, the nature of the occupational sector/s in which they operate, and the type and level of job being recruited for. While employers may ‘blame skills shortages as a key reason for why they are unable to find workers, other factors such as job quality, wages or hiring processes may be the reason. For example, Cedefop (2015) estimates that between half and two-thirds of EU firms reporting difficulties... face this challenge because they are putting forward unattractive job offers or display a lack of commitment to talent management’ (OECD/ILO, 2017: 28²⁶).

Employers’ recruitment practices can put some young adults at a disadvantage. In making judgements about the supply of skills, for example, witnesses informing the House of Commons Work and Pensions Committee (March 2017) suggested that some employers may have unrealistic expectations of young people. There can be a ‘mismatch between their expectations and young people’s experience, capabilities and confidence levels’.

During the recruitment process, this mismatch can be made worse by the fact that:

‘Young people can struggle to “sell” themselves to employers at application and interview. Employers can also find it difficult to assess the suitability of young applicants who do not have significant work experience to refer to. This can lead to an inaccurate impression that they have little to offer’.

(House of Commons Work and Pensions Committee, March 2017: 30²⁷)

Recruitment practices can disadvantage those in the middle and at the bottom end of the labour market:

‘Small and medium-sized businesses in particular rely on informal means of recruitment, such as word of mouth... [This] means that applicants’ existing social connections and networks are important. Not all young people will have these connections...’

(House of Lords Select Committee on Social Mobility, April 2016: 6)

Although the Committee noted that ‘some employers are already changing their recruitment practices to address these problems’, they ‘tend to be limited to the largest employers’ and it is thought that they ‘will not go far enough on their own to achieve real progress’.

²³ Kashefpakdel, E., & Percy, C. (2016) Career education that works: an economic analysis using the British Cohort Study. *Journal of Education and Work*, DOI: 10.

²⁴ Mann, A., Kashefpakdel, E.T., Rehill, J. & Huddleston, P. (January 2017) *Contemporary transitions: Young Britons reflect on life after secondary school and college*. Occasional Research Paper 10. London: Education and Employers Research

²⁵ Mann, A. & Huddleston, P. (2016), Schools and the twenty-first century labour market: perspectives on structural change. In *British Journal of Guidance & Counselling*²⁵

²⁶ Organisation for Economic Co-operation and Development & International Labour Organisation (2017) *Better use of Skills in the Workforce. Why it matters for productivity and local Jobs*. Paris: OECD Publishing

²⁷ House of Commons, Work and Pensions Committee (March 2017) *Employment opportunities for young people. Ninth Report of Session 2016-17*

IPSEMET: The next generation assessment

Two Years ago, we approached some of the biggest UK graduate recruiters to ask what their main problems were. They reported that the current system delivered:

- a poor graduate retention rate, with up to 40% leaving within 24 months
- a poor candidate experience
- a mismatch between applicant expectations and the reality of the assessment/selection process.

Current selection tools were felt to be old fashioned and subjective, with ~25% of applicants feeling confident they could change their test behaviour. A better assessment and evaluation tool was required.

The Hotel Belvedere game uses psychometric measurements based on gaming actions, behaviours and dialogue.

- Behaviours are emitted in real-time, new metrics
- Multiple situations are linked into each scenario
- Dilemmas and conflicts are generated to assess behavioural style, values and decision-making
- Competency-based behaviours and values-based decisions can be measured.

The free-form game uses a neutral, but familiar setting in a hotel, with players having autonomy. It comprises task performance, colleague interaction and customer service. It offers a non-linear, unrepeated game experience, but consistent results.

Outputs are: detailed report with interview questions; profile matching; and a candidate summary which reports, for example, on the candidate's ability to: plan ahead; comply with procedure; meet customer needs; persuade others; relate to others; cooperate with others; collaborate; seize the initiative; cope with pressure; adapt to change; show resilience.

Example provided by CET Business Advisory Group member. Further information:

<https://ipsemet.co.uk/>

A difference between skills demanded by some employers 'on the point of hire and needed to get a job' and those 'on the point of use and needed to do the job' can result in failure to tap into young people's potential and under-utilisation of workers' skills.

'...while employers have increased their demand for skills at the point of hire... demand for skills needed to do the job has remained unchanged... Many employers, faced with a more qualified pool of applicants, select workers with better qualifications, seeing the possession of qualifications as a signal of capability. However, the effect is that the qualification levels to obtain jobs spiral: jobs that were non-graduate yesterday are graduate jobs today....'

(Warhurst & Findley, 2012: 4²⁸)

Warhurst & Findley found 'no evidence to suggest that having better-skilled workers encourages employers to create jobs that utilise these workers' skills effectively'. To help avoid under-utilisation of skills, Buchanan identifies four measures of education-jobs matching that are required:

'Entry credential matching, i.e. the extent to which job entry requirements reflect rising skill requirements, or credentials are used to screen applicants and exceed skill requirements of the job; Performance matching, i.e. the performance capability of workers versus the performance level actually required to do the job; Field of studies matching, i.e. the relevance of the area of preparatory education to job requirements; Subjective matching, i.e. workers' personal evaluation of job requirements against their capabilities.'

(Buchanan et al, 2010: 16²⁹)

²⁸ Warhurst, C. & Findley, P. More Effective Skills Utilisation: Shifting the Terrain of Skills Policy in Scotland. *SKOPE Research Paper No. 107*, 2012

²⁹ Buchanan, J., Scott, L., Yu, S., Schutz, H., & Jakubauskas, M. Skills Demand and Utilisation – an international review to approaches to measurement and policy development', *OECD Local Economic and Employment Development Working Paper 2010/04*, Paris: OECD

The CET Business Advisory Group emphasised ‘expectation matching’:

‘A way needs to be found to engage with the young generation and manage their expectations when they move out of education into the business world – help them to understand that transition.

- *Retention of young adults is an issue in the workplace. There is something around the individual assessing the environment in which they want to work (e.g. flexibility in working arrangements) and matching this with what the employer expects*
- *It’s about matching the purpose of business in recruiting people and the purpose of individuals applying, and then new recruits being inspired by their managers to ‘stick around’ (acknowledging some will not). Expectation match is an emerging science, but leaders in the system are key.*

Do employers know what they want? Do young people understand what’s needed? Do they understand themselves sufficiently well to make a match? Using appropriate assessment tools is part of this process.’

(CET Business Advisory Group members)

3.1.2 A way forward – better skills utilisation

‘Despite major progress in the past decades in improving access to, and the quality of, education and training, further efforts are required in all G20 countries to fully equip their populations with the skills that are needed in increasingly dynamic and inter-dependent economies. Moreover, it is also essential to ensure skills are used effectively in the labour market by promoting participation of under-represented groups, improving the recognition and matching of skills and increasing the value employers, and workers, place in skills.’

(OECD, July 2015: 3³⁰)

But, as Keep argues:

‘...knowing a problem exists is very different from knowing how best to address it, and a 30-year plus period in which there has been a more or less exclusive focus for skills policy on boosting supply has left a major gap in terms of institutional capacity, programmatic designs and expertise that might be deployed to address the improvement of skills utilisation...’

(Keep, August 2016: 7³¹)

Findings from the literature review indicate that there is a lot going on in the policy context to address some of the issues raised, but as the CET Business Advisory Group observed:

‘It’s been more, more, more for quite a long time. We now need a massive shift from more to BETTER – to get our heads around the cultural changes taking place and the social contract – bring people together on developing ideas for the future...’

³⁰ Organisation for Economic Co-operation and Development, *The G20 Skills Strategy for Developing and using skills for the 21st century*. Prepared for the Third G20 Employment Working Group Meeting, 23-24 July 2015, Turkey

³¹ Keep, E. Improving skills utilisation in the UK – some reflections on What, Who and How? *SKOPE Research Paper No. 123*, August 2016

Industrial Strategy

The industrial Strategy³² sets out how the UK Government is seeking to do better. It provides the policy backdrop to future work in tackling issues in helping young adults to make successful transitions into the labour market.

The aim of the Strategy is to strengthen the five foundations of productivity: innovation, people, infrastructure, places and the business environment’.

Examples of the Government’s intended actions include:

- additional investment in the technical education system
- continued support for flexible career learning
- help for people to develop the skills needed for jobs of the future
- building an evidence base about how technological change may affect different sectors, groups and places, including how data analytics can be used to improve understanding of employer demand for skills
- provision of resources and skills to fully develop commercialisation opportunities
- emphasis on local networks, collaboration and partnerships to drive success.

To boost productivity, HM Treasury suggests that:

‘...the UK needs to pay due attention to improving the skills of our workforce and to putting them to better use. Productivity relies on a dynamic economy where good ideas spread rapidly, workers are well matched to jobs, firms can scale up, and where people move into jobs that use their skills.’

(HM Treasury, 2015³³)

The Industrial Strategy Commission has acknowledged that ‘ensuring better utilisation of people’s skills must be core to a new strategy’ (November 2017:23³⁴). Skills not only have to be acquired and available, to ‘add value for individuals and employers, they have to be effectively used in the workplace’ and ‘developed over time in line with their evolving jobs and other job opportunities...’ (Campbell, May 2016³⁵).

Warhurst & Findley (2012) report that ‘debates about skills and their utilisation often fail to distinguish between the skills possessed by people and the skills required by jobs’. They make a distinction between *use of better skills* which requires skill acquisition, or upskilling, on the part of workers so they can do a more highly-skilled job, and *better use of skills* that individuals have already acquired through, for example, education and training, to enable them to do a job better. It is argued that both are important to effective skills utilisation (10).

In making transitions into work, adjustment to working in a new environment is dependent ‘as much upon the receptive or expansive nature of the...workplace as upon the prior experiences that workers bring with them’ (Hager & Hodkinson, 2011³⁶). The development of people’s ability to effectively utilise skills is thus not only down to the Education sector, but to what happens once people move into the workplace: ‘support within business by the right people, management and business practices is also needed’ (CBI/Pearson, July 2016³⁷).

³² HM Government (November 2017) *Industrial Strategy. Building a Britain fit for the future*

³³ HM Treasury (2015) *Fixing the foundations: Creating a more prosperous nation*, HMSO, quoted in Thom, G., Agur, M., Mackay, S., Chipato, F. & MacLeod, K. (SQW), Hope, H. & Stanfield, C. (UK Commission for Employment and Skills) (August 2016) *Evaluation of the UK Futures Programme: conclusions and guidance*. UKCES

³⁴ Industrial Strategy Commission (November 2017) *The Final Report of the Industrial Strategy Commission*

³⁵ Campbell (May 2016) *The UK’s Skills Mix: Current Trends and Future Needs*. Government Office for Science

³⁶ Hager P. & Hodkinson, P. (2011) *Becoming as an appropriate metaphor for understanding professional learning*. In Scanlon, L. (Ed) *“Becoming” a professional: An interdisciplinary analysis of professional learning*, pp 33-56. Springer

³⁷ Confederation of British Industry & Pearson (July 2016) *The Right Combination. CBI/Pearson Education and Skills Survey 2016*. London: CBI

Approaches to skills utilisation are said to ‘represent a new way of thinking about public policies, moving away from traditional supply side to focus on how better to work with employers to raise the quality of jobs at a local level and provide employees with more autonomy to create innovation in the workplace’ (OECD & ILO, 2017).

In focusing on improving skills utilisation and discovering what best practice looks like, the work of the Scottish Government offers a definition that, according to Keep (2016), ‘links tackling skills utilisation to a range of wider policy debates’. It ‘sets goals for the education and training system, as well as employers and government’ (9).

To ‘increase performance and productivity, improve job satisfaction and employee well-being, and stimulate investment, enterprise and innovation’, skills utilisation is defined as about:

‘...confident, motivated and relevantly skilled people who are aware of their skills they possess and know how to best use them in the workplace, engaged in workplaces that provide them with meaningful and appropriate encouragement, opportunity and support for employees to use their skills effectively.’

(Scottish Government³⁸)

In re-examining education-to-work transitions and addressing issues in relation to skills, the OECD Policy Framework (OECD, July 2015) may be a way forward in focusing on three main areas:

- i) building skills for work and life;
- ii) encouraging firms to invest in skills; and
- iii) ensuring skills are fully used (through better activation and matching of skills)’.

‘Co-ordinated approaches across training, employment and economic development’ are needed to ‘create an environment in which utilising skills “pays” and is a natural decision for firms’; it is often necessary to ‘address skills utilisation and skills supply (acquisition) simultaneously to create meaningful change’ (OECD/ILO, 2017).

Furthermore, to just focus on skills is to ‘overlook what it is the practitioner needs to *understand* and to under-estimate what is required’ (Lum, 2013³⁹), especially for temporary, agency workers and freelancers who quickly need to acquire ‘situational understanding’ to see how they can utilise their skills in working in different places and are likely to find access to development opportunities difficult.

In the creative industries, for example, workers:

‘...often have to take on a multitude of roles in microbusinesses and as freelancers in their field’; [this means that] ‘many of them have to take on managerial, basic finance and other non-creative functions, which are not areas of expertise’.

(CBI, September 2011:5⁴⁰)

The next section of this report looks in more detail at what role commercial education can play in helping people to understand the business environment.

‘Whatever the type of skills, their effective application is dependent on having a good understanding of the business/industry environment and the realities of the work place.’

(CET Business Advisory Group)

³⁸ Scottish Government *Effective skills use*. Available at: <http://www.gov.scot/Topics/Education/skills-strategy/making-skills-work> (Accessed 6 November 2017). See also: Findley, P. & Warhurst, C. (June 2012) *Skills utilisation in Scotland*. SFA/Skills Development Scotland

³⁹ Lum, G. (2013) The role of on-the-job and off-the-job provision in vocational education and training. In Gibbs, P. (Ed) *Learning, work and practice: New understandings*, pp21-32. Dordrecht: Springer

⁴⁰ Confederation of British Industry (September 2011) *Skills for the Creative Industries: Investing in the talents of our people*. London: CBI

3.2 The WHAT...

3.2.1 What role can commercial education play?

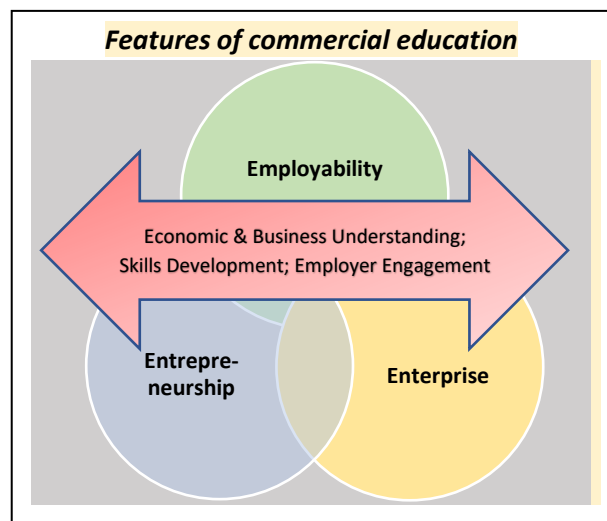
'In a fast-paced and constantly changing world, it is more important than ever to have a sound appreciation of the context in which business organisations exist and operate... the structure of the global economy and the dynamics governing world trade... a multitude of topics...'

(Institute of Export and International Trade⁴¹)

Commercial education⁴² develops skills alongside knowledge about business, commerce and trade, and the know-how to enable learning to be effectively applied to work. It can be understood in terms of fostering:

- **Employability:** ability to prepare for work, cope with change and manage transitions, career and professional development
- **Enterprise:** ability to respond positively, seize, create and successfully manage personal and work opportunities
- **Entrepreneurship** - ability to turn ideas into action, set up, develop and grow a business.

Together with skills, programmes that include commercial education commonly provide opportunities for the acquisition of economic and business understanding and employer engagement.



Economic & Business understanding has been described as a 'process of enquiry, focused on the context of business, central to which is the idea that resources are scarce so that choices have to be made between alternative uses'. It not only includes developing 'familiarity with a range of economic concepts such as market, competition, price, efficiency, economic growth', but 'attitudes and skills to apply theoretical understanding to practical situations', the 'ability to take decisions and make judgements on issues with an economic dimension...' (Davies, February 2002: 18⁴³)

Employer engagement is a strong feature of what is understood as good commercial education. Mann *et al* (January 2018⁴⁴) describe employer engagement as a 'process through which members of the economic community can engage in the educational experiences of young people through the aegis of their school or college', with variety in provision reported as important by educational professionals contributing to their study. A number of other UK studies: 'highlight both the importance of volume of encounters and student perception on the value of encounters (the effective affirmation that something new and useful was secured) to later economic gains' (e.g. Mann & Percy, 2014 and Percy & Mann, 2014⁴⁵; Kashfepakdel & Percy, 2016; Mann *et al*, 2017).

⁴¹ Institute of Export and International Trade: <http://www.export.org.uk> (Accessed 16 March 2017)

⁴² These features of commercial education were identified during the *Review of CET's Grant-making*, Fettes, T. & Muir, F. (2016)

⁴³ Davies, H. (February 2002), *Review of Enterprise and the Economy in Education*, London: HMSO

⁴⁴ Mann, A., Rehill, J. & Kashfepakdel, E.T. (January 2018) *Insights from international evidence for effective practice and future research*. Education & Employers Research/Education Endowment Foundation

⁴⁵ Mann, A. & Percy C. (2014) Employer engagement in British secondary education: wage earning outcomes experienced by young adults, *Journal of Education and Work*, 27 (5), pp. 496–523. Percy, C. & Mann, A. (2014) School-mediated employer engagement and labour market outcomes for young adults: wage premia, NEET outcomes and career confidence, in Mann, A., Stanley, J. & Archer, L. (Eds), *Understanding employer engagement in education: theories and research*, London: Routledge.

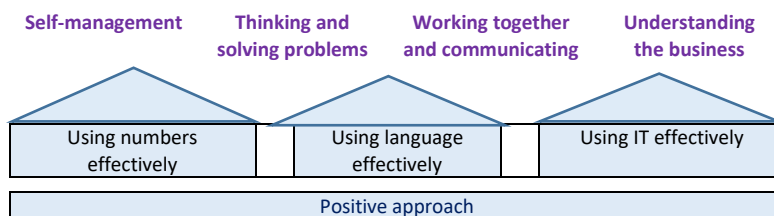
Through activities that *supplement or complement* conventional teaching and/or provide *additional* experiences, partners from business can bring the realities of the workplace into learning activities to support the development of economic and business understanding, as well as various skills. They can offer ‘practical insights into how recruitment processes work and contemporary workplaces operate’; and ‘enhance young adults’ understanding of jobs and careers’ (Mann *et al*, January 2018: 70).

3.2.2 What skills are we talking about?

There has been a long history, in the UK and internationally, of identifying skills, qualities, attitudes and attributes commonly deemed to be successful at work. For example, almost three decades since *Towards a Skills Revolution* (CBI, 1989⁴⁶) emphasised the importance of employability skills’. But, to date, there has been no one, agreed definitive list, although many attempts to produce one.

Examples include:

- **National standards for key skills**⁴⁷: communication, application of number, IT, working with others, problem solving and improving own learning and performance. These were originally designed for use across general and vocational education and training, and qualifications, with progression up levels 1-5 associated with increasing: complexity of the skills; unfamiliarity and range of contexts for their application; and individual responsibility for contextualising them
- **Personal, Learning and Thinking Skills (PLTS)** 11-19 framework (QCA, 2006⁴⁸) categorised as 6 inter-related groups: independent inquirer; self-manager; effective participator; team worker; creative thinker; reflective learner
- **Employability skills** defined by UKCES (February 2009⁴⁹) as combining a ‘positive approach’ with three ‘functional skills’ exercised in the context of four ‘personal skills’, including ‘understanding the business’



UKCES, February 2009: 11

- **the Framework for 21st Learning** (2016⁵⁰) which includes learning and innovation skills, information, media and technology skills, life and career skills.

The Department for Education has recently stated that content of new T Level qualifications must help to ensure that all students who study them are ‘equipped with a coherent set of **core skills**, to support progression, adaptability and movement between different job roles once in work’ (DfE, May 2018⁵¹). Skills such as ‘communicating, working in a team and solving problems are [said to be] essential in a 21st-century workplace’ (BIS/DfE, July 2016).

⁴⁶ Confederation of British Industry (1989) *Towards a skills revolution: A Youth Charter, Report of the CBI’s Vocational Education and Training Taskforce*. London: CBI

⁴⁷ This list was informed by international research by Tim Oates while at the London Institute of Education, 1992, and taken forward by the National Council for Vocational Qualifications (NCVQ) and then the Qualifications and Curriculum Authority (QCA). For a summary of their development, see Fettes, T. Generic Skills. In Huddleston, P. & Stanley, J. (Eds) (2012) *Work-related teaching and learning*. Abingdon: Routledge

⁴⁸ Qualifications & Curriculum Authority (2006) *Personal, Learning and Thinking Skills Framework*. Available at: <http://archive.naaidt.org.uk/news/docs/conf2007/docs/secondarycurriculumreviewcdrom/qca/lenses/skills/personal-learning/index.htm> (Accessed 20 October 2017)

⁴⁹ UK Commission for Education and Skills (February 2009) *The Employability Challenge*. UKCES

⁵⁰ The Partnership for 21st Learning (2016) *P21 Framework for 21st Century Learning*. Washington. Available at: <https://education-reimagined.org/resources/partnership-for-21st-century-learning/> (Accessed 20 October 2017)

⁵¹ Department for Education (May 2018) *Implementation of T Level programmes. Government consultation response technical annex: 7*

Sometimes discussions of Britain's skills problems are impeded because terms are used in different and inconsistent ways. I believe it helps us to think through to the best policies and strategies if we can be as clear as possible about what we are talking about. Drawing on the wisdom of economists, sociologists and psychologists, it is best to think of 'skill' in broad terms, rather than in an old-fashioned narrow sense.

(Green, April 2018: 1448F⁵²)

How skills are conceptualised has a bearing on how skills may be developed effectively. In the literature there are various definitions of 'skill'. In broad terms, 'skill' is defined by Green as 'a personal characteristic which can produce value, and which can be enhanced through education, training and development'. As an umbrella term, 'skill' can embrace quality of performance – the ability to do something well, to a pre-determined standard - and a notion of developmental progression from novice to expert. Although 'some skills can be performed without a good level of underpinning knowledge', to 'apply them in a wide range of contexts...[also] demands a fundamental level of knowledge⁵³ relating to that skill' (National Skills Task Force, 2000: 21⁵⁴).

The UK Commission for Education and Skills (May 2016) suggests that 'where establishments struggle to find the skilled recruits they need from the available labour supply, there is a clear imperative to understand which skills in particular are in poor supply'. It broadly categorises skills as: 'people and personal skills', and 'technical and practical skills':

'People and personal skills can often be less tangible than technical and practical skills, but they can nevertheless have a big impact on the ability of a potential employee to adapt to the workplace and be an effective member of staff.'

(UKCES, May 2016: 4351F⁵⁵)

In the 'people and personal skills' category (the primary focus for this study), the UKCES survey 2015⁵⁶ found that employers particularly struggle to find staff with skills in 'time and task management' (47% of skill shortage vacancies), 'customer handling skills' (39%) and 'team working' (33%), believing this contributes to 'reduced productivity levels within the UK'.

The terms 'soft' and 'hard' are often used to distinguish between 'people and personal skills' - generic-type skills commonly found across occupational sectors that enable individuals to be effective in managing their own learning and performance (likely to have a long shelf-life) - and 'technical and practical skills', which are more specifically related to jobs within particular sectors (and may change over time).

But, in practice this distinction is not so clear-cut. For example, some skills described as technical and practical, or 'hard' may also be required across different occupational sectors:

'Design skills are not confined just to design sectors. At least 2.5m people use design skills in their day-to-day work. This is equivalent to one in 12 workers (8%)... demand for workers with these skills has grown at twice the rate of UK employment over the same period (14% vs 7% since 2012).'

(Design Council, December 2017⁵⁷)

Lists of 'soft skills' can also include attitudes, qualities and behaviours to perform well at work.

⁵² Francis Green, Professor of Work and Education Economics, LLAKES Centre, UCL Institute of Education, quoted in Edge Foundation, *Skills Shortages in the UK Economy, Edge Bulletin 1*. April 2018

⁵³ Various types of knowledge are associated with skills: knowledge that underpins/enables action - 'know that' - and knowledge that is inherent in practice – 'know-how' (e.g. a distinction made by Ryle, 1949); knowledge that is difficult to tell others, but important to skilled behaviour - 'tacit knowledge' (e.g. Polanyi, 1967); knowledge constructed in practice at work, e.g. in solving problems in the workplace - 'work process knowledge' (e.g. Boreham & Fischer, 2002)

⁵⁴ The National Skills Taskforce (2000) *Skills for All: A Research Report*, DFEE

⁵⁵ UK Commission for Education and Skills (May 2016) *Employer Skills Survey 2015: UK results*

⁵⁶ The 2015 survey involved 91,000 interviews with employers

⁵⁷ Design Council (December 2017) *Designing a future economy Executive Summary*

A CBI/Pearson survey (reported July 2016) found, for example, that in addition to literacy and numeracy core skills:

'...by far the most important factor employers weigh up when recruiting school and college leavers is: attitude to work (89%), followed by aptitude for work (66%)...' and 'attributes such as resilience, enthusiasm and creativity'. One in five businesses also view business awareness and relevant work experience as among the top three considerations (21% and 20% respectively).'

(CBI/Pearson, July 2016:31)

O*Net in developing its content model collected data world-wide on key features of occupations which show that different mixes of knowledge, skills and abilities are required at work.

O*NET Content Model

The O*Net content model has six domains of which 3 relate to people: worker characteristics, worker requirements and experience requirements.

The other 3 reflect the character of occupations: occupational requirements, workforce characteristics and occupation-specific information.

In addition to knowledge and education required to perform well in a job, the model includes:

- **basic skills** – developed capacities that facilitate learning or the more rapid acquisition of knowledge
- **cross-functional skills** – developed capacities that facilitate performance of activities that occur across jobs, including social, complex problem solving, resource management, systems and technical skills.

Worker characteristics that may influence both performance and capacity to acquire knowledge and skills for effective performance include:

- **abilities that influence performance**
- **occupational interests** – preferences for work environments
- **work values** – specific needs important to a person's satisfaction
- **work styles** – personal characteristics that can affect how well someone performs a job.

Further information available at:

https://www.onetcenter.org/dl_files/ContentModel_Detailed.pdf

Skills for the future

It is not only about meeting current skill needs, but about looking ahead to what skills may be required in the future. For example, the World Economic Forum (January 2016) reports that:

Ability to work with data and make data-based decisions will become increasingly vital across many job families. Overall, social skills will be in higher demand...Content skills (which include ICT literacy and active learning) are expected to have more responsibilities related to equipment control and maintenance and problem-solving skills, as well as a broader general understanding of the company's/ organisation's work processes.

Many formerly purely technical occupations are expected to show a new demand for creative and personal skills. Overall, a wide range of occupations will require a higher degree of cognitive skills – such as creativity, logical reasoning and problem sensitivity.

(Summary drawn from World Economic Forum, January 2016: 23/24⁵⁸)

⁵⁸ World Economic Forum (January 2016) *The Future of Jobs. Employment Skills and Workforce Strategy for the Fourth Industrial Revolution*. WEF

The Organisation for Economic Co-operation and Development (OECD) has highlighted the growing need for problem solving abilities.

The OECD Programme for International Student Assessment (PISA)

PISA examines not just what students know in science, reading and mathematics, but what they can do with what they know. However, 'these competencies are not sufficient to thrive in life', and so problem solving has been added.

In 2012, PISA identified four processes that make up individual problem solving:

- gathering information related to the problem
- representing the problem and the various relationships in the problem with tables, graphs, symbols or words
- devising a strategy to solve the problem and carrying out this strategy
- ensuring that the strategy has been followed and reacting to feedback obtained during the course of solving the problem.

It is now recognised that:

Solving unfamiliar problems on one's own is important, but in today's increasingly interconnected world, people are often required to collaborate in order to achieve their goals, both in the workplace and in their personal lives.

Hence, PISA 2015 for the 'first time ever in any international assessment - has measured c. 125,000 students' ability to solve problems collaboratively in 52 education systems around the world'.

There are three additional competencies specific to collaborative problem solving:

- establishing and maintaining shared understanding (finding out what other team members know and ensuring that team members share the same vision of the problem)
- taking appropriate action to solve the problem (determining what collaborative actions need to be performed – for example, who does what? – and then executing these actions)
- establishing and maintaining team organisation (following one's own role in the problem-solving strategy and checking that others also follow their assigned role).

Together they cover 12 specific skills. A computer-administered assessment has been used to assess students as part of a team: they must answer questions in a quiz show-like contest about the fictional country of Xandar.

OECD (31 October 2017) *Collaborative Problem-Solving: PISA Results 2015 (volume 5)*

In addition to having basic skills as a minimum to 'participate and progress in the future workplace', people will need to be 'autonomous, self-motivated learners'; in future, knowing how to improve one's own learning and performance will be more important than ever before' (PIU, 2001: 56⁵⁹).

'Learning-to learn' skills will be needed because success is:

'...no longer about reproducing content knowledge, but about extrapolating from what we know and applying that knowledge creatively in novel situations; it is also about thinking across the boundaries of disciplines. Everyone can search for – and usually find – information on the Internet; the rewards now accrue to those who know what to do with that knowledge' ...and 'innovation today is rarely about individuals working in isolation but an outcome of how we mobilise, share and link knowledge...'

(Schleicher, 2018: 232/241⁶⁰)

⁵⁹ Performance and Innovation Unit (2001) *In Demand: Adult Skills in the 21st Century*. London: PIU, Cabinet Office

⁶⁰ Schleicher, A (2018), *World Class: How to build a 21st-century school system, Strong Performers and Successful Reformers in Education*. Paris: OECD Publishing

Examples of skills drawn from the case study programmes and online survey

The case studies included as part of this study illustrate the range of skills, qualities and other attributes currently being developed.

Examples of skills/qualities commonly developed in the case study programmes

Skills: active listening; communication and presenting skills; teamwork/skills in working with others; leadership; problem solving; organisational/planning skills; job-search skills.

Qualities: confidence; resilience; ability to stay positive; ambition/motivation to succeed.

Other skills/qualities/attributes include: literacy and numeracy skills; decision-making skills; negotiation skills; self-assessment skills; systems thinking; visualisation; evaluation/analytical skills; creativity; curiosity; open-mindedness; reliability; resourcefulness; professional attitude/ behaviours.

One of the case study organisation contributing to this study - Enabling Enterprise - has developed a framework that is also being adopted by other organisations.

Enabling Enterprise: The Skills Builder Framework

Enabling Enterprise's framework focuses on eight skills within four critical domains:

- **communication skills:** **presenting**; and **listening and understanding**
- **interpersonal skills:** **teamwork** and **leadership**
- **problem solving skills:** **problem solving** where the problems are pre-defined; and **creativity** where problems are not, requiring imagination and generation of new ideas
- **self-management skills** embracing: **aiming high**, to set goals and then **staying positive** to stick at achieving them – not just a mind-set, but equipping students with tools and techniques, practical things that they can learn and implement.

Skills Builder is a developmental framework that can be used with children from aged 5 to 18. It is made available to other organisations, with permission from Enabling Enterprise, at:

www.skillsbuilder.org

The Prince's Trust Enterprise Programme

This programme supports personal development to enable young adults aged 18-30 who are unemployed, or working for less than 16 hours a week, to have the confidence, reliability, resilience, personal, enterprise and other skills to succeed in business and life.

For example, skills in: setting and achieving goals; working with others; communication; job searching; decision-making.

'I will be eternally grateful for the help, encouragement and support that I have received from The Prince's Trust. I would have never got my business started without them. I completely feel like I'm supposed to be doing what I'm doing...'

(Participant)

**The Royal Academy of Engineering (RAE)
The Engineering Leaders Scholarship Programme**

These scholarships help ambitious and inspiring engineering undergraduates who have potential to become leaders to undertake accelerated career and personal development programmes to become role models for the next generation of engineers.

Opportunities are provided to acquire and apply: 'learning habits of mind', such as curiosity, open-mindedness, resilience, resourcefulness; skills in leadership, communication, negotiation, visualisation, creative problem finding/solving, systems thinking, career planning.

'The single most important skill I have learnt from my time as a Royal Academy ELA recipient is communication and diversity of thought...clear communication has been a central theme...Another important skill has been to learn how to share airtime during meetings'.

(Participant)

On ARK's Professional Pathways programme, 'we had a mock interview [at a company] which helped me with my interview skills, as well as my CV building...we practise our presentation skills. This helps to build your confidence because the first time I did a presentation I wasn't so confident...'

(Participant)

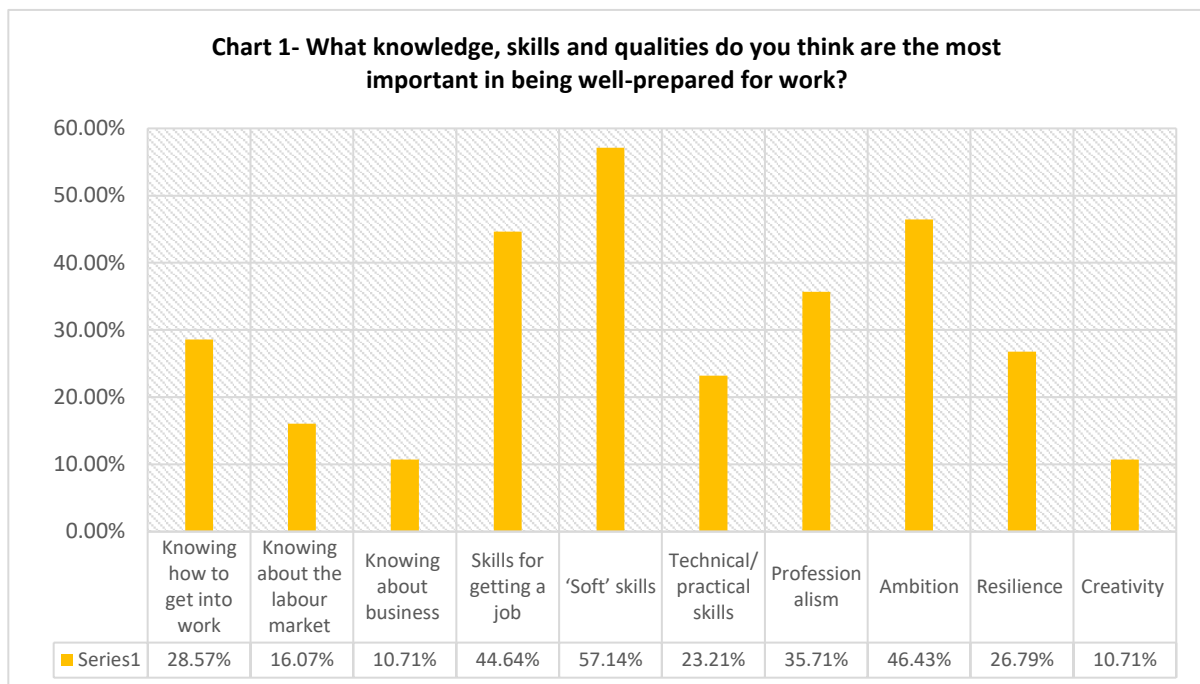
Views from respondents to the online survey

In the study's **pilot on-line survey**⁶¹, around three quarters of the 56 survey respondents (73% females and 78% males) thought that in the recruitment process their employer/ contractor was looking for 'soft skills', followed by: 'qualifications held' (73% of females; 54% of males); and 'ambition' (40% females; 81% males).

When asked to choose from given lists the three most important skills and/or qualities for a) being prepared for work and b) performing well once in work, the charts below show that: 'soft skills' (communication and team working, equally, followed by problem solving) were rated most highly 'for being **well-prepared for work**' and for '**performing well at work**'.

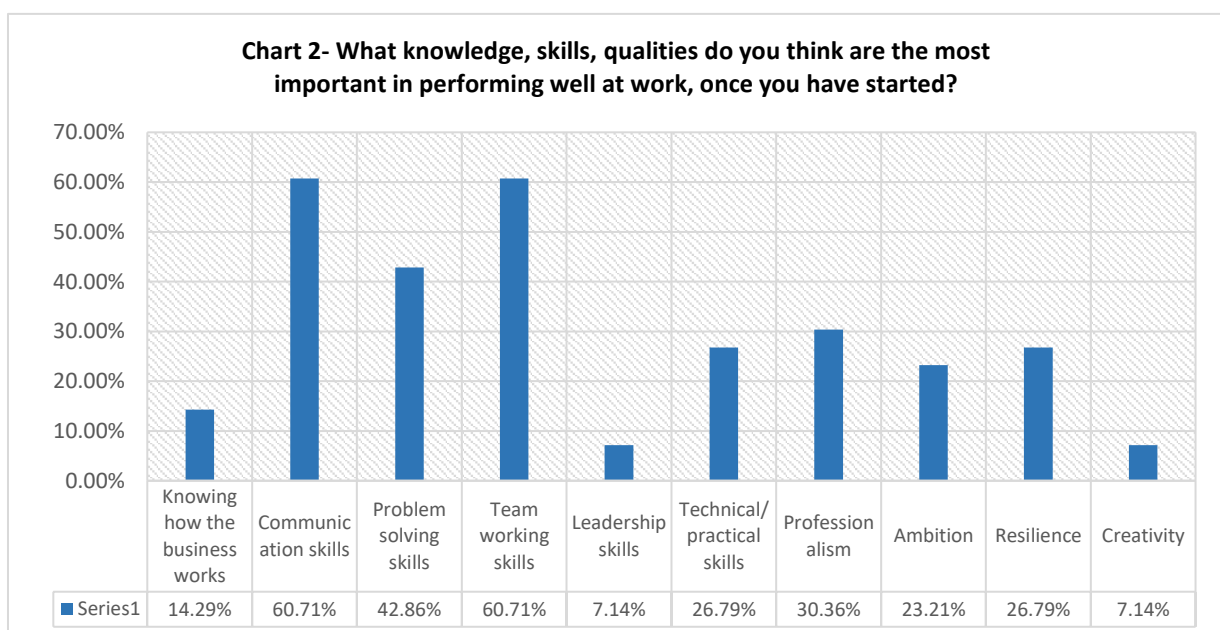
'Technical/practical skills were rated similarly in both cases (23.2% rated these 'hard skills' as important to being 'prepared for work'; 26.79% for performing well at work'). 'Ambition' was rated more highly in 'being prepared for work' than in work (46.4% compared to 23.2%).

⁶¹ 573 leavers from three of the case study programmes were invited to respond, via email, by the respective organisations. The response rate was c. 10% (with 56 useable responses). All 56 respondents had achieved Level 4 qualifications or above (the majority, 78%, had level 7 qualifications). All were 20 years' old or older (57.4% 25+). Most were employed full-time (89.58%); 2.08% employed part-time; 4.17% were self-employed/ freelance part time; half were working in Engineering and Manufacturing; 29.7% in Construction; 6.25% in the Creative and Design sector; 4.17% in Transport and Logistics; 4.17% in Business and Administration; 2.08% in Childcare and Education; 2.08% in Legal, Finance and Accounting.



For female respondents, 'skills for getting a job', 'soft skills' and 'ambition' were selected as the most important in feeling well-prepared for the world of work. Males selected 'soft skills' above 'skills for getting a job', but also felt that 'ambition' was important.

Female respondents believed 'team work' (e.g. ability to: work collaboratively with others to achieve something; recognise the value of other people's ideas while making own contributions), 'communication' (e.g. ability to listen actively, present information in different ways to suit purpose/audience) and 'problem-solving' skills (e.g. ability to identify problems, evaluate options for solving them, work through potential solutions) were the most essential to succeed once they were in work. The ranking changed slightly for male participants with 'communication' being the top choice, and 'teamwork' and 'problem solving' rated second and third.



Examples given of skills being used in the workplace included:

- **Teamwork**, e.g.
"Working with architects/other engineers in design teams."
"Leading a team..."
- **Communication**, e.g.
"Communicating with clients, getting them to understand the ways in which they need to adapt their plans to fulfil legal requirements..."
"Communication is important when discussing work priorities..."
"Writing reports..."
- **Skills of analysis, calculations**, e.g.
"In business it is critical to know cash flow inside out... skills to enable my cash flow to operate successfully."
- **Problem solving**, e.g.
"Solving complex problems – highways alignment design problems..."

"I am part of a small team delivering approximately £20 million worth of work – therefore teamwork and leadership are very important."

"Liaising with teams is crucial; even more so in consultancy work. Many will know the technicality of projects, some maybe even better than you, but if you can explain it, make them calm and guide them you will be more trusted, respected, useful."

"I have to apply my problem-solving skills which I acquired through my academic training and work experience, to provide a safer environment to the everyday users of the particular infrastructure, while bringing acknowledgement and profit to my company."

Resilience and creativity were also noted as needed at work.

"Resilience is essential, the IT may not work and you lose a few hours of working time, but deadlines won't change..."

"I needed to be resilient when we've had a client come back to us multiple times with requests that have resulted in changes of direction with the project..."

[Creativity is] "essential because we are designing new devices... need to resolve the challenges we come up against; we have to think creatively, to come up with new concepts, ideas...make them a reality."

Putting it all together

Work is a complex ‘whole’ of integrated capabilities requiring individuals to ‘put it all together’ in navigating transitions and utilising their skills in the workplace. Although there is a large body of research suggesting ‘non-cognitive skills are associated with positive outcomes for young people’, Gutman & Schoon, in reviewing the literature (November 2013⁶²), found ‘no single non-cognitive skill that predicts long-term outcomes. Rather key skills are inter-related and need to be developed in combination with each other’ (2).

To manage transitions, young adults need what has been described as ‘**career adaptability**’ skill: an attitude of curiosity to explore self and environment, and confidence to design [their] occupational future’ (Ebenehi *et al*, 2016: 58⁶³).

Career adaptability ‘represents a critical skill in an individual’s ability to navigate the career decision-making process and the world of work’ (Savickas, 1997⁶⁴), concerning the ability of individuals to:

- engage in career planning - look ahead and prepare for the future (have ‘*career concern*’)
- develop decisiveness and competence in decision-making (have ‘*career control*’)
- explore own knowledge, skills and abilities, clarify values’, interpret occupational information and weigh up options in thinking about the fit between self and different environments, vocational roles and future scenarios (have ‘*career curiosity*’)
- have a perceived ability to solve problems and overcome obstacles in order to pursue their career aspirations (have ‘*career confidence*’).

(Summarised from Koen *et al*, 2012: 396-397⁶⁵)

To optimise their ability to gain entry to the labour market and respond flexibly to its changing demands, the literature and case study examples suggest that, in addition to **basic skills** (literacy, numeracy and ICT – foundations for learning and functioning in society), young adults increasingly need a combination of **personal, people, creative and problem-solving skills**.

However, to be able to ‘put skills to work’, to contextualise and re-contextualise skills for themselves to suit different tasks and situations, they also need:

- **meta-cognitive strategies** - higher-order thinking ability that enables individuals, as self-regulating learners, to know when and how to adapt their skills, or when it is necessary to acquire new ones
- **positive attitudes and personal qualities** such as confidence, resilience, self-motivation.

Technical and practical skills will be important in relation to work within their specific occupation, but also **understanding of the workplace environment**, the physical and the social contexts (culture, norms and practices) in which they are to utilise their skills.

To cope in the longer term with changing work situations and demands, individuals need: ‘a sense of curiosity and willingness to go on learning far beyond the years of formal education’ to take advantage of new flexibilities in the labour market (DCMS, 2015⁶⁶).

⁶² Gutman, L. M. & Schoon, I. (November 2013) *The impact of non-cognitive skills on outcomes for young people: Literature Review*. London: Education Endowment Foundation

⁶³ Ebenehi, A.S., Rashid, A.M. & Bakar, A.R. Predictors of Career Adaptability Skill among Higher Education Students in Nigeria. In *International Journal for Research in Vocational Education and Training*. Vol. 3. Issue 3. December 2016

⁶⁴ Savickas, M.L. (1997) Adaptability: An integrative construct for life span, life-space theory. *Career Development Quarterly*, 45, 247-259. Quoted in Duffy, R.D. (2010) Sense of Control and Career Adaptability Among Undergraduate Students. In *Journal of Career Assessment* 18 (4) 420-430

⁶⁵ Koen, J., Klehe, Ute-Christine & Van Vianen, A, E. M. Training career adaptability to facilitate a successful school-to-work transition. In *Journal of Vocational Behaviour* 81 (201) 395-408

⁶⁶ Department for Culture, Media and Sport (2015) *Creative Industries Economics Estimates – January 2015 Statistical Release*, DCMS

3.3 The WHY...

'England's education system still falls short in delivering a wide range of vital competencies needed to prepare young people for future work and study...The effect of this is set to grow in the future with demographic and economic change, compounded by the many uncertainties surrounding the country's economic prospects post-Brexit. Advances in science and technology mean that different sorts of skills are moving into sharper focus, and there needs to be a renewed focus on ensuring people access education to respond to continuing and ever-more-rapid technological change throughout their working lives.'

(Anderson/Education Policy Institute, 2017:82⁶⁷)

3.3.1 Why are skills important?

'We might call these skills different things – soft skills, life skills or employability skills – but we draw on them as much as numeracy or literacy. I have known them as enterprise skills, but have come to see that they are best termed 'essential skills'...

They underpin effective learning in the classroom... They are more highly valued by employers than academic grades. They are the foundation for successful entrepreneurship...

When we look to the next decades, in a world of increased automation, fragmented jobs and the need for constant learning it is these skills that will really set our children and young people up for future success'.

(Tom Ravenscroft, Founder/CEO, Enabling Enterprise (2017) *The Missing Piece. The Essential Skills that Education Forgot*. Woodbridge: John Catt Educational Ltd: 7)

Although some contest all the claims made for them, there have been well-rehearsed arguments in the literature as to why generic-type skills are particularly needed, not only by individuals, but for the benefit of the UK's economy and society at large (e.g. Development Economics, January 2015; The Prince's Trust, 2016; Anderson, October 2017).

For individuals, such skills can contribute to increased lifetime earnings (although disproportionately benefitting those from higher socio-economic groups) and analysis by Development Economics suggests that:

'... soft skills are worth over £88 billion in Gross Value Added to the UK economy each year, underpinning around 6.5% of the economy as a whole...By 2020, the annual contribution of soft skills to the economy is expected to grow in real terms to £109 billion....

However, deficiencies in the UK's current stock of soft skills impose severe penalties on our economy, affecting all sectors and regions of the UK. These skills deficits are not just a minor irritant for employers: they can cause major problems for business and result in diminished productivity, competitiveness and profitability. The annual expected loss of production due to expected soft skills shortages is anticipated to amount to just over £7.44 billion per annum (in 2011 price terms) by 2020.'

(Development Economics, January 2015: 8-10⁶⁸)

⁶⁷ Anderson, R. & Education Policy Institute (2017) *Educating for our Economic Future*. Available at: <https://epi.org.uk/wp-content/uploads/2017/10/Educating-for-our-Economic-Future-Advisory-Group.pdf> (Accessed 1 November 2017)

⁶⁸ Development Economics (January 2015) *The Value of Soft Skills to the UK Economy. A report prepared on behalf of McDonald's UK*

A Prince's Trust survey in 2016⁶⁹ found that: 'soft skills are considered by young people, teachers and workers to be as important to achieving success in life as good grades' and the Taylor Review into modern working practices reported hearing:

'...time and time again about the importance of transferable skills, such as communication, team-working and organisation...'

(Taylor, July 2017: 83⁷⁰)

It is argued that generic-type skills, in having wider applicability and a longer-shelf life than job-specific technical or practical skills (the demand for which may change over time), are essential for entry into, and succeeding in, a labour market that is changing as well as complex.

This is a labour market in which:

'...the popular concept of work as a traditional 9-to-5 job with a single employer bears little resemblance to the way a substantial share of the workforce makes a living. Millions of the self-employed, freelancers, and temporary workers... are part of a significant trend...'

(Manyika *et al*, October 2016: iv⁷¹)

On current trends it is predicted that: 'there will be more freelancers in the UK than those working in the public sector by 2020' (O'Leary, 2014⁷²).

As a result, rather than being a single, linear event, transition can involve: 'potential u-turns, detours and zig-zag movements...such as returning to education or moving in and out of employment (Schoon & Lyons-Amos, 2016: 10⁷³). Many young people 'often intersperse spells of inactivity with spells of work or job search; and the process of settling into the labour market is often prolonged and discontinuous rather than a smooth and quick transition' (Quintini *et al*, 2007: 4⁷⁴).

To survive when having by choice or necessity to move between different forms and contexts for work, may require the individual to: 'juggle operating a business', learn 'how to recognise and act on opportunities' and position themselves to 'gain a continuous flow of work and suitable income' (Bound *et al*, forthcoming 2018:109⁷⁵).

'I work in the entertainment sector, on productions/live events. I'm an entrepreneur, freelancer, self-employed, portfolio careerist, employer – all of them. I do freelance design work – it's great to make contact and get involved in other projects, in the short-term, but when it becomes a bigger offer, longer-term, then I have to question if it's right for my business... I didn't have a salary for the first 2 years, so I had to do the additional work. There was no other option. I think when you are in a creative project and have a clear vision of what you want it to be, putting too much financial pressure on yourself can make or break it.'

(Member of the CET Business Advisory Group)

⁶⁹ The Prince's Trust (2016) *Results for Life Report*. Prince's Trust/HSBC. (A sample of 2,224 11-19 year olds, 2,675 workers and 1,000 teachers took part in an online survey, conducted by Censuswide on behalf of The Prince's Trust between 13 and 29 of July 2015)

⁷⁰ Taylor, M. (July 2015) *Good Work: The Taylor Review of Modern Working Practices*

⁷¹ Manyika, J., Lund, S., Bughin, J., Robinson, K., Mischke, J. & Mahajan, D. (October 2016) *Independent work: choice, necessity and the gig economy*. McKinsey Global Institute

⁷² O'Leary, D. (2014) *Going it alone*. Demos

⁷³ Schoon, I. & Lyons-Amos, M. Diverse pathways in becoming an adult: The role of structure, agency and context. In *Research in Social Stratification and Mobility* (2016)

⁷⁴ Quintini, G., Martin, J.P. & Martin, S. *The Changing nature of the school-to-work transition process in OECD countries*. The WDA-HSG Discussion Paper Series on Demographic Issues. No. 2007/2

⁷⁵ Bound, H., Sadik, S., Evans, K. & Karmel, A. (forthcoming, 2018) *How non-permanent workers learn and develop?* Abingdon and New York: Routledge.

Employers are also needing to respond to change as established business models - notions of how companies are organised - are challenged; a challenge acknowledged by Government in commissioning the independent review of how employment practices need to change to keep pace with modern business models (Taylor Review, July 2017).

In the Construction Industry, for example:

'Changes in technology, primarily digital – notably building information modelling (BIM) and off-site construction processes – have the possibility of significantly changing the industry. Another significant driver for change of business model over the past decade has been the shift from direct employment to self-employment and sub-contracting. This has had an impact on training and implications for the relevance of government skills policy. ... Such changes require increasing the supply of transferable skills.'

(CITB, June 2015: 3⁷⁶)

EXAMPLE FROM STUDENT TEAMBUILD

The Student Teambuild competition has been designed primarily for undergraduate or postgraduate students looking to improve their knowledge of the construction industry before moving into the sector.

It recognises the need to respond to changes in the sector and improve efficiency in the construction industry through:

- teaching and encouraging effective interdisciplinary teamwork; communication skills
- improving confidence, presentation, planning
- imparting to future industry leaders a holistic view of project team roles in the construction of a building project – how individual specialisms fit in.

Teambuild also offers a programme for graduates who have moved into the construction industry - the Future Leaders Competition. This team event is paid for by employers for Continuing Professional Development (CPD).

With churns between employment (part-time, full-time, temporary), education, training and unemployment being commonplace, understanding of how the labour market works, job seeking skills, knowing how to collaborate with others and personal resilience become more important - how to persevere, how to bounce back from failure (e.g. Mann & Huddleston, 2016; DfE, updated August 2016).

I was surprised [when I started work]:

"It's all about the soft skills and knowing how to communicate with others which is always the biggest challenge."

"Having to network all the time."

"The pace of progress."

"How little of my degree was used."

"How little uni did actually prepare me for the real world of work."

(Survey respondents)

Learning to network and communicate professionally with people has already proven important... So much of what we know comes from conversations with experts that sharing information and experiences with others is an essential part of the learning process...

(Ex-participant of RAE Engineering Leaders Scholarship programme)

⁷⁶ Construction Industry Training Board (June 2015) *The Future of Jobs and Skills in the UK Construction Sector. Executive Summary*. CITB

3.4 The HOW...

Types of skills for effective performance in the workplace and why they are important, has been widely discussed in the literature over many years. But now, in considering the problem of putting these skills to work, the more crucial questions to address may not be WHAT or WHY, but HOW...

Two questions on HOW have been considered:

1. How can skills be developed to better equip young adults to utilise their skills in moving from education into work?
2. How can evaluation be conducted, and programme leavers tracked along their different career pathways, to gather evidence of how interventions are making a difference and inform improvements in practice?

This section focuses on the former. The case studies illustrated in this section of the report, offer a rich source of information and examples of practice for stimulating discussion on what can be achieved. Fuller case studies are provided in a separate document.

Evaluation is discussed in section 4, below.

3.4.1 How can skills be developed to support their utilisation at work?

Having reviewed existing skills frameworks and reports, Youth Employment UK concludes that: ‘a unified approach would improve effectiveness in supporting young people to better understand the skills they need to develop for their futures’.

‘Employability skills have become an increasingly hot topic, with many working on the principle that if we can improve the employability skills of young people, they are more likely to progress. Yet, we have found that despite this focus young people today still struggle to identify what employability skills are and how they might develop...these skills.’

(Youth Employment UK, 2017: 2)

A unified approach would be helpful. However, rather than trying to produce one, agreed list of required skills (it has not been possible over at least five decades to come up with one), it may be better to focus on curriculum development, with an emphasis on the quality and nature of the learning process to secure learners’ understanding of skills and how they may be utilised; to start with some examples of skills and develop the meta-cognitive strategies that will enable learners to appropriately apply these and whatever other skills are required in the future.

Helping young people to identify and develop the skills and knowledge required in work is essential, but not enough. With personal effectiveness and adaptability at a premium in a service /knowledge economy, ‘it has become more important for young people to be able to *apply* their knowledge in unfamiliar situations’ (Mann & Huddleston, 2016). They need to acquire the know-how necessary to ‘put their skills to work’, be able to apply what they know: ‘know how to interpret it, how to utilise it, and when and how to act on it’ (DfE/BIS, April 2013⁷⁷).

However, being able to apply skills and knowledge in a new context is ‘not automatic, mechanical or unproblematic’ – not simply a matter of ‘transfer’. And it is not a one-off event, but a ‘continuous, transformative process’ requiring productive interactions between learning partners and progressive and combined development of capabilities. Opportunities need to be provided for young people to learn how to ‘make their knowledge and skills applicable to different context-related situations’

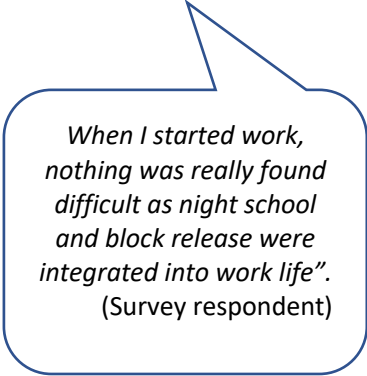
⁷⁷ Department for Education/Department for Business, Innovation & Skills (April 2013) *Rigour and Responsiveness in skills*. London: BIS

(Griffiths and Guile 2004⁷⁸) and develop ability to ‘understand both differences and similarities among situations and tasks’ (Sappa & Aprea, 2014: 5⁷⁹).

Wolf (1990⁸⁰) suggested that the answer lies, not just with the characteristics of the context, but with ‘...the links an individual makes (consciously or unconsciously) between past tasks/situations in which they were competent and the new tasks/situation...’. She also recognised the role played in this process by ‘affective dimensions such as motivation, confidence (linked to incentives, rewards, disincentives etc.)’.

Evans *et al* (2008) have developed a framework for considering how knowledge, including skills, can be ‘contextualised’ and ‘re-contextualised’ by individuals as they move between different sites of learning.

They identify several pedagogic strategies that facilitate this process. Some strategies are a ‘smart re-working of long-standing pedagogic practices’ such as ‘the gradual release of knowledge and responsibility’ from teacher to learner, to ‘build engagement and confidence’. Others, such as the use of ‘industry educators, supplement educational expertise by bringing real-world perspectives into learning...’. ‘Chains of re-contextualisation’ are forged by practitioners across programme design, teaching and facilitating and workplace environments and learners helped to ‘make sense of the whole’.



When I started work, nothing was really found difficult as night school and block release were integrated into work life”.
(Survey respondent)

3.4.2 How can programme design (content) help?

Bound *et al* (forthcoming, 2018) suggest that ‘it is necessary to design the building of capabilities to be and become a particular occupation across a whole program’, adopting a ‘cyclical developmental approach’ that ‘enables building confidence and degrees of expertise’. The ‘key is to be aware of how to make the most of different spaces and possibilities’ and not to conceive of ‘capabilities as separate sets of skills’ (119).

The case studies illustrate programmes which are designed to:

- focus consistently on a small number of skills that can be developed in combination over time in different activities and situations
- capitalise on learners’ passions, interests and motivations, to show the relevance of skills to their personal, learning and career development
- facilitate links between subject-based learning and the knowledge and skills required at work
- reflect the realities and practices of the workplace.

Some programmes are designed to take place in subject lessons, to offer a commercial dimension to the subjects: show the relevance of what the students are learning to work and support the development of relevant skills. Business volunteers help to design the lessons and sometimes co-teach. Others are offered as extra-curricular activities or as independent programmes.

⁷⁸ Griffiths, T. & Guile, D. (2004) *Learning through work experience for the knowledge economy*. Office for Official Publications of the EC, Luxembourg. ISBN 9289602686

⁷⁹ Sappa V. & Aprea C. Conceptions of Connectivity. How Swiss teachers, trainers and apprentices perceive vocational learning and teaching across different settings, In *Vocations and Learning*. 7 (3), 2014

⁸⁰ Wolf, A. (1990) *Learning in context: Patterns of skills transfer and training implications* (Research & Development)

Example of a programme designed to take place in subject lessons

EXAMPLE FROM FUTURE FIRST

A grant from the Commercial Education Trust (CET), enabled Future First to offer schools a free service designed to support the development of knowledge and skills, such as communication and numeracy, through the context of business studies, science/physics and English lessons.

The series of lessons for Business Studies in Key Stage 4 covered:

- market segmentation, marketing mix – product, place, price, promotion, SWOT analysis (How do I market my business?)
- recruitment, retention, motivation (How do I look after my employees?)
- cash flow, revenues, profit as a reward for enterprise and risk taking (How do I make money from my business?)
- understanding that different types of stakeholder have different needs, and that good companies have to manage them (What are stakeholders and how do I manage them?)
- the role of government, how the UK can compete internationally, supply chains, demand (How can I make my business successful worldwide?)

Students then applied skills and knowledge learnt through these lessons in completing associated tasks.

Example of a programme designed as an extra-curricular activity

EXAMPLE FROM STUDENT TEAMBUILD

This programme is a fast-paced, challenging and fun team-based competition. It is designed to introduce students in higher education to the realities of the construction industry.

It is normally split into segments which follow, chronologically, the way a construction project is delivered: the briefing and planning; detailed design stage; handover; and, finally, the adaptation and in-use stage. At the end of each stage, each team gives a presentation to a panel of industry professionals who act as judges.

For each of these stages, Teambuild writes scenarios based on complex problems from industry.

Two programmes are specifically designed to teach what is needed to develop a business plan and make applications for a monetary Award or grant to start up a business, with progressive opportunities to practise the required skills in a supportive environment before ‘going for it for real’ (if appropriate).

EXAMPLE FROM THE PRINCE’S TRUST

The **Enterprise programme** is designed to have 4 stages.

1. An information session to find out what the programme involves and available support
2. 4-day interactive workshop, including an inspirational talk from a business expert, discussions about different aspects of business and opportunity to achieve a Level 1 Award
3. Flexible, one-to-one support to plan and test a business idea, with an opportunity to gain a Level 2 certificate once the business plan is complete
4. Presentation of business plan to a panel of volunteers with experience of starting their own business, with questions; and then, if viable, launch of the business.

EXAMPLE FROM THE ROYAL ACADEMY OF ENGINEERING

The Engineering Leaders Scholarship programme is designed to help ambitious and inspiring engineering undergraduates, who want to become leadership role models for the next generation of engineers, to undertake an accelerated personal development programme. All Scholars receive £5,000 to be used over three years towards career and personal development activities.

There is one round of applications held each year via an online application form. A selection panel composed of Fellows of the Royal Academy of Engineering, Sainsbury Management Fellows and alumni of the scheme, review the applications and around 70 shortlisted candidates are invited to attend a selection event. Shortlisted candidates engage in a 30-minute interview with two selectors, including at least one Fellow, and two group activities.

The scholarship application and selection process is an opportunity for undergraduates to apply their knowledge and skills in communicating key facts and selling themselves in writing and through the interview, and demonstrate communication and leadership skills in group activities.

'I already had knowledge that I could apply to making the application for the Award. It was more about channelling that knowledge for the particular purpose and doing it on my own...I think the difference to what I had done before, was that this time it could actually lead to being able to set up my business...'

'I had learnt before how to put together a budget and a proposal, so it wasn't a new experience for me. It was more about having to prove you could do it in a real situation that was new. It was self-led, rather than a manager asking you to do it...'

'There were three rounds, so there were opportunities to rehearse the pitch before the final one. For the first round, there was the course director and course leader, and one or two others. The mentors were involved in the second round... The third round was the real thing, the actual pitch to the panel...'

(Member of CET Business Advisory Group
who won an Entrepreneur's Award to start in business)

3.4.3 How can the teaching and facilitating environment help?

To learn how to effectively 'put skills to work' is dependent upon having appropriate teaching and facilitating environments: the physical and social contexts in which development of these skills takes place (Evans *et al*, 2008). 'The physical context includes the size and design of classrooms, workshops or other spaces, materials tools and equipment, and the social context relates to the inter-related roles of learners and teachers, and authority relations, traditions and norms of practice' (Cedefop, 2015⁸¹).

'Contemporary learning environments develop connections with other partners so as to extend boundaries, resources and learning spaces' (OECD, 2013: 12⁸²). The 'authenticity of task' is also important: activities that are real or realistic work tasks which are performed in real or realistic contexts' (Bruijn, E. de & Leeman, Y. 2011⁸³).

⁸¹ Cedefop (2015). *Vocational pedagogies and benefits for learners: practices and challenges in Europe*. Luxembourg: Publications Office of the European Union. Cedefop research paper; No 47

⁸² Organisation for Economic Co-operation and Development (2013) *Innovative learning environments*. Paris: OECD Publishing

⁸³ Bruijn, E. de; Leeman, Y. (2011). Authentic and self-directed learning in vocational education: challenges to vocational educators. In *Teaching and Teacher Education*, Vol. 27, Issue 4, pp. 694-702.

Examples of effective practice, drawn from the case studies, indicate that it helps to provide an environment in which:

- a whole ‘organisation’ approach is encouraged, with support from senior managers and a culture that values skills
- teachers have opportunities to develop their understanding of skills and ways that their utilisation in different contexts can be facilitated
- all learners have carefully-structured opportunities to develop their skills and then practise their application in a greater range of activities and situations within and outside the school or college
- business is actively involved in ‘bringing the workplace into the classroom’.

UKCES (February 2008⁸⁴) suggests that: ‘the main barriers associated with the promotion of employability skills and adoption of relevant pedagogical techniques relate to staff skills, confidence and knowledge of the world of work, institutional support and competition in the curriculum’ (19). Teachers need to be able to ‘select methods to achieve the desired outcomes’ which has ‘implications for their training and continuing professional development’ (Lucas, July 2016⁸⁵).

Examples of how the case study organisations support teachers include the following.

EXAMPLE FROM ENABLING ENTERPRISE

Training and resources are offered to teachers who support primary and secondary school pupils in developing enterprise/employability skills.

...what we do is try to change the way skills are taught within schools and that is quite a sizeable ambition... We benefitted from doing lots of different things in the past, but now only focus on doing things we think have the biggest impact.’

The resources have three elements: assessing students’ current capabilities; the theory of developing these skills; practical ways to develop these skills. Videos identify what the skills look like in the classroom at different levels of competence, including skills modelling.

Six key principles underpin EE’s advice to teachers in developing enterprise skills:

1. Keep it simple: focus on a small, consistent number of highly transferable skills
2. Measure it: by really understanding students’ existing skill levels we can identify strengths, weaknesses and where to focus
3. Start young and keep going: as with literacy and numeracy, building the skills, starting with basic empathy and resilience, pays dividends throughout education as well as beyond it
4. Focus tightly: ensure activities and projects give the students enough challenge, but not too much
5. Keep practising: reinforce the skills throughout school life – including other lessons and wider school ethos
6. Bring it to life: real world links help students to apply the skills to new experiences and future employability.

⁸⁴ UK Commission for Employment and Skills (June 2008) *Employability Skills Project. Review of Evidence on Best Practice in Teaching and Assessing Employability Skills*. UKCES

⁸⁵ Lucas, B. What if the further education and skills sector realised the full potential of vocational pedagogy? In Londesborough, M. (Ed) (July 2016) *Possibility thinking: Reimagining the future of Further Education and Skills*. London: RSA Action and Research Centre

EXAMPLE FROM ARK: PROFESSIONAL PATHWAYS PROGRAMME

ARK works with teachers to further their understanding of teaching, learning and assessment methods for supporting students in developing and applying their 'work readiness' and other skills.

Teachers learn the principles of developing skills and how to raise their profile in core lessons. They also have individual coaching sessions to reflect on progress and how they will tweak their approach based on information gathered during the programme. Bi-annual meetings are held with teachers and industry partners on implementation.

Teaching and learning methods

'Fundamentally it's a pedagogical question: it is the way in which these things are taught and learned, how they are contextualised that are crucial. Assessment is also a real issue here – how do we assess these skills? Can we assess these skills out of a workplace context? ...'

(Unwin, February 2015: 29⁸⁶)

Schleicher (2018) suggests that there is a need to 'think more about teaching and rewarding collaboration in addition to individual achievement', to consider 'the fact that collaborative learning is also a great way to inspire self-regulated and enquiry-based learning'; and also recognise the 'wider set of relationships – with their teachers, peers, families and communities – that influence student learning', the 'interactive, mutually supportive relationships that help learners progress' (241).

The case study organisations:

- make skills explicit to learners, for example by including them in learning objectives and through skills conversations
- use a variety of methods, including 'learning by doing', collaborative work, teaching inputs, debates, scenario-building and role -plays
- contextualise the skills in subject/vocational teaching and wider activities, taking care not to 'lose them without trace' – learners need to know the skills they are developing
- plan for the gradual release of responsibility for contextualising skills from 'teacher' to learner
- encourage learners to engage in self-assessment, reviews and reflection, with feedback to inform further development
- support validation of learners' skills assessment by teachers and business partners.

During the respective programmes, most of the 56 survey respondents (87.5%) reported that they had developed 'soft skills'. These skills were followed by: 'creativity' (62.5%); 'professionalism' (46.43%); and 'ambition' (44.64%). They most highly rated 'learning from others' (80.36%), followed by 'direct experience of the workplace' and 'opportunities to engage in real work tasks and problems' (62.50% for each).

⁸⁶ Unwin, L. In Mann, A. & Huddleston, P. (Eds) (February 2015) *How should our schools respond to the demands of the twenty first century labour market? Eight perspectives*. London: Education & Employers Research

EXAMPLE FROM ARK PROFESSIONAL PATHWAYS PROGRAMME

When working with students, teachers start by understanding where their students' strengths and weaknesses currently lie, and then build higher levels of competence in these areas during the programme...

They focus on how they can break quite large skill concepts into small digestible chunks and build in time each day for deliberate practising to ensure that the component parts of using this skill move into long-term memory. This is completed both formally through a work readiness curriculum and informally through the culture of the classroom where they are required to practise skills daily such as team work, reflection, problem solving and presentation skills.

The bespoke work readiness curriculum introduces students to concepts and skills; and also provides structured activities... In addition, students receive almost 200 hours during the course engaging with businesses to understand and research key business concepts. This not only requires them to digest new information, but also practise their skills whilst investigating.

EXAMPLE FROM FUTURE FIRST

Developing transferable skills

Students are introduced to the idea of 'transferable skills' and helped to reflect on what their own might be. The aim is to increase students' confidence in identifying their skills, strengths and talents. The alumnus, acting in a coaching role, supports students in drawing out these skills.

A PowerPoint presentation (available from Future First website) invites students to guess the job of the alumnus using identified key skills and to question the alumnus about things they are good at and skills they developed through school subjects. Students then engage in an activity which involves drawing themselves and populating this with information about their hobbies, skills, strengths, interests, values and aspirations. Each group has one minute to tell the whole class about their skills and strengths before the facilitator draws the session to a close by explaining why understanding their skills is important now and in the future.

Session on how subjects studied relate to the world of work

Students debate statements such as: 'maths is only useful if I want to do a job like finance or banking'; 'learning leadership skills is more important than learning how to work together in a team'.

Questions are asked of the alumnus on their career pathway into their current job and when they might use skills in: being a good communicator; working as part of a team; coming up with new ideas; finding out how things work; being organised and sticking to deadlines; working well under pressure; being independent; practical activities; being polite and creating a good first impression.

During a reflection task, students look at skills cards, put them in order of importance to getting a job and then identify subjects in which they are learning these skills. They tick skills and attitudes they think they are developing and those they need to improve.

In other sessions, students have opportunities to apply their skills, for example: the application of communication skills in practising interviews, writing CVs and covering letters, networking.

EXAMPLE FROM THE PRINCE'S TRUST

Enterprise programme

A mix of teaching and learning methods is used to cater for different styles of learning, including interactive workshop activities, skills discussions, talks by business volunteers. Participants are encouraged to explore how they learn best, record and reflect on their learning, using questions to aid reflection and feedback from mentors to support their personal and business development.

Participants use a self-assessment tool (in booklet and poster formats) to assess their 'soft' skills development. This is explained at the start with learners supported in completing the form to make sure they understand it. At a mid-point, a one-to-one session with a staff member facilitates skills discussions, encouraging them to reflect on how they think their skills are developing and whether their assessment is realistic. At the end of the programme, they re-visit the form and rank where they are then.

Exploring Enterprise qualifications are centre-assessed using portfolios of evidence compiled by candidates to show they have met the assessment criteria. Assessment is continuous, allowing for alternative activities where needed. This keeps learners motivated and engaged. Open dialogue with the learner is recorded. Evidence can take various forms; some may be derived from observation. Portfolios are externally verified.

EXAMPLE FROM THE ROYAL ACADEMY OF ENGINEERING

Skills development through the Engineering Leaders Scholarship programme

Central to the theme of accelerating the professional development of the individual, is the need to look ahead to where they think their careers are going and to start planning for them. Personal and career development skills include the ability to: identify own strengths and development needs, and opportunities to meet these needs; review and reflect on their progress; and plan next steps. Scholars are responsible for developing their own skills, knowledge and understanding, setting out in their personal development plan how they will do this.

During the three years of the scholarship, recipients get the opportunity to acquire the skills they need to fulfil their potential, helping them to move into engineering leadership positions in UK industry soon after graduation.

An annual training and networking weekend is part of the support at which all the current scholars are brought together to undertake a series of activities that provide opportunities to undertake non-engineering activities such as learning the benefits of team building, negotiation, marketing skills and considering elements of entrepreneurship. Throughout the three years as scholars of the programme, they may request advice and support from Royal Academy of Engineering Fellows, Sainsbury Management Fellows and ELS Alumni.

Scholars are expected to submit an annual report including receipts of expenditure against activities undertaken throughout the previous year.

Bringing the world of work into the classroom

Although ‘access to school-mediated employer engagement is not fairly distributed’, Mann *et al* (January 2017) found that both quantity and quality matter: for example, young adults who experience a greater volume of school-mediated employer engagement feel better prepared for adult working life’; and ‘better economic outcomes are associated with greater volume and more highly regarded engagement’.

EXAMPLE FROM ENABLING ENTERPRISE

Students at a sixth form college made enterprise a key part of their learning by taking part in lesson-time projects which included organising and carrying out two events at their school, both of which were successful.

They then went on a business trip to a housing company to enhance teamwork and presentation skills they had been developing in the classroom. Travelling to this business was a way to apply these skills in a real-world context and bring their learning to life. With extra help and expert advice provided by volunteers from the company, students were ready to tell their stories and create their presentations...when preparation time was up, the students took to the stage and gave their presentations...

UKCES (May 2016) found that:

‘...most studies say it is important for the learning environment to be like a workplace. Some suggest that a good simulation is as effective as actual exposure to a real business environment. It may also make it easier to teach use of numbers, technology and the written word because it can offer a more representative set of learning experiences.

The key is to recreate genuine aspects of the workplace. This is not just about space and equipment, but should include consequences for poor performance, uncertainty and ambiguity. In establishing a simulated workplace, however, teachers and trainers will benefit from working with employers; and simulated workplaces should not be seen as a substitute for investment in relationships with employers’ (21).

Business involvement in case study programmes include: co-teaching in lessons; giving talks; acting as role models; coaching; mentoring; supporting projects; providing authentic problems and materials; providing experiences of job applications and interviews; acting as judges on panels; hosting visits.

‘We did our recruitment project with a UK company. This helped us with our communication and improved our skills. We also did some marketing communication... they gave us a project on how we could market their buildings to their clients. And lastly, we did a sustainability challenge when we had to make our school community sustainable. We had to present our ideas back to a board of employees...’

‘I thought a career in construction would be mainly building on site...wearing helmets, mainly males, building with bricks and all that. Working with the company, I realised that there’s a lot going on before they actually start building. There’s different departments, they have people to look at finance, people to look at planning, architects...there’s a lot. It was way different from what I expected... I’m going to be studying construction project management...’

(ARK Professional Pathways student)

STUDENT TEAMBUILD

The competition joins together disciplines across the industry and engages industry professionals to act as judges. These are often people who have previously taken part in a Future Leaders event and have since been working in the industry, but may be senior people from local companies. The industry judges are asked to make the experience as real as possible. They listen to, and assess, the presentations by the multidisciplinary teams, which are encouraged to use various forms of communication that are used in the industry in presenting to clients, such as flipcharts, PowerPoints or booklets. High-level professionals in key firms in the region can also offer the opportunity for students to meet and speak informally about the industry and may offer coaching.

The Teambuild experience is approved and supported by sector bodies such as ICE, IStructE, RIBA, CIBSE, RICS, RTPI, and others.

Teambuild develops a broad awareness of how individual specialisms fit in. Scenarios require the application of several skills when, for example, students are evaluating the finances, the energy performance and the aesthetic quality of the construction balanced against the time and cost to develop it. This requires bringing in all the different skills and abilities of team members. An individual may have good knowledge and understanding of one aspect of the problem but must communicate the value of their particular expertise to other team members.

'Situational knowledge' is developed as they begin to see how their skill sets and what they have learnt applies to the context in which they are going to work. They also develop tacit knowledge of the workplace, what it means to be professional, which fits in with what is required by professional organisations. Ethics are also covered as part of professionalism. Rather than being taught new knowledge, it is more about teaching how to apply knowledge and recognising the value of what they have learnt.

Learning is primarily 'by doing', although there is structure provided through tightly designing the scenario questions and the briefing. Content is transmitted through the materials.

Learning is applied and shared through collaborative activities. Students work in a small team made up of people from different disciplines with different skills to contribute. For example, an architect or a designer in the team may be more likely to have the skills to sketch quickly and produce diagrams to communicate the team's ideas in the short period of time available.

In summary

Like other forms of learning, inter-related factors that impact on skills development include those relating to: *learner characteristics* and *teacher characteristics* (e.g. previous experiences and beliefs about success, conceptions of learning/teaching, motivations and preferences); and the *learning environment* (e.g. physical conditions, ethos, resources, activities, involvement of others). Provision of opportunity is accompanied by an expectation of the active involvement of the learner as a partner in, for example: adopting an inquiring approach; using work tasks as test-beds; seeing adults from the workplace as sources of information and advice; recognising use of skills and articulating their learning and development.

'Learning and development are mediated by a complex dynamic between learner disposition, biography, the situated context of the work and of the educational institution and of industry and national practices of being. Education and those engaged in supporting learning in a range of environments cannot afford to remain ignorant of this complex dynamic.'

(Bound *et al*, forthcoming 2018: 111)

Training of teachers is key to the effective development of learners' skills, and for making the most of support from business volunteers. Teachers 'make decisions about how much time and freedom they give learners to engage in skills on their own terms... They are 'inevitably influenced by ...assumptions (often un-articulated) about what constitutes good learning experiences and worthwhile learning outcomes and also by the specifications set by professional or examination bodies' (Evans *et al*, 2010: 5⁸⁷). Many features of effective teaching and learning in general also apply to skills development. The main difference is the emphasis on making skills explicit and 'learning by doing'.

In *designing programmes*, skills can be mapped against activities to ensure coverage of those that are relevant to the subject matter: to 'contextualise' the skills for learners. It may be assumed that by completing the activities, learners will automatically acquire these skills. However, learners may, or may not, be aware of this. If they are to 'own' their skills, it is necessary for them to be able to identify and understand the relevance of these skills for themselves.

In the *teaching and facilitating environment*, this can be achieved by including skills as explicit learning outcomes and providing opportunities for learners to review, discuss and reflect on the skills they are developing, with feedback to support further learning. The next step along the continuum of transferring responsibility for contextualisation from 'teacher' to learner, is to provide a range of different learning activities, carefully structured to enable learners to 'learn by doing' and practise application of skills in a supportive environment.

Bringing the world of work into the classroom through the involvement of business volunteers, and use of real work problems and materials, extends the experience: enables learners, to see the relevance of skills both to the subjects they are studying and the workplace.

Use of alumni as 'knowledge brokers', for example, can make a difference in that they have:

'...experienced the same (or similar) qualifying pathway as learners; they are aware of the challenges learners face and will face in future and they understand the working cultures and circumstance of the sector and particular institution'.

(Evans *et al*, 2010: 12)

Provision by educational institutions of 'iterative movement between classroom learning experiences and being in work settings and spaces is important in developing the capability to make appropriate judgements and to act appropriately in the occupational practices...' (Bound *et al*, forthcoming 2018: 112). Providing learners with opportunities to go on to apply skills for themselves during direct experiences of work can serve to reinforce learning how skills can be re-contextualised, or when new skills are required, to suit tasks and problems in different situations, some of which may be unfamiliar. Opportunities to learn how to re-contextualise skills can take place through engaging in 'workplace practices and activities that support knowledge development through mentorships, coaching and other arrangements...' (Evans *et al*, 2010: 6).

3.4.4 How can the workplace environment help?

Workplace environments 'fundamentally affect how skills are put to work and they vary in the nature and quality of learning experiences that they afford' (Guile, 2006⁸⁸). While it was beyond the scope of the study to visit workplaces to research the utilisation of skills, examples drawn from case

⁸⁷ Evans, K., Guile, D., Harris, J. & Allan, H. (2010) Putting Knowledge to Work: A New Approach. Originally published In *Nurse Education Today* (2010), Volume 30, Issue 3, pages 245-251

⁸⁸ Guile, D. (2006) Learning across contexts. Quoted in Evans *et al* (2010)

study organisations and Business Advisory Group discussions point to the importance of supporting learners beyond education.

For example, providing opportunities for young adults to:

- become familiar with working practices and cultures, for example, to better match their expectations with those of employers or the realities of self-employment
- engage in professional development to prepare them for the future e.g. to prepare for leadership, collaborative, multi-disciplinary work
- have sustained mentoring to support them in settling in or starting up and growing a business.

In the example below, office workplaces were specifically designed to help unemployed people to develop skills within a realistic work environment and become familiar with its norms and practices.

Pop-up Academies

A technical service company was set up, with Pop-up Academies created as a branch of this to address the skills gap for the long-term unemployed.

Modern workplace environments looking like an office have been created to develop both technical and employability skills. There are seats in this space for a project/HR manager, recruiter, IT support technician and business support members of staff, plus 4 spare seats for programme participants. People join a group of 16 working in the space for one day a week, to test their behaviour in a work environment, and then work remotely in teams with members in different places.

The programme is designed to be part-time, to build confidence along the journey into employment. Interviews are used for selection purposes. Strength-finder tools are used and psychometric tests. The Computing Technology Industry Association (CompTA) which awards certificates for the IT industry, addresses technical knowledge and verification. People develop their 'soft' skills through creating projects, for example with local charities.

The programme has been trialled in 7 areas of the UK, working with the Sector Skills Council for Technology. 54% of participants have moved into employment.

(Example provided by CET Business Advisory Group member)

Most responses to an open question in the on-line survey on 'things found difficult when starting work' concerned the working environment, the demands of the working day and knowledge about business and commercial practices: For example:

- **the working environment**, e.g.
"Learning the culture and 'way of working' of my new office."
"Adjusting to the social dynamics of the workplace."
- **demands of the working day**, e.g.
"...working hours; having to be at work every day, no matter what – university is more relaxed and with very few consequences if you take a day off." "Rigidity of 9-5 imposed schedule."
"Different working patterns."
"The shift from having structured outputs to achieve (drawings, calculations, exams) to having multiple outputs where I had an input to the deadline. Also, working for a construction contractor company I struggled with the volume of workload I was expected to complete."
"Transition to managing my own workload."
- **knowledge**, e.g.
"Lack of business knowledge." "Being the least knowledgeable member of the team..."
"Understanding commercial practices, business models which underpin the industry."
"The rapid learning curve required when starting a job – there wasn't much easing in."

[The work] ... 'was less theoretical and more practical, applying codes and standards to designs and working in a market undergoing the downturn in 2007/8 where mid-management was scarce, so guidance was rare...'

(Survey respondent)

Such difficulties must be addressed in the workplace. New recruits need support in coming to terms with its practices and culture.

Skills need to be developed in ways that enable their effective application in the workplace. However, it also crucially depends on organisations embracing workplace cultures that enable people to perform at their best. This has many aspects to it, including: business/ organisational ambition; leadership and people management practices; effective employee engagement; job design that encourages autonomy; how well learning is transferred to the workplace setting; and effective equality, diversity and healthy business practices' (Scottish Government).

Dillon *et al* (2006⁸⁹) suggest that in applying and further developing their 'key skills':

'...one of the critical changes graduates must make is understanding and adapting to new assessment processes and frameworks used, for example, in relation to appraisal and performance review...A supportive and responsive professional development environment is needed for identifying and guiding development needs and further enhancing competence.' (323)

At the organisation level, key determinants of successful transition into work are: 'social support, e.g. by colleagues, supervisors, and feedback; structural and organizational circumstances in the workplace, e.g. implementation opportunity; high variability in work tasks; commitment; achievement, learning, risk taking/innovation and quality driven cultures' (Tonhäuser and Bükler, August 2016: 148⁹⁰).

Effective application of skills and knowledge is more likely in, what Fuller and Unwin (2004⁹¹) describe as, 'workplace environments that are "expansive" in that they create learning opportunities that make full use of individuals' capabilities and provide them the opportunity to demonstrate their potential'.

'In the company I worked for, if someone was going on a training course, I would ask them these questions: What are you going to learn? What is your expectation? How are you going to use it? How will I notice? I would then revisit these questions on their return to work. Make it conscious.'

(Member of CET Business Advisory Group)

'Skills shortfalls have negative effects and can contribute to... lower levels of productivity.... In our company we had to do more to empower the new intake...by making confident and informed choices, thereby accelerating the pace of progress in meeting skill needs and supporting our employees to up-skill and re-skill across our working environments.'

(Member of CET Business Advisory Group)

⁸⁹ Dillon, C., Reuben, C. & Hodgkinson, L. Higher level skills for learning and employability. In Rust, C. (Ed) (2006), *Improving Student Learning through Assessment*: The Oxford Centre for Staff and Learning Development

⁹⁰ Tonhäuser, C. & Bükler, L. Determinants of Transfer of Training: A comprehensive Literature Review. In *International Journal for Research in Vocational Education and Training*. Vol. 03, Issue 02, August 2016, 127-164

⁹¹ Fuller, A. & Unwin, L. (2004), Integrating organisational and personal development, in Rainbird, H., Fuller, A. & Munro, A. (Eds), *Workplace Learning in Context*. Routledge, London, pp. 126-44

There is a wide range of evidence which supports the conclusion that ‘employer mentoring can have a significant and observable impact on young people, as well as on mentors and their employers...’ (Hooley, T. 2016: viii⁹²).

For those who decide on graduating from the **Prince’s Trust’s Enterprise programme** to start up their own business, support is provided by an experienced business mentor (volunteer) for 2-3 years.

Their role is to help the young adults to achieve their goals: listen; support; highlight (the finer details); focus (help maintain an overview of business goals); measure (support with budgeting, sales conversion rates, website statistics).

Local, specialist volunteers may provide specific guidance around challenges being faced by the young adult.

[The Prince’s Trust Enterprise programme]
‘...asks the right questions in the right way and makes sure the people it helps are ready to start a business and can make a proper business case for it.’

‘It’s proven formula balances intensive business training with long-term mentoring to ensure young people have the strongest foundations on which to build and sustain their business ideas’.

‘Many of these young people overcome enormous social and personal hurdles to get their business off the ground and each year NatWest applauds their achievements...

(Sponsor, NatWest)

‘From the first year of business, we had a mentoring session – 3 hours every 4 weeks, to talk about where you were with things. Checking in with someone – that was very important especially when you come from a structured environment. Really good to have that structure in place and in a way, I still really want that.’

(Member of CET Business Advisory Group
who won an Entrepreneur’s Award to set up in business)

⁹² Hooley, T. (2016). *Effective employer mentoring: lessons from the evidence*. London: Careers & Enterprise Company

Be Onsite

Founded by LendLease, the Be Onsite not-for-profit company is dedicated to helping disadvantaged people make a positive change in their lives. The aim is to address the skills gaps in the construction industry by providing people with industry training and employment opportunities and the property industry with the skilled workers it needs.

We aim to match people and jobs together and we work with our contractors to achieve this

'We provide training and job opportunities that ultimately lead to sustained employment in the property sector. We work with those who want to turn their lives around and support them to make a real difference. We don't simply invest money in our employees. We also dedicate our time and support to provide training and opportunities that lead to sustained employment and careers. From the pre-employment programme, to bespoke training and on-site experience, Be Onsite works to prepare employees for a specific job role. We work with employers to ensure employees become fully skilled and are able to move into a sustainable career. As technology in the property industry advances, new skills are required. Be Onsite works with the supply chain and implements bespoke training to help fill the gaps in the workforce.'

The Be Onsite Delivery Model

Select – seek out and identify individuals willing to make a real commitment to turning their lives around.

Skill – provide industry-specific training to ensure employees get the skills they need.

Employ – give employees employability training, on-the-job experience and find a suitable position.

Support – combine training with emotional and practical support to help employees stay on track.

Sustain – provide the right skills and prolonged support to help employees build sustainable careers.

Local people are trained for local jobs and it is believed the best way to learn how to do a job is to actually do it, on site. Be Onsite employees earn as they learn, allowing them to build the skills they need for a sustainable career and get paid as they go.

Be Onsite employees are expected to:

- show good attendance both at training and at work
- be willing to listen and learn
- be able to work successfully as part of a team
- have the utmost respect for others
- be honest, show integrity and be determined to succeed.

Delivering continued support

'By finding the right individuals and giving them industry training specific to a particular job role, Be Onsite creates skilled workers. But our commitment doesn't stop there. We continue to work with our employees, offering emotional and practical support to ensure they are ready to start and sustain a career.'

Example provided by a member of CET's Business Advisory Group. With information taken from the Be Onsite website:

<http://www.beonsite.org.uk/who-we-are>

'The requirements of the employer and the behaviours linked to success are focused on from the very beginning at our selection events.'

'We feel that it is the bespoke pastoral care offered to our employees which helps them sustain employment, starting as soon as they have been selected and have commenced their pre-employment training.'

'Career guidance is also incorporated into the whole pastoral care element... We take great care to make our ethos clear to our referral partners so that from the very moment a person expresses interest in construction or property as a potential career the realities of the job and the exact opportunity is spelled out.'

'This element of career guidance is crucial. If we get it wrong, we get the wrong people into the wrong job which can be highly detrimental both to the individual and to Be Onsite as a whole.'

4. EVALUATION

4.1 How feasible is it to find out what makes a difference?

Evaluation can be described as a ‘systematic investigation into how, why and to what extent objectives are being achieved’ It may draw on monitoring data, but it is not the same as ‘monitoring’ – a process for tracking the progress of a project against expectations, for the purposes of compliance and informing revisions. Evaluation does, however, involve the systematic collection of data.

4.1.1 The bigger picture

‘Data is almost always identified as one of the key trends driving change in the 21st century... ‘data revolution’, the ‘era of big data’ or more simply ‘big data’, this describes the enormous increase in the amounts of data generated.... Data is now considered an economics and a policy asset for decision-making...’

(Shacklock, Policy Connect, January 2016: 11/387⁹³)

Shacklock reports that the Higher Education Commission draws a distinction between what can be termed ‘static data’ and ‘fluid data’, although much data ‘straddles the two types’. ‘Static data’ refers to that which has long been collected, recorded and stored by institutions, such as student records, staff and financial data. ‘Fluid data’ is generated through the ‘increasingly digital way the student interacts with their institution, such as swipe card data...log-ins to virtual learning environments’ (3).

The ‘measurement, collection, linking, analysis and reporting of data about learners’, termed ‘learning analytics’, can provide ‘an instant, accurate picture of how a student is performing’. It also has the potential to help in ‘understanding and optimising learning and the environments in which it occurs’. But, realising this potential is in its infancy. If data are to be managed well, institutions and their staff need to be ‘data capable and equipped with the necessary resources and skills’.

The following are examples of data required to be collected for national accountability purposes.

Higher Education – destination data⁹⁴

The Higher Education Statistics Agency (HESA)’s Destinations of Leavers from Higher Education (DLHE) survey has formed an essential part of the Teaching Excellence Framework (TEF). The survey has been conducted by HE providers (HEPs) 6 months after students graduate, supplemented by the Longitudinal DLHE which has been conducted with a sample of leavers 3½ years after graduation; this survey has included collecting perspectives on the skills developed during their HE experiences.

⁹³ Shacklock, X., Policy Connect (January 2016) *From bricks to clicks. The potential of data and analytics in Higher Education*. The Higher Education Commission

⁹⁴ Department for Education, Destinations of graduates: <https://www.gov.uk/government/statistics/graduate-outcomes-longitudinal-education-outcomes-leo-data> (Accessed 13 March 2018)

However, following the review of the DLHE, a new survey, the *Graduate Outcomes survey*,⁹⁵ will be conducted four times a year, with the first to run in December 2018 (with data to be reported January 2020). This survey will be administered, by telephone or online, 15 months after graduates have completed their studies to give ‘a meaningful opportunity for graduates to progress in their post-grad activities’.

It includes ‘three new “graduate voice” measures which allow graduates to comment on: how meaningful or important they feel their activity to be; whether they are using the skills they gained from their qualification in their current activity; how they are progressing towards their future goals’. It will also gather ‘deeper insights into graduates pursuing non-traditional career paths such as developing creative portfolios or setting up a business’.

6-18 Education and Training

The Government has put in place an accountability system to ensure high quality 16-18 education and training that equips young people to go on to higher education or sustainable employment.

Headline Measures

The Government now publishes a set of five headline measures: progress; attainment; progress in English and maths...; retention; and destinations. These measures aim to provide a ‘rounded picture of provider performance used in a range of ways: informing student choice; informing a provider’s own self-assessment and benchmarking; informing Ofsted’s inspection regime; and informing Government’s performance management of the 16-18 sector’.

Destination data

Schools and colleges play a crucial role in preparing young people for success in the next stage of their education or training... Destination measures provide clear and comparable information and are increasingly being seen as a key tool in assessing how well schools and colleges prepare their students to make a successful transition into the next stage of education or training, or employment.

Five administrative data sources are used in compiling the National Pupil Database (NPD) to determine students’ education destinations.

Employment data and out-of-work benefit data have been linked to the NPD to form the Longitudinal Education Outcomes (LEO) dataset. Along with local authority data, LEO data are used to calculate employment destinations.

Information, collected over two terms the year after finishing school or college, includes:

- personal characteristics such as gender, ethnic group and age
- education, including schools, colleges and higher education institution attended, courses taken, test results and qualifications achieved (type and level)
- employment and annual earnings (achieved through PAYE employment)
- spells spent on benefits.

(Summary drawing on: DfE, December 2017⁹⁶)

⁹⁵ Higher Education Statistic Agency (HESA) Graduate Outcomes survey. Available at: <https://www.hesa.ac.uk/innovation/outcomes> (Accessed 13 March 2018)

⁹⁶ Department for Education (December 2017) *16-18 Accountability measures: technical guide. For measures in 2017 and 2018*

Schools, colleges and universities will be engaging with issues raised by having to collect data for the above purposes. For example, those relating to:

- the cultural shift required within their organisation to make data integral to all aspects of what it does and achieve senior management 'buy-in' to ensure staff have the appropriate training and support to improve their digital capability and data management skills
- the capacity and resources needed to put in place and maintain data management systems, to ensure data is clean, accurate, consistent, secure and fit for purpose
- ethical considerations relating to the use of student data, particularly student consent and privacy.

Within the above context, a clear case needs to be made for collecting data specific to skills within programmes that offer commercial education in relation to: institutional priorities and benefits; data already being provided to other bodies; and what is already known.

The picture is further complicated by the claim that:

'Simple impact questions like "Did it work?" are becoming more difficult to answer when programmes overlap with others and are influenced by other developments, actors and their activities and policies. A more useful question in these circumstances is "Did the programme make a difference?'

(Stern, 2015: 15⁹⁷)

A review of vocational pedagogies across Europe, for example, showed that much of the literature 'tackled benefits tangentially or failed to apply robust methodologies to measure the impact...on learner benefits...' (Cedefop, 2015:42). Ofsted (November 2016), too, has reported that even where schools are delivering enterprise education, it was: 'often unclear whether this was having any impact on pupils' knowledge, understanding and skills'.

The take-up of ideas and approaches takes time to establish and any changes in policy and practices is likely to require senior management and wider institutional/ organisational support, and the winning of the 'hearts and minds' of colleagues. Risks of a programme 'disappearing without trace' are reduced where there is a good fit between its objectives and institutional priorities and due regard is paid to proportionality in terms of type and scale of evaluations, and the organisation's stage of development – its readiness.

The full extent of whether, or not, a programme is achieving its objectives, for example whether what has been learned has been of benefit to learners on moving into work and along their different career pathway/s, requires data being gathered for some time after they have left.

To track leavers beyond the lifespan of the project or programme thus requires careful planning and preparation.

Examples are given below of evaluation conducted by case study organisations, including those that track leavers from their programmes and collect destination data for national purposes.

⁹⁷ Stern, E. (2015) *Impact evaluation. A design guide for commissioners and managers of international development evaluations in the voluntary and community sector*. Prepared for Bond, Comic Relief, Big Lottery. Available at: https://www.bond.org.uk/data/files/Impact_Evaluation_Guide_0515.pdf (Accessed 11 March 2016)

4.1.2 Examples of how case study organisations are conducting evaluations

The Royal Academy of Engineering commissioned the Careers Research & Advisory Centre (CRAC) to review HESA's DLHE data for recent engineering graduates. It concluded that 'a thorough understanding of "recent destinations" data is valuable in making a well-informed case for support for graduation pathways into the engineering profession' (RAE, November 2016⁹⁸).

Evaluation conducted by ARK also includes use of national databases such as those managed by HESA. It has a strategic approach, centralised systems and an expert team of people who work with schools across the whole curriculum. It believes that:

*...great results are achieved when **informed action** is taken by school leaders and teachers – as well as students and their parents. We also believe that these actions should be informed by **insightful analysis**, which is only possible when we have **accurate data**.*

(ARK, Blog⁹⁹)

Ark is 'actively working across its network of schools on minimising the time spent on data collection and analysis, identified as a key driver of teacher workloads by the Department for Education, to 'allow for more time for action'. Three levers are described in a series of blogs as having the potential to make a big difference: technology; consistency; and scale.

There are: integrated, multiple systems for inputting and processing data via a data warehouse (a carefully organised central repository); a common framework for assessment to allow for comparability of 'like-for-like' and a common approach to analysing data by looking at an agreed set of measures via a consistent set of dashboards. Scale drives economic efficiency, but also improves the reliability of assessment data by significantly increasing sample size and allowing for comparability of judgements.

ARK PROFESSIONAL PATHWAYS PROGRAMME

Teachers are responsible for collecting student data that is related to work readiness skills and student destinations. Evaluation is a standard part of coaching and training with teachers. They play a vital part in building a sense of responsibility amongst the student cohort to feed back to ARK about what happens when they leave school.

Both qualitative and quantitative data are collected. For example, school leavers complete a series of annual surveys, with some undertaking more in-depth focus groups and interviews. Interviews are also conducted with university and industry partners, and teachers, to collect relevant qualitative information.

Destination tracking is a strategic priority for ARK and its schools. ARK has centralised systems to track the non-academic progress of students whilst at school and for tracking the intended and final destinations of students, with clear milestones for completion of surveys. Retention is also monitored through half-termly meetings in schools and through the centralised system.

Data protection is in place to gain permission to securely share and analyse data. Consent for long-term tracking allows access to data about HE graduation and work data up to age 25.

⁹⁸ Royal Academy of Engineering (2016) *Employment outcomes of engineering graduates: key factors and diversity characteristics*. London: RAE

⁹⁹ ARK Reducing the load: How teachers can save time on data collection and analysis Available at: <http://arkonline.org/blog/reducing-load-part-three-how-scale-helps-teachers-save-time-data-collection-and-analysis> (Accessed 3 November 2017)

The Prince's Trust also has a centralised team to support evaluation and systems to ensure data are collected using a consistent method across all regions/counties. An on-line submission system tracks, monitors and reports on young people's progress, linked to a bespoke database, *Trust in Track*, which is used to record information about young people on all Prince's Trust programmes.

EXAMPLE FROM THE PRINCE'S TRUST: ENTERPRISE PROGRAMME

Two main ways are used to evaluate the effectiveness of the Enterprise programme and its impact on young people - the differences it makes to their future prospects:

- *Soft outcomes*, such as employability and life skills, life satisfaction, awareness of issues in their community, are collected through My Journey form
- *Hard outcomes* are collected via Text surveys at three, six and 12 months after leaving the programme.

Automated text surveys to mobile phones are found to be a young people-friendly and resource-efficient, timely and streamlined method of communication, allowing responses at a convenient time and place.

Everyone is asked questions in a consistent manner about:

- a) their main activity: in education, paid employment, self-employment, training, apprenticeships, volunteering or another Trust programme; whether the activity is full-time, part-time (number of hours); sector/industry of work/training/ volunteering; subject of study when in education; other activity if not in any of the above; whether they are also doing a secondary activity (e.g. education and a job); benefits claimed
- b) how much they attribute their main outcome to the support of the programme team, e.g. information, advice and guidance, if the programme satisfied their goals.

A 'census' approach is used to try and contact everyone, rather than a sample, so that outcomes can be reported to specific programme delivery partners.

During the programme, delivery partners are asked to brief young people about the reasons for the text message survey and how it works; and collect mobile numbers. An introductory text repeats this information. The survey is short (3-8 questions) and free (no phone credit needed). To ensure compliance with the Data Protection Act, a consent notice is included on the young person's Profile Form to allow delivery partners to provide updated contact details to the Prince's Trust. A check on currency of the contact details is made one month before the survey.

Feedback is also gathered from staff and business mentors. Individual stories are collected and case studies developed. The Prince's Trust has a Qualifications Portal to track, monitor and report on the progress of learners who have registered for qualifications, using Unique Learner Numbers (ULN).

Future First operates a database platform (portal) that allows teachers to collect all their leavers' information before they go on to the next stage of their education, training or career. Alumni data are stored securely online so they can easily keep in touch using centralised email addresses.

EXAMPLE FROM FUTURE FIRST

For the core programme, schools and colleges conduct their own evaluations and assessments of knowledge and skills developed by their students.

But, Future First does have evaluation forms for use with students who have participated in other programmes. For example, the evaluation form for its employer programme covers questions relating to: how often student have had an opportunity to meet with someone from their field of interest; the extent to which it has improved knowledge of jobs for the future, and had an effect on motivation to want to work and level of confidence, using a rating scale.

Teachers who have organised the events and volunteers are also surveyed. Future First analyses the feedback from students, teachers and volunteers and develops case studies of practice.

Future First conducts an annual survey, in the Spring, of all former students asking what they are doing now, to help schools track their progression routes and keep contact details up to date. Alumni receive an email with a link alerting them to the survey. A survey is also conducted with main contacts in schools and colleges asking them, for example, to rate the effectiveness of their Alumni Officer and satisfaction with the programme; and highlight any barriers to running the programme.

Other ways to reach out to former students include: using Future First's Press officer to contact local press; using social media; asking all staff to sign up those they are in touch with; Future First's national campaign to encourage people to sign up to #gobackgiveback.

Database Platform

For schools and colleges, Future First's database platform (portal) allows them to collect all their leavers' information as they go on to the next stage of their education, training or career. They can store their alumni data securely online and easily keep in touch. It is recommended that students are briefed on the purpose and benefits of joining the alumni network beforehand to increase the likelihood of them responding to the tracking survey. The alumni portal has promotional materials and a template presentation.

A link is given to a page where alumni can sign up which asks for their personal details, information about their education and employment, the year they left and what sort of support they would like to offer to current students. In future they will be able to login at any time and update their profile. It is possible for schools and colleges to login to view all alumni details as their network grows and filter the network of former students in a range of ways, such as by leaving year, what they studied at university, or what support they would like to offer. For example, they could look for students who have left since 2004, studied science at A-level, and are willing to act as a mentor. Direct emails, updates and invites can be sent.

The digital toolkit, including a comprehensive guide to using alumni, as well as the alumni sign-up process and centralised email address for all alumni communications, supports use of the portal. Future First staff provide the help and support necessary to make sure all leaving students are signed up.

Schools and colleges are kept up-to-date with portal developments in Future First's monthly emails. The Hubs feature which allows alumni networks to be managed across a group of schools, is currently being tested by three multi-Academy Trusts.

EXAMPLE FROM STUDENT TEAMBUILD

Feedback forms are issued online to all participants: competitors, their employers or lecturers, and industry visitors. Data gathered include:

- written feedback from judges and competitors
- reflections on the competition by previous year's judges to shape the following competition, during informal discussions at an annual dinner
- Press coverage and media interaction statistics
- individual stories.

This feedback is shared with students and tutors associated with each event, so they have a sense of how their group felt about the experience. Staff are asked six-months on for their reflections on the effectiveness of the event.

Teambuild is a small, agile organisation that responds to feedback each year in developing the model for the competition. Quantitative data (e.g. number of events, participating companies and competitors) and qualitative data (feedback) is collated and analysed to identify themes, factors, trends or correlations.

Cataloguing 25 years of Teambuild in a database enables contact to be made with previous participants, to trace their career paths and ask them about their memories of the competition.

Students are asked to join Teambuild's LinkedIn group which is used to track past participants.

Use of a Facebook page was not found to be so helpful. The young professionals move very quickly between employers and so LinkedIn enables contact to be better sustained.

The plan is now to pull out information and further activate that group, to start to tell stories about what individuals have done, how many times organisations have participated, and write blogs, to try and make the LinkedIn group worth joining. The issue is that Teambuild does not want lots of different LinkedIn accounts. One overall account is needed with sub-accounts for each university, but that is not offered, yet.

'Hundreds of millions of workers across the globe have added their professional information – including their education, skills, and past and present jobs – to online talent platforms such as LinkedIn, affording unique insights into changing skills supply'. LinkedIn's analytics describe each job function as an agglomeration of skills, enabling the platform to nowcast changes in the skills landscape as members update their professional information' (World Economic Forum, January 2016: 24).

EXAMPLE FROM ENABLING ENTERPRISE

Enabling Enterprise conducts annual monitoring and evaluation. It uses the results from teacher assessments, tracking students across the year and, also, looks at a group of students before taking part in the programme, as a counterfactual of what happens otherwise.

Feedback is gathered from teachers via evaluation forms and a facility on the portal when teachers access resources. Informal feedback from volunteers is taken at the end of each visit by the school and an evaluation form is also sent to the business.

External evaluation of the programme has looked at skills gaps and the extent to which skills can be taught. Methods used have included: a literature review to gather different perspectives on skills; the development of 5 case studies involving visits to schools, reflecting different age-ranges, geographical locations and models for skills development; interviews with teachers and pupil focus groups; and round-table discussion with representatives of different enterprise education bodies and schools.

In summary

Effective evaluation practice includes:

- use of mixed evaluation methods (qualitative and quantitative), for example, focus groups, individual interviews; questionnaire and text surveys
- use of national databases to put local findings into a wider context
- centralised systems for data management and the development of consistent approaches to data collection to facilitate comparison over time
- training and supporting teachers on evaluation methods, collecting and making use of data (local and national)
- briefing programme participants on the reasons for longer-term tracking and how it will operate, with data protection in place and permission to securely share data
- use of databases of alumni and LinkedIn groups to encourage buy-in and responses to requests for information.

The pilot of the online survey indicates that it is much harder to achieve a ‘good-enough’ response rate if it is an ‘add-on’ requirement, rather than one planned from the start. For example, the case study organisations found that it is helpful to inform potential participants whilst on the project that this is the intention, to discuss the purpose of the tracking, the protocols and survey methods, and to obtain their consent.

Their experiences also suggest that there needs to be some incentive for leavers to keep in touch. During the first year after leaving, contact details are likely to be correct and responses higher than in subsequent years when drop out can be expected. Most of the case study organisations use a census approach (try to contact everyone), but if sampling the target population, then it is important to ensure the sample size is large enough to account for this.

Schools and universities have an incentive to keep in touch with their alumni as these provide a potential pool of mentors and others who can provide a business perspective to programmes, as well as possible sources of funds. For the alumni, to return to their school or university is an opportunity to ‘give something back’. They often find that this experience is personally rewarding and can also develop their own skills.

“I always knew I would go back even before I left... I go back regularly to help the students because I feel so grateful to the school for the help they gave me. I am indebted to them as they were always really supportive...”

“When you’re coming from a state school not many people apply for medicine...No one had even applied from my school in 8-10 years before my colleague (year above me) did. I wanted to be the person to spark that interest in the student and help the school improve their ability to help more students. It was also because I know I’ve been in their position. I know that feeling of not knowing what to do and not even knowing what key information I was missing out on.”

“It was extremely rewarding that I could go and do what people have done for me... Not only that, but volunteering helps my own communication skills.”

(Ex-participant of Future First programme)

Choice of evaluation method/s is an important consideration, taking account of the strengths and limitations of each method and the type/ of information required. For example, the Prince’s Trust uses surveys by text to leavers’ mobile phones to collect data on hard outcomes from the Enterprise

programme. This method has been found to suit their young adults: 'text messaging is young people-friendly' as well as a 'resource-efficient, timely and streamlined method of communication, allowing responses at a convenient time and place'. There are, however, limitations as to how much information can be collected in this way. A combination of methods is likely to be needed to obtain, for example, more detailed information on how leavers are coping with entry into the labour market.

Online surveys are an efficient method for collecting quantitative data from large target populations. Open-response questions can be included to gather some qualitative data, but responses will be brief and follow-up interviews may be needed to gather more detail.

Gathering data from different sources, for example, learners, teachers and business partners, using different methods such as surveys, interviews and observations, can offer a fuller picture of a programme's effectiveness. In analysing the data, such method and source 'triangulation' can strengthen the validity of findings and the conclusions that can be drawn from them, to better inform decisions about any changes to be made to a programme.

Data analysis is about looking critically at what the data are saying, to identify relationships, patterns, common threads and consistencies between them, and exceptions to the rule, and to draw meaning from them that can be justified – to move from description to explanation. To facilitate this process, data must be managed: collected, stored, organised and easily retrieved.

The effort of doing this will be wasted unless findings are presented effectively (clearly and in an appropriate form) to the target audience/s. It is also important to be aware of how, and for what purpose, others may interpret and use the findings. In all cases, information should be provided to enable users to make judgements on the robustness of the evaluation, so they can be confident in the conclusions. Some may appreciate full details of the methodology; others a summary including, as a minimum (where applicable), survey numbers and response rate.

5. CONCLUSIONS & RECOMMENDATIONS

5.1 Conclusions

The study's aim was to explore ways in which programmes that incorporate commercial education can develop young adults' ability to apply the skills and know-how necessary to succeed at work and methods for evaluating their effectiveness in preparing participants for moving into the early labour market. It is acknowledged that the limited scale of the study has precluded detailed examination of all the factors that can impact on education-to-work transitions. It has focused on the generic skills commonly required across occupational sectors. Nevertheless, in reviewing the literature, and re-visiting CET-supported research on 'putting knowledge to work' (Evans *et al*, 2008) and some examples of current programmes and workplace practices, it does offer pointers for taking forward the work.

Findings from the study suggest that, although there is no one, definitive list of skills, there are indications as to WHAT types of skills should be developed and WHY they are important to individuals, employers and the UK. In addition to a foundation of basic skills, it has been argued, for example, that young adults increasingly need personal, people, creative and problem-solving skills to take advantage of new flexibilities in the labour market and meet its changing demands.

However, there has been less policy attention to HOW such skills can be better utilised in the workplace. For young adults to effectively 'put their skills to work', attention needs to be paid to the quality and nature of the learning process in schools, colleges and universities. Training of teachers and institutional support are vital. Learners need opportunities to develop 'career adaptability skill' to manage their education-to-work transitions and the necessary meta-cognitive strategies to be able to utilise their skills in new contexts. But it is not only down to education providers: appropriate recruitment and HR practices in the workplace are also essential.

Being able to 'put skills to work' is 'not unproblematic, a simple matter of transfer, but a continuous, transformative process' which is dependent on collaboration between learning partners and involves progressive and combined development of capabilities. It is the way these skills are 'taught and learnt, how they are contextualised, that are crucial'.

The case studies have illustrated ways in which education providers can work in partnership with business to help learners learn how to contextualise and re-contextualise their skills in a variety of activities within and beyond the classroom, making explicit the relevance of skills to work. Alongside skills, commercial education can provide insights into business practices, trade and commerce, and develop learners' ability to make judgements on issues with an economic dimension. Some businesses are willing to adapt their practices to better identify young applicants' capabilities in relation to actual job requirements and match expectations, as well as help new recruits settle into the workplace and make use of their skills.

However, while effective practice does exist, and there has been no shortage of government policy initiatives to increase the value placed on skills and better prepare young adults for work, there is variation in access to, and the quality of, provision across the UK. This is often exacerbated by

deficiencies in information available to inform career decision-making. Not all young people have the same opportunities. For example, while not easy to arrange in some localities, the lack of appropriately crafted and managed on-site experiences of work, especially that available pre-16, can be a serious gap in provision. This is a missed opportunity for young people to gain an understanding of the realities of the workplace and, by talking from experience when applying for jobs, help employers identify what they can offer.

The case study organisations have shown that it is feasible to evaluate programmes during and shortly after their completion, but the full extent to which interventions are achieving their objectives may not become apparent until well after participants have left the programme. The pilot survey gave some indication that programmes undertaken by respondents had been successful in raising their awareness of the skills needed both to gain and perform well at work, but it can be more problematic for organisations to track programme participants for an extended period beyond school or university. Resources need to be available to sustain efforts over time and achieve reasonable response rates to surveys.

There is some evidence that centralised systems and a strategic approach to data management can help in keeping workloads manageable and in promoting and recognising, in a consistent way, skill development over time. Building an alumni network can be effective in encouraging 'buy-in' and providing reasons for keeping in touch, as well as a potential source of business volunteers.

Although destinations are a key performance measure for educational institutions, and data are now more readily available, it is still early days in making full use of these, and Local Labour Market Intelligence, to inform programme design and careers decision-making. There have been relatively few evaluations of interventions in workplaces that can make a difference to skills utilisation.

The Business Advisory Group concluded that there is now a sense of urgency for a concerted, interconnected and sustained effort that builds on effective practice to embed elements of commercial education into the curriculum for all and support the effective utilisation of skills. There is a need, for example, to: develop young people's passions and interests, encourage them to develop, discuss and articulate their skills in relation to career plans; work in partnership with the various stakeholders, including parents/carers; provide the necessary information about career routes and skills required at work; teach for transition to support learning about how to apply skills to suit different contexts, increase understanding of workplace cultures and practices; and develop performance once in the workplace.

The overall conclusion is that in a period which sees the launch by Government of its new industrial strategy, with skills plans and opportunities for innovation at a local level, and the imminence of Brexit, effective commercial education will be increasingly important. There is an opportunity to adopt a fresh approach to engaging the interest and stimulating the joint action of stakeholders involved in education-to-work transitions in tackling some of the issues for the potential benefit of individuals, businesses and the UK.

5.2 Recommendations

In reflecting on findings, it is suggested that a shift in thinking is required from a primary focus on skills supply to serious consideration of how skills can be best utilised in workplaces and the inter-relationships required for a co-ordinated and partnership approach to supporting young adults in preparing for and making transitions between education and work. Such support is needed in education from an early stage, to include work as part of the learning process, and continue well into young adults' career, together with longitudinal studies to identify what interventions can really make a difference in the longer term.

A co-ordinated approach is needed to: 'build skills for work, encourage firms to invest in skills and ensure skills are fully used (through better activation and matching of skills)'; and easier access to appropriate professional development for self-employed, freelance or temporary workers.

5.2.1 Employers who do not already do so should be invited to:

- **review and refine their recruitment and HR practices** to help ensure:
 - application and interview processes are appropriate for young adults entering the labour market and enable their potential to be identified and skills better matched with those required to do the job
 - a culture is developed in which skills can be utilised effectively, with leadership, encouragement, opportunity and support provided for new recruits to help them to settle into the workplace, become familiar with its norms and practices and perform at their best.
- **engage with schools, colleges and/or universities for mutual benefit**, to:
 - optimise young adults' chances of success in the competition for employment in the early labour market, for example by: enhancing their understanding of jobs and careers; and providing authentic, relevant experiences and insights into 'how recruitments processes work and how contemporary workplaces operate'
 - build skills such as communication, teamworking and creative problem solving through, for example, projects and providing real work problems and interview practice. Where feasible, provide students with direct experiences of work
 - provide personal and professional development opportunities for their employees through working with young people
 - offer teachers opportunities for developing/up-dating their knowledge of workplace practices, job opportunities and career pathways.
- **sign up to the cross-party Social Mobility Pledge**¹⁰⁰ to obtain accreditation, examples of best practice and access to partners who can support their company in showing commitment to:
 - partnering schools or colleges to provide coaching through quality careers advice, enrichment experience and/or mentoring to people from disadvantaged backgrounds or circumstances
 - providing structured work experience and/or apprenticeship opportunities to people from disadvantaged backgrounds or circumstances
 - adopting open employee recruitment practices which promote a level playing field for people from disadvantaged backgrounds or circumstances.

¹⁰⁰ An initiative instigated by the cross-party MPs Network within Parliament to 'create a campaign and a portal that will push businesses towards social mobility organisations that are doing great stuff and trying to scale up'. Further information available at: <https://www.socialmobilitypledge.org/> (Accessed 28 March 2018)

5.2.2 Education providers that do not already do so should be invited to:

- **develop a whole organisation approach** that promotes a culture that values skills and learning about business, trade and commerce, with support and encouragement for teachers from senior managers in making skills explicit and developing students' ability to develop and apply skills within the curriculum and wider activities
- **monitor and keep under review how they are ensuring all their students have the necessary opportunities** from an early stage of their education for developing the skills and other capabilities required to meet the challenges of changing work requirements, building on their passions and interests
- **ensure teachers are aware of organisations and resources available to support skills development and can access the necessary training and professional development opportunities** that:
 - (ideally) offer direct experiences of different workplaces so they can lead skills development from a position of real understanding of how businesses operate and can keep up to date with current practices
 - develop understanding of the nature of skills deemed important in various types of work and ways that these can be developed to enable their learners to effectively utilise them.
- **ensure teachers are data capable and equipped with the necessary resources and skills to facilitate evaluation of the effectiveness of their interventions**, and optimise their use of national data and Local Labour Market Intelligence
- **build and sustain effective relationships with business partners and alumni** who can bring the world of work into the classroom to show the relevance of skills and subject learning to work and offer direct experiences of the workplace through, for example, hosting visits, work shadowing and work experience.

5.2.3 Government and its agencies, in working in partnership, could support key stakeholders by:

- **using opportunities presented by the Industrial Skills Strategy to sustain a focused, long-term and co-ordinated approach to skills policy and initiatives**, including, for example: wider support for commercial education; facilitating the collection, comparability and sharing of data, including the alignment of skills accountability and quality measures; disseminating and rewarding effective practice to inform/stimulate improvements to the skills system
- **providing incentives for leadership and innovation at a local level, underpinned by robust Local Labour Market Intelligence**, to support relationship building and measures to:
 - address gaps and improve access to opportunities for *all* young people to learn about business, commerce and trade, develop the required skills and be supported in learning how to utilise them at work
 - make appropriate support more widely available to develop the skills of the self-employed/freelancers/temporary workers, i.e. to manage and grow their businesses/cope with the unpredictability of their work.
- **addressing with some urgency the inequality of access to quality work experience**, including support for such experience pre-16 and teacher work placements
- **ensuring teachers' initial training and continuing professional development include a strong focus on teaching and learning for skills development** and a consistent approach by support agencies in training the trainers and cascading effective practice to teachers
- **commissioning, funding and disseminating research on skills utilisation, including longitudinal studies**, as a matter of priority.

5.2.4 Suggestions for further research

It is suggested that the inter-relationships between skills supply, demand and utilisation in a local network of educational institutions and businesses should be further researched. This research could include, for example: visits to one or two educational establishments, to conduct baseline surveys of practice and identify the learning outcomes in relation to skills and being prepared for work; detailed research in workplaces that have taken on leavers from these institutions, to look at recruitment and HR practices – what employers are asking for and induction programmes; tracking young adults in this network in moving from education along their different career pathways, to collect specific data on what and how skills are being utilised in the workplace and the factors and conditions that support this; share findings and feed into policy development work to encourage wider application of lessons learned.

In designing such research, it would be helpful to draw on the work of:

- Keep (August 2016¹⁰¹), e.g. his framework for designing a generally qualitative case study approach to evaluate skill utilisation activities, with suggestions for issues and questions (and references to work in Scotland)
- Anderson & Warhurst (2012¹⁰²) and Green *et al* (2017¹⁰³), e.g. their research on how to understand the way in which local-national and local-local collaborative working needs to develop if it is to enhance skills development
- Evans, Guile & Harris (October 2008¹⁰⁴), e.g. focusing on ‘programme design’, ‘teaching and facilitating’ and ‘workplace’ environments’, and multi-faceted partnerships, to explore how skills are ‘contextualised’ and ‘recontextualised’ as young people move between different sites of learning.

It may be possible, with appropriate partners, to apply for funding from the ESRC Research Grant.¹⁰⁵

Smaller-scale studies could be conducted in workplaces that have recruited students from local schools, colleges or university to explore the education, job application and workplace experiences of these young adults in terms of their skills development and utilisation, and employer views and practices. Chambers of Commerce, Local Enterprise Partnerships and other business umbrella organisations could be approached to help identify potential workplaces and disseminate effective practice.

¹⁰¹ Keep, E. Improving skills utilisation in the UK – some reflections on What, Who and How? *SKOPE Research Paper No. 123*, August 2016

¹⁰² Anderson, P. & Warhurst, C. (2012) Lost in translation? Skills policy and the shift to skill ecosystems. In: *Complex New World. New Era Economics*. IPPR, pp. 109-120

¹⁰³ Green, A., Hogarth, T., Thom, G., MacLeod, K., Warhurst, C., Willis, R., & Mackay S. (2017). *Local Skills Case Study* (Department for Education Research Report 673). London: Department for Education. ISBN 978-1-78105-741-4

¹⁰⁴ Evans, K., Guile, D. & Harris, J. (October 2008) *Putting Knowledge to Work: integrating work-based and subject-based knowledge in intermediate-level qualifications and workforce upskilling*. Teaching and Learning Research Briefing

¹⁰⁵ ESRC Open call specification: <http://www.esrc.ac.uk/files/funding/funding-opportunities/research-grants-open-call-specification/> (Accessed 29 March 2018)

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