



RESEARCH FOR PRACTICE PAPERS FROM THE 5TH INTERNATIONAL **CONFERENCE ON EMPLOYER ENGAGEMENT 2018**

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Introduction: Making the most of employer engagement; what the research tells us.

Professor Prue Huddleston (Emeritus Professor, University of Warwick)

This publication presents contributions from the 2018 International Conference on Employer Engagement in Education and Training. The conference brought together delegates and speakers from around the world, sharing perspectives on employer engagement in education and training. The conference was the fifth hosted by Education and Employers, the fourth by the Edge Foundation and the second joint event by the two organisations. The event was made possible through the generous support of the Edge Foundation, the Commercial Education Trust (CET), the Careers and Enterprise Company (CEC), the Department for Business, Energy and Industrial Strategy and the Centre for Vocational Education and Research (CVER).

In the pages that follow you will find summaries of eight contributions from the conference, which present research findings on different aspects of employer engagement, reflecting the multiplicity of ways in which the worlds of education and employment intersect. The importance of these contributions is that they are grounded in research across all phases of education and present the perspectives of a range of stakeholders, not just of the critics who carp from the sidelines about the inadequacy of the education system and of youth in particular; or about employers' unwillingness to engage. There is much to be learnt from well designed and rigorously analysed research that can be shared to inform future policy and practice.

In addition to the eight contributions presented here, you can find short videos of keynote presentations and panel discussions, as well as summaries of other delegates' research and perspectives <u>here</u>. These provide a glimpse of the range and scope of research activity across the education employment interface and foreground the extent to which employer engagement is seen as fulfilling a multiplicity of aims within the education and training system.

The eight contributors featured here were invited by the editors to summarise insights from their conference papers. Contributors were selected on the basis of the high quality of the research approaches they had adopted exploring questions of particular relevance to professionals working in UK schools and colleges. All the summaries focus, in different ways, on the implications for practice stemming from research studies.

The collection begins with an important and timely contribution by Fettes, Evans and Kashefpakdel 'Putting skills to Work: It's not so much the What, or even the Why, but How...' This mixed methods research builds on previous work by Evans, Guile and Harris (2008) and highlights the complexity of the sometimes taken for granted assumption of "skills transfer". Whilst employers constantly highlight the need for young people to enter the labour market with the necessary employability skills, however interpreted, transferring skills learnt within the education context to workplace contexts is not a straightforward matter. The research conceptualises transfer as a "continuous and transformative process" requiring the support of workplace supervisors and others to help new entrants re-contextualise skills already acquired within new contexts. The problem therefore, may not be a lack of skills but the lack of workplace opportunities in which to demonstrate and develop such skills. The authors argue for 'a coordinated and partnership approach to supporting young adults in making transitions, with better skills utilisation in mind.'

Two papers: Hanson and Lucas **The role of school leadership in increasing engineer employer engagement among teachers** and Turkenburg-van-Diepen and Hanley **Employer Engagement: Too little, too late**, highlight the importance of opening up young people's perceptions of STEM subjects, and of employment opportunities within the sector. The importance of early engagement at primary school level is discussed in Turkenburg- van-Dieman and Hanley's work, also the potential motivational gains from employee participation in such schemes. However, such engagement requires a significant commitment of time and resource, which may be vulnerable when other business demands are more pressing. The research also illustrates the importance of well-designed learning activities pitched at the right level to engage young learners; it cannot be assumed that all visitors to schools will possess such competence.

Hanson and Lucas's paper builds on some of these themes in emphasising the key role that school leaders can play in encouraging and supporting employer engagement through a whole school approach. Within the context of engineers in schools, school leaders were reported as demonstrating success in incorporating engineering 'habits of mind' into the curriculum when they adopted a 'pedagogic leadership style'. This involved setting a direction for the school including: valuing the importance of engineering and of working with engineers in the classroom; encouraging teacher professional development; engendering a culture of innovation and flexibility, allowing risk-taking and; gathering evidence of what works and why. In short, the vision for the school was underpinned by recognising the value of working with engineers, learning about engineering and developing engineering 'habits of mind'.

Continuing the theme of engineering, Tami McCrone's research, sponsored by the Edge Foundation and the Royal Academy of Engineering: **Project-based learning in university technical colleges: How are employers engaged?** - demonstrates the role of engineers in developing and supporting project-based learning. Project- based learning implies a "profound" engagement within the curriculum involving the design of authentic tasks and problems set within realistic work contexts that students undertake with employer input. In the best cases projects were clearly aligned to students' programmes of study, including specific units or modules of courses.

"Profound" engagement also implied involvement in a wide range of activities, including: workplace visits, work placements, employer talks, provision of industry standard equipment and resources. UTC staff recognised the centrality of employer engagement in securing the UTC mission of enhancing the technical knowledge and skills of learners and of preparing them for future learning, training and employment within their chosen field. The challenges included: securing and maintaining sufficient employers with appropriate levels of commitment and expertise; recruiting and retaining students with an interest in the specialism and recruiting teachers with the appropriate levels of sector knowledge and skills.

Moving away from specialist technical institutions to technical qualifications offered within a range of schools and colleges, Williamson and Carroll's paper: **Examining the use of technical qualifications within Key Stage 5 programmes of study** provides some important new evidence into who takes these qualifications and what are the outcomes. It is a welcome contribution to an under-researched area and provides new insights into the field. It is particularly timely since the future of many applied/technical qualifications, whether or not these qualifications are taken in combination with other qualifications and students' progression route beyond school/college. It should be recommended reading for all who seek to 'reform' the KS5 qualification landscape since it helps to dispel some myths around technical qualifications – their purposes, take-up and outcomes.

Much of what has already been said argues a strong case for young people to be fully informed about the choices they make in terms of further study, or possible labour market opportunities. At a time when a career for life is no longer a realistic proposition, it is essential that young people have access to high

quality, trusted, independent advice and guidance concerning contemporary and possible future labour markets. This includes access to those currently in employment, both recent entrants and more mature workers.

Percy and Kashefpakdel's paper 'Insiders or outsiders, who do you trust? Engaging employers in schoolbased career activities' provides evidence from a longitudinal study of the potential impact on secondary pupils of sustained employer engagement, in particular careers talks with outside speakers, in terms of future career trajectories and earnings. Their findings echo previous work in terms of" who gets what and how much?"

The research draws upon a large dataset tracking individuals born in 1970 and their subsequent employment outcomes, including wage differentials. The findings demonstrate that, controlling for a range of background socio-economic factors, school-based career talks can provide similar wage benefits to having trusted personal networks helpful in securing positive labour market outcomes. However, such school-based activities need to be proactive and sustained in providing access for those who lack access to trusted networks of professionals. It is suggested that without such proactive approaches, the tendency of careers activities to reinforce social privilege will persist.

Continuing the theme of social disadvantage, the paper by MacDonald, Kane and Williams describes a European partnership project, including partners from UK, Romania, Austria, Bulgaria, aimed to ameliorate the experiences and chances of success of vulnerable young people entering the vocational education and training system. The paper helpfully reminds us that the terms 'vulnerability' and 'disadvantage' are not readily generalisable; that differing groups of young people, in different contexts and circumstances, require a sustained and tailored approach if they are to succeed within the vocational education and training system. Whilst employers were not unwilling to accommodate vulnerable youths into their training programmes, they required support in achieving this.

Project outputs included an online Handbook for employers and training providers/professionals working with vulnerable young people and a set of resources to support delivery. The research also highlights the ways in which progress in this area, across several of the partner countries, including the UK, has been hampered by constant policy changes in terms of housing and other social security benefits, apprenticeships, and the VET system more widely. This has led to confusion for employers, teachers, trainers and vulnerable youth. The research concludes that the EU's 'Youth Guarantee', designed to promote a comprehensive approach to vocational education, training and employment has had mixed success.

The final paper, Wylie, Robson and Watt Measuring the Wider Impacts of Apprenticeship- the Apprenticeship Wellbeing Survey, provides a hopeful message about apprenticeship in Scotland in terms of apprentices' feelings of well-being, with higher than general levels of satisfaction and happiness reported than the general population. The research is part of a wider piece of work being conducted by Skills Development Scotland using a framework developed by OECD - 'Long-term Outcomes Framework'. Evidence collected from 2,000 apprentices in Scotland over the past three years, indicates high levels of well-being, satisfaction, increased confidence and personal and career progression.

Currently employed apprentices reported higher levels of well-being than those currently unemployed, confirming substantial previous research on the impact of unemployment on the health and well-being of those out of work. Some variation was found in responses by sector framework. In the Social Services and Healthcare Framework respondents saw their job as particularly 'worthwhile'. Whilst within the Business and Administration, IT and Telecommunications and Retail positives were reported as mainly financial.

This is a fascinating study and provides affirmation of the importance of good quality vocational education and training leading to positive labour market outcomes and crucially improved health and well-being. This is an ambition to which all education employer engagement, across our schools, colleges and universities, should aspire. However, it is something that cannot be left to chance, it requires nurturing and support (employers are not experts in education), educators may not have recent and relevant business expertise to make appropriate linkages between what occurs in schools and the demands of contemporary employment. Research can provide evidence of what is happening in this field and more crucially if it works and why?

Education and Employers is committed to making high quality research into the subject of employer engagement in education easily accessible. It does this through conferences and seminars, publications, free web resources (including a unique library of summaries of key publications in the field), a free ebulletin with details of new findings and a dedicated twitter account. You can access these resources and stay in touch with the Research team by visiting: <u>www.educationandemployers.org/research/</u>



'Putting skills to Work: It's not so much the What, or even the Why, but How...'

Trisha Fettes (formerly Principal Research Fellow, Centre for Education and Industry, University of Warwick), **Karen Evans** (Emeritus Professor of Education, UCL Institute of Education) and **Dr Elnaz Kashefpakdel** (Head of Research, Education and Employers).

Summary

Drawing on a literature review and Commercial Education Trust (CET) study that explored ways in which school and university students' skills can be developed to facilitate their utilisation in the workplace, the research found that "putting skills to work" is not automatic or unproblematic. It is not simply a matter of "skills transfer", but a "continuous and transformative process" during which individuals, supported by multi-faceted partnerships, learn how to re-contextualise skills in moving between education and work environments. Opportunity and support are needed, in workplaces as well as schools, for skills orientated learning that emphasises adaptability and preparedness for change.

Context

Changes in in the education system and labour market have created a complex world for young people (Kashefpakdel & Percy 2016). Education-to-work transition is often prolonged and discontinuous (Quintini et al. 2007) and young adults are facing unprecedented struggles to succeed in the early labour market (Mann & Huddleston 2016).

There has been a long history of identifying skills required for success in the workplace. Generic skills such as communication, problem solving and teamworking are commonly reported to be essential for both the UK's economy and individuals (Anderson/ EPI October 2017; Prince's Trust 2016; Taylor July 2017), along with attributes such as 'resilience, enthusiasm and creativity' (CBI/Pearson July 2016). There has also been a stream of government initiatives and various programmes that have sought to prepare young people for work. However, many employers (e.g. in surveys by: AGR; British Chambers of Commerce; EY Foundation; UKCES) continue to suggest that they find it difficult to recruit young adults with the essential, non-technical, people and personal skills needed for entry-level jobs. The inference is that education providers are not adequately preparing young people for work, not teaching them the skills needed in the labour market. But is this necessarily the case?

Method

A literature review was conducted, focusing primarily on reports and papers relating to education-to-work transitions that were published since 2015, with some revisiting of earlier literature. In the CET study (Fettes, 2018), case studies of practice were developed during a workshop and two sets of semistructured telephone interviews with key personnel who volunteered to participate from 6 projects that offer elements of commercial education – learning about business, commerce and trade. These projects were identified by CET as potentially having effective practice. Three were sited in schools; two involved undergraduates; and one concerned a programme for young adults who were not in education, training or employment.

An online survey was used to test the feasibility of following-up some programme graduates to find out the extent to which they perceived generic skills to be important in preparing for and performing well in the workplace. Three case study organisations volunteered to email the survey link to 573 leavers who were believed to be in the labour market. Individual stories were also provided.

Although it was beyond the scope of the study to visit workplaces, CET's business advisory group provided perspectives on emerging findings. The group comprised entrepreneurs and those with experience of working in large corporations, or Small & Medium Enterprises (SMEs), across a range of occupational sectors, including Finance, Construction, Creative, Engineering and Information and Communications Technologies.

In organising data for analysis, a framework developed by Evans, Guile and Harris (2008) for the recontextualisation of skills, informed by extensive fieldwork and the work of Bernstein, Barnett and van Oers', was combined with features of "powerful learning environments", a model used by de Bruijn and Leeman (2011) which is 'grounded in the idea of cognitive apprenticeship' and 'inspired by sociocultural theory'. (e.g. Collins et al. 1989; Raizen 1994; Billett 2001).

Findings

There has been much debate on what skills are required and why they are important, but a shift in thinking about public policies is now required that moves away from 'disproportionately focusing on increasing the supply of skills' to more attention being given to 'shaping how skills are used' (OECD 2017). The problem may not always be lack of skills, but with skills not being fully articulated and recognised, and then utilised.

Young people need to be 'confident, motivated and relevantly skilled', but also 'aware of the skills they possess and know how to use them in the workplace' (Scottish Government, Keep August 2016). To be able to recontextualise skills, they need to be self-regulating learners and have "career adaptability skill", meta-cognitive strategies, self-knowledge and 'ability to "read" norms and expectations in the working environment' (Bound et al. 2018).

Effective practice exists for developing skills in ways that facilitate their utilisation: a culture that values skills; learning environments that reflect workplace realities; making skills and their relevance explicit; "learning by doing", problem-solving and collaborative work; coaching and mentoring by business partners; gradual release of responsibility from 'teacher' to learner for contextualising skills; opportunities to practise applying skills in a variety of activities and situations; self-assessment, review and reflection, with feedback to inform further development.

However, not all young people have access to best provision. Programmes can 'sometimes be left on the margins of the curriculum' rather than being embedded 'throughout school curricula and FE/HE courses' (RSA/RBS 2013). While some employers are changing practices to better recognise and nurture young people's potential, 'these changes are not widespread, are limited to the largest employers and will not go far enough on their own to achieve real progress' (House of Lords Select Committee on Social Mobility April 2016).

Akkemann and Bakker (2012) report vocational literature as moving away from a "comparative approach", focusing on "transfer", towards a "relational approach" which rests on a notion of "boundary crossing". Whereas the former is 'mostly about one-time and one-directional transitions', leading to 'questions about the correctness of the school curriculum... about whether students can recall and apply what they have learned in school', the latter is about 'establishing a productive relation between school and work... a shared interest in the development of future professionals.'

The UK Government's industrial strategy offers a fresh opportunity to stimulate a co-ordinated and partnership approach to supporting young adults in making transitions, with better skills utilisation in mind. To inform practice, further research is recommended on inter-relationships between skills supply, demand and utilisation in a local network of educational institutions and businesses, drawing on case study approaches described by Anderson and Warhurst (2012), Green et al. (2017) and Keep (August 2016).

Further information

The study report and pre-publication research paper are available from the Commercial Education Trust at: <u>http://www.lccicet.com/pages/projects/research/</u>

The role of school leadership in increasing engineer employer engagement among teachers

Dr Janet Hanson & Professor Bill Lucas (Centre for Real-World Learning, University of Winchester)

Summary

This paper explores school leadership strategies which encourage teachers to collaborate with employers in delivering the curriculum and providing real-world learning experiences. Building on earlier studies into engineering habits of mind^{1, 2} we identified how school leaders create an educational culture and learning opportunities that cultivate children's interest in engineering. Using a positive deviance approach to the research, we found that when school leaders modelled personal attributes and enacted strategies which are encompassed by the phrase *pedagogic leadership*³, teachers are more likely to develop the confidence and understanding to incorporate engineering themes into their subject teaching, in collaboration with engineers.

Context

The projected shortfall in the recruitment of engineers in the UK has encouraged a proliferation of initiatives to attract more young people to engage with STEM subjects⁴, but one of the challenges for schools in England in increasing interest in engineering is that the subject rarely appears on the school curriculum.

Nevertheless, subjects such as design and technology, science, mathematics, and even art and English, can be studied through engineering problems which support children's development of engineering habits of mind (EHoM) or 'thinking like an engineer'. This is most effectively achieved through cross-curricular project-based learning, which can be challenging for teachers to initiate, but if they can see engineering as a way of thinking, not as a specific discipline, this can open up discussion about pedagogy as well as content.

Employer engagement is particularly important in helping young people make informed career decisions about engineering⁵, but achieving sustained employer engagement within the curriculum is complex. Many teachers have limited knowledge of how best to approach employers to involve them in curriculum initiatives.

School leadership, therefore, plays a vital role in enabling teachers to gain the confidence to engage with engineers and work with them in devising learning opportunities within the curriculum.

Method

This was a small-scale mixed methods inquiry. We adopted a positive deviance approach, the premise of which is that solutions to common challenges exist most often in schools that are already performing

outstandingly and that members of the school community will have tacit knowledge and wisdom from which it is possible to learn and generalise⁶.

We grounded the study through an integrative review⁷ of literature on school leadership with a specific focus on leading complex issues such as cross-curricular teaching involving engineering projects delivered in collaboration with employers.

This was followed by an online survey sent to around 210 schools which had a declared interest in engineering through their involvement in engineering education initiatives. The response rate was 28%.

We then undertook individual in-depth telephone interviews with eleven school leaders who had expressed interest in being contacted through the survey. They representing primary and secondary schools and a mix of leadership levels including headteachers and middle leaders. The interviews explored participants' views on the value of engineering in schools, successful experiences of leading education for engineering and their personal leadership skills and attributes.

While this provided rich data about schools currently seeking to value engineering and offer opportunities for their students to explore engineering, the positive deviance approach does have limitations. It is time-consuming and necessarily an imprecise science, seeking to identify successful outliers at all levels of a large school system. Furthermore, those who are succeeding against the odds are, de facto, unusual, so their attributes and strategies may not always be easy to generalise from.

Findings

This study enabled us to understand some of the challenges facing leaders who were creating opportunities for young people to develop an interest in engineering by integrating EHoM into the school curriculum. Challenges included teachers' lack of confidence, perceived restrictions imposed by the increasingly academic focus of the National Curriculum in England and concerns about the negative implications for the school of a poor Ofsted judgement.

Our key finding, whether looking at the role of the headteacher or a middle leader such as head of department, was that the pedagogic leadership style offered the best chance of success in this demanding context. Our subsequent findings were grouped under three main themes: how leaders developed the school culture; the attributes they demonstrated; and the strategies, distributed across four core leadership functions, that were most effective in achieving their goal.

This paper reports on a sub-set of the findings. It specifically examines strategies that school leaders used to help teachers engage with engineers under the four core leadership functions of setting direction, developing staff, aligning changes and managing teaching and learning.

When setting direction and creating the school vision, leaders in schools successfully engaging with engineers established a pedagogy-focused culture in which engineering was valued. Engineering was included in the school's development plan and a whole-school focus on engineering was evident.

Employers were valued partners and engineering habits of mind were used to prompt teachers to think across subject boundaries.

Leaders developed teachers who valued what engineers brought to the classroom by modelling the desired pedagogy and participating in professional development. Teachers operated within an atmosphere of high trust and were encouraged to try innovative methods. There was an environment of supported risk-taking and failure was tolerated as part of the process of gathering evidence on what works.

Leaders were skilled at aligning their vision for engineering to the school ethos. They directed employer involvement to meet school needs. They engaged school governors and parents in their changes.

Finally, leaders ensured that teaching and learning activities were managed to support the vision. Timetabling was flexible enough to allow for project-based learning; assessment and progression statements valued and recognised EHoM learning; teachers had flexibility to deliver the curriculum, but without relaxing accountability.

In the light of these findings, practitioners and policy makers might consider the following to support teachers' engagement with engineers:

At school level, headteachers might consider:

- Recruiting school governors with STEM experience
- Developing professional development for teachers in collaboration with engineers
- Raising the status of STEM teaching through timetabling, space allocation and job descriptions.

At policy level, Ofsted, awarding bodies, engineering professional bodies and school leadership organisations might consider:

- Developing guidance for school leaders on incorporating education for engineering in the curriculum
- Encouraging engineering employers to persevere in their efforts to engage with schools, especially at primary level.

Further information

This paper was based on research commissioned by the Royal Academy of Engineering, published as *Learning to be an Engineer: the role of school leadership*⁸. It is the third report in the series on embedding engineering in the education system through the introduction of EHoM and can be downloaded from: www.raeng.org.uk/ehom-leadership

References

Lucas, B., Hanson, J. and Claxton, G. (2014) *Thinking like an engineer: implications for the education system.* London: Royal Academy of Engineering.

Lucas, B., Hanson, J., Bianchi, L. and Chippindall, J. (2017) *Learning to be an engineer: implications for the education system.* London: Royal Academy of Engineering.

Lucas, B. and Claxton, G. (2013) *Pedagogic Leadership: Creating cultures and practices for outstanding vocational education.* London: 157 Group.

The UK STEM Education landscape, Royal Academy of Engineering. 2016 <u>www.raeng.org.uk/stemlandscape</u>

Nathan, S. (31 July 2017) Inspiring future engineers with employer engagement. *The Engineer*. <u>https://www.theengineer.co.uk/inspiring-future-engineers-employer-engagement/</u> [Accessed 13 June 2018]

Pascale, R., Sternin J. and Sternin, M. (2010) *The power of positive deviance: how unlikely innovators solve the world's toughest problems*. Boston, MA: Harvard Business Press.

Torraco, R. J. (2005) Writing integrative literature reviews: guidelines and examples. *Human Resource Development Review*, 4(3), 356-367.

Lucas, B. and Hanson, J. (2018) *Learning to be an engineer: the role of school leadership*. London: Royal Academy of Engineering.



Employer Engagement: Too little, too late?

Dr Maria Turkenburg-van Diepen and Dr Pam Hanley (University of York)

Summary

Increasingly there is a recognition in the literature that primary-age children need to be informed about science-related opportunities. Our survey showed that companies appreciate the enthusiasm of their young visitors and the opportunity to inspire them. The biggest hurdle to on-site visits seems to be finding time to train staff and develop appropriate, inspirational activities. Moreover, staff regularly use volunteering for outreach as a stepping-stone to other things, making a programme like Children Challenging Industry potentially high maintenance in terms of training. Changes in organisational direction or key personnel can mean outreach programmes slip down the company agenda.

Context

The ASPIRES report (Archer et al, 2013) recommended introducing initiatives to boost science, technology, engineering, and maths (STEM)-related aspirations at the primary school level, because a focus on secondary is "likely to be too little, too late". Children Challenging Industry (CCI) is a rare example of an initiative designed to achieve this through building links between primary schools and local industry. It has been delivered by the Centre for Industry Education Collaboration (CIEC) at the University of York since 1996. CCI involves practical classroom activities and site visits to industry (or, where impossible, visits from an industry "ambassador" to the school). The programme aims to improve the following: children's interest in/enjoyment of science; teachers' knowledge and confidence teaching it; and children's and teachers' perceptions of industry. Ongoing evaluations show the programme meets these goals. However, only anecdotal information exists regarding the industry side of the relationship. We intended to find out how aware science-related employers are of educational outreach opportunities including CCI, how and why they engage, what kind of programmes they participate in, and what they perceive to be the benefits of and barriers to involvement.

Method

Fieldwork comprised an online survey and semi-structured telephone interviews. Employers and individual staff in science-related industries were asked to participate in the survey via personal approach, snowball sampling, promotion through third parties and so on. Survey respondents were asked whether they would be willing to take part in a follow-up interview.

72 respondents from 32 different companies provided data for the online survey. Half the companies (15) were in the chemicals sector, with the next most common being pharmaceuticals (6). Thirty-five respondents offered to be interviewed and 13 interviews were conducted with 15 people, including seven senior and three middle managers. Most of the respondents (28) were currently participating in CCI or had previously done so (12). Reflecting the methodological challenge of recruiting those uninvolved with CCI, only four had had no previous contact. The length of time current CCI participants had been involved ranged widely, with nine saying over six years and 13 under three years. The profile of the interviewees broadly reflected that of those responding to the survey, with the exception that all four of those claiming no previous contact with CCI were sampled.

The survey collected background information on the individual and organisation, before exploring involvement with schools-related programmes (including CCI), reasons for involvement including the initial decision-making process, and attitudes to educational outreach. The semi-structured interviews

probed in greater detail how and where in the organisational structure decisions about educational outreach are made, how involvement is maintained (where relevant), and the attractive features of different opportunities.

The survey was open from November 2017 to April 2018. Interviews were conducted between December 2017 and June 2018. Qualitative data was coded in detail using NVivo software before drawing out broader themes and patterns.

Findings

A variety of reasons was advanced for getting involved in education outreach, with the focus on schools and communities being the most important. Corporate social responsibility (CSR) featured highly. Staffrelated reasons, such as teambuilding and staff development, were also mentioned regularly.

Participants in the CCI programme particularly appreciated the "fun" and "buzz" of the visiting children: experiencing their sense of wonder and perhaps being instrumental in inspiring children to consider a science-related future. The challenges of CCI related to three main areas. Firstly, finding the resources in terms of time and people to run the visit. Secondly, designing an interesting programme pitched at the correct level. And thirdly, logistical issues around managing a large group of children in a working environment and ensuring the day runs to time.

Asked how CCI might be improved, some participants suggested increased funding. This would enable its promotion to more companies through enhanced marketing and advertising. It would also lessen the burden on industrial partners who contribute funds directly and in kind (by providing their employees' time for training, planning and executing the programme - sometimes having to stop manufacturing during the visit). Another proposed improvement was to make the industry link with the curriculum more explicit.

Most of the 56 respondents to a survey question about industry links agreed they were valuable, particularly for secondary schoolchildren (42 agree strongly) though rather less for primary (27). 21 out of 62 answering said they were involved in no school-related programmes other than CCI. However, another 15 were involved in four or more. Many companies have their own STEM or SIP (Science Industry Partnership) ambassadors, not just those going into schools for CCI. Some companies have their own programmes, such as BASF's Kids' Lab and Pfizer's Lab in a Box. Many companies have openings for work experience (often specifically employees' children) and are involved with career days in schools and such like.

When referring to benefits of other programmes, the links with the post-primary age group and with the wider local community become apparent: the companies want to instil awareness of their business, the science they do, and the careers that are available. They hope that this will provide them with a steady influx of new employees. Managers anticipate that current staff will make this extra commitment since they have a vested interest in the company showing its best side to the outside world.

One limitation of this study was that a high proportion of participants were already familiar with CCI, despite attempts to recruit from a wider pool. This may have made responses more favourable towards education outreach in general, and primary school outreach in particular.

Further information

Contact <u>maria.turkenburg@york.ac.uk</u> or see <u>http://www.ciec.org.uk/</u> for more detail about the work of the CIEC.

Project-based learning in university technical colleges: How are employers engaged?

Tami McCrone and David Sims (National Foundation for Educational Research)

Summary

This paper provides evidence from a qualitative NFER evaluation of University Technical Colleges (UTCs) commissioned by the Edge Foundation and the Royal Academy of Engineering. It draws on the <u>phase 1</u> report published in 2017 and emerging findings from phase 2 (forthcoming). We found that there is a range of UTC approaches to working with employers and to utilising their input into the design and delivery of project-based learning (PBL). Interviewees considered that UTC students are typically better prepared for the world of work than other students their age. They noted UTC students' enhanced levels of confidence, motivation and engagement.

Context

UTCs were introduced in 2010 and have a university as a lead sponsor. They are schools for 14 to 19 year olds that deliver an education which combines technical, practical and academic learning. They combine <u>National Curriculum</u> requirements with technical and vocational elements. Students can study a technical specialism alongside core academic subjects at GCSE and A-level. There were 49 UTCs open in England at the time of the publication of the interim report in 2017.

The overall aim of the study is to understand effective practice and lessons that can be learned from the approaches currently being adopted, particularly in relation to curriculum design and employer engagement, as well as the broader challenges facing UTCs. More specifically, the objectives of the research are to ascertain the use of PBL and employer engagement in the development and delivery of the curriculum within UTCs at Key Stage 4 and post-16 and to share the most effective practice and identify lessons learned, including areas that have been less successful, in order to inform future sector-wide practice. PBL typically provides real-world authentic questions and problems for students to address over an extended time period. Students normally work in teams alongside regular employer input.

Method

We used a case-study methodology supplemented with analysis of management information on the schools and a survey of young people's views on education in general and UTCs specifically.

In phase 1 (2017) we visited ten UTCs, three in the north of England, three in the midlands and four in the south of England. In total we interviewed ten senior leaders; ten members of staff with responsibility for liaising with employers; 20 other members of school staff; 16 employers; ten governors; and six higher

education institutions (HEIs). We also conducted nine focus groups with young people in Year 10, and 11 focus groups with young people in Year 12.

We asked the young people who took part in the focus groups to complete the survey. In addition, we asked a senior leader if they would administer the survey with the rest of their Year 10 and 12 students. We received 466 completed questionnaires from eight UTCs. As 414 were from four UTCs (and the remaining 52 were from the other four UTCs) caution should be exercised in the interpretation of the findings as not all UTCs were equally represented.

In phase 2 (2018) we have carried out three further in-depth case studies with three UTCs identified in phase 1 as demonstrating profound employer engagement and different approaches to PBL. We interviewed: three senior leaders; five heads of department; two teachers; three employers and conducted three focus groups with Year 13 students; and two focus groups with Year 11 students. We will conduct short interviews with young people who took part in the focus groups and/or college staff, gathering data on young people's destinations in the autumn of 2018. We will then produce a final report and a practitioner guide.

Findings

Employer Engagement

We found considerable employer awareness and presence at all the UTCs we visited ranging from profound co-production, through to moderate input to contextual contributions.

At its most profound level, some UTCs have developed relationships with employers where they are codeveloping and delivering projects, with employers taking ownership of curriculum units or modules. This is associated with PBL whereby specialist theoretical, practical and applied learning is informed by an employer providing an "authentic, engaging and complex question, problem, or challenge". Employers work in partnership with UTC staff to deliver the project, such as a BTEC unit or A Level module, from setup to final project outcome.

All ten case-study UTCs demonstrated moderate and contextual employer input into young people's learning. For example, through activities such as real-life application of theoretical learning into the practical world of work; informing the curriculum with current industry's skills needs; observation and experience of industry activity; genuine, authentic challenges or problems for young people to solve; ongoing, regular input into projects; visits to employers' workplaces; employer talks; resources and facilities; and specialist sector expertise. Governor and university interviewees supported UTCs' close links with employers and, where possible, helped to focus on progressing the UTCs' strategy to develop further young people's technical knowledge and skills in alignment with industry's current needs.

Perceived impact on young people

On the whole, young people were optimistic about the future, recognised that qualifications are important and that their UTC was providing them with the skills they need for the future. They indicated that they value authentic projects that provide qualifications or evidence of current workplace practice to enable them to 'stand out' when pursuing higher education or apprenticeships.

Interviewees believed that attending a UTC benefits young people in terms of: improved academic learning; enhanced technical skills and knowledge; increased transferable skills, readiness for the world of

work and engagement with learning and motivation to succeed; greater awareness of and confidence in post-UTC pathways; and increased likelihood of securing and maintaining chosen destinations.

Challenges

The main challenges the case-study UTCs faced were ensuring that they secured and managed a suitable range of employers providing high-quality input into the curriculum; recruiting and retaining appropriate students with an interest in the specialism and who are motivated to engage and succeed; and recruiting and retaining high-calibre staff with appropriate knowledge and skills.

Although challenging to engage enough employers, most case-study UTCs recognised the importance of investing in building and maintaining high-quality relationships with employers. They believe that the experiences are enabling their students to apply theoretical concepts to the real world and develop current, meaningful and relevant skills which will enable them to make successful transitions to apprenticeships, further/higher education and productive careers.

Further information

For more information on the report discussed in this paper please follow the project link above or visit the <u>NFER website.</u>

Examining the use of technical qualifications within Key Stage 5 programmes of study

Joanna Williamson and Matthew Carroll (Cambridge Assessment)

Summary

Student-level national datasets in England were analysed in order to investigate the use of technical qualifications within Key Stage 5 (KS5 – upper secondary) programmes of study. The analysis focused on Cambridge Technicals, a particular suite of technical qualifications. Candidates were typically middleattaining relative to their Key Stage 4 (KS4 – lower secondary) cohort, and studied Cambridge Technicals alongside a wide range of other qualifications. Their overall KS5 pathways ranged from entirely vocational/technical to mostly academic. Candidates' average total UCAS scores were approximately equivalent to ABB at A level, and many progressed to higher education (HE), apprenticeships and further education (FE).

Why the research was undertaken

Research was carried out to gain a more up-to-date and detailed understanding of which KS5 students in England currently take technical qualifications, and how they incorporate them within their studies.

Previous research has shown that uptake of technical and vocational courses at KS5 has often been higher among lower/middle attainment groups, among male students, in areas of higher socioeconomic deprivation, in more industrialised regions, and in FE colleges. Concerns have frequently been raised about the 'warehousing' of certain students on courses that do not prepare students for meaningful progression. Recent trends, however, show applied/technical courses increasingly being offered by schools and 6th form colleges, and increasing numbers of students with applied/technical qualifications progressing to HE.

The UK Government's Post-16 Skills Plan, published in July 2016, announced the creation of discrete academic and technical routes at KS5, marking a radical change from previous practice. The future of many qualifications in the current landscape, including many applied/technical qualifications, is unclear. Our concern was that not enough was known about the role that qualifications like this currently play – and that the direction of present policy makes it important to find out.

Method

We analysed all students in England who took a level 3¹ Cambridge Technical qualification between 2012/13 and 2015/16 (the most recent year for which data was available). We obtained data from the KS5 National Pupil Database (NPD), which lists student and school characteristics, prior attainment (at age 16), and all qualifications achieved at upper secondary level, for all students in England. We classified each student's programme of study as an 'academic', 'mostly academic', 'mixed', 'mostly

¹ Equivalent in difficulty to an A level.

vocational/technical' or 'vocational/technical' pathway according to the proportion of hours spent on academic or vocational/applied/technical qualifications. We defined each student's **main** qualification to be the one for which they received the most UCAS points (since this took into account both performance and qualification size).

To examine student progression, we linked the KS5 NPD to the Individualised Learner Record (detailing participation in FE and apprenticeships) and Higher Education Statistics Agency records (detailing participation in HE). We counted progression to HE only where a student remained on their course from October to the following March (at least), matching the definition of 'sustained' participation used in the Department for Education's destinations data. We were not able to analyse the progression of students who progressed to employment only, as data was not available.

We analysed progression for students who were in Year 13 in 2013/14 or in 2014/15, and looked at their activities in the subsequent academic year (i.e., 2014/15 or 2015/16). These were the most recent cohorts for which data was available on students' post-KS5 destinations.

Detailed descriptive statistics were used to answer our three research questions:

- 1. Who takes Cambridge Technicals?
- 2. What else do Cambridge Technicals students study?
- 3. How do these students perform at KS5, and where do they progress to next?

Findings

Candidate characteristics

Cambridge Technicals candidates were more likely to be male (46.5% female), in contrast to A level candidates and KS5 students overall. We found strong gender differences between subjects: just over 30% of IT candidates were female, whilst health and social care had over 90% female candidates.

Candidates tended to have lower prior attainment than other KS5 students. However, compared with their KS4 cohort (including those who didn't progress to KS5), candidates were from middle-attaining groups. Similarly, candidates tended to be from areas of higher socio-economic deprivation than other KS5 students, but from slightly *less* deprived areas compared with their KS4 cohort.

The majority of candidates (68.4%) studied at a comprehensive school or academy, rather than a college. Very few studied at selective or independent schools.

Programmes of study

Among candidates in 2015/16, 47% also took an A level, and 35% also took a BTEC. Reflecting the 16-19 funding policy introduced in 2014, 22% also took GCSE English and/or Maths, a steep increase from previous years. The most common level 3 qualification combinations were Cambridge Technicals with AS/A levels only (35%), and Cambridge Technicals with AS/A levels and BTECs (16%). Candidates' overall programmes of study ranged from entirely vocational/technical to mostly academic.

The majority of candidates took only one Cambridge Technical, but around a quarter took more than one – commonly, a smaller Cambridge Technical qualification in Year 12, followed by an A-level-sized Cambridge Technical in the same subject in Year 13, appearing to mirror progression from AS to A level in academic subjects. Candidates at FE colleges were more likely than those from other types of centre to study *only* Cambridge Technicals.

Progression of Cambridge Technicals candidates

Candidates in 2014/15 achieved median UCAS points of 127 (128 is equivalent to ABB at A level), and over 40% progressed to HE. Of students whose **main** qualification was a Cambridge Technical, 40%

progressed to HE - this was lower than for students whose main qualification was an Applied A level (48%), but higher than for students whose main qualification was a BTEC (33%).

Among students on mixed or entirely vocational/technical pathways, students with Cambridge Technicals progressed to HE more frequently than those without. For students on largely academic pathways, progression rates were similar for students with and without Cambridge Technicals. Cambridge Technicals candidates who also took AS/A levels were the most likely to progress to HE (~46%).

Around 15% of Cambridge Technicals candidates progressed to an FE-based apprenticeship or traineeship, double the proportion seen among other students.

Overall, the findings provide a detailed picture of candidates undertaking technical qualifications at KS5. In several important aspects, this picture differs from that shown by previous studies in vocational/technical education.

Further information

For a copy of the conference presentation, visit: <u>https://www.educationandemployers.org/research/5th-international-conference-on-employer-engagement-in-education-and-training-2018/</u>



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Insiders or outsiders, who do you trust? Engaging employers in school-based career activities

Christian Percy and Dr Elnaz Kashefpakdel (Education and Employers)

Summary

This research found that school-based career talks can provide similar wage benefits to having personal networks that can help students in the jobs market. We examined the relationship between wages for those in full-time employment aged 26 and what they said at age 16, controlling for a range of background factors and using a large dataset that tracked individuals born in 1970. However, we also found that school-based careers activities can only compensate for prior disadvantage if used proactively – without this, they risk reinforcing social inequalities.

Context

Previous research has found that careers talks with outside speakers and engagements with the world of work while at school are linked to a modest, but statistically significant improvement in earnings in your 20s. With a good number of such talks and engagements, the effect can accumulate, being equivalent to a few thousand pounds a year.

For instance, we have found talks are associated with larger wages if they are regular, outside of exam years, with outside speakers and in a school environment with a proactive careers culture. Moreover, when students say they like the overall programme of talks, the wage effect tends to be higher.

We know that this relationship exists on average when you control for students' different socio-economic background, but we do not know how it varies across such different backgrounds – which led to this research.

Method

A large representative group of British people, all born in a single week in 1970, answered detailed surveys at regular intervals about their life, as did their parents and teachers. By tracking the same individuals over time, we get a rich insight into how their early lives, as reported at the time, might have affected their futures.

We used answers from several surveys in the dataset, the British Cohort Study, to compare how someone's self-reported wage at age 26 (i.e. 1996) relates to the number and type of careers talks they participated in at age 14-16 (i.e. the mid 1980s, when there was great variation in such provision), as well as whether they thought at aged 16 that they or their parents had a contact who might be able to help them get a job.

In doing this, we are careful only to compare like for like, focusing just on those in full-time employment. Specifically we set up the mathematics so that we only people compare people who have broadly similar

academic achievements (Drawing test at age 5, Maths scores at age 16, and highest qualification at age 26), social backgrounds (mother's socio-economic status), early home learning environment (based on the TV watched at age 10), gender, and how hard it might be to get a job in their area (local economic activity rate). These features were carefully chosen out of a larger set of options based on which were most closely linked to wage. We then report the average effect across all similar sets of people (in technical terms: regression analysis with control variables).

Finally, we reviewed modern case studies of employer activities in British schools to identify how classbased differences play out today.

Findings

1. Career talks with outside speakers are associated with comparable (or better) wage benefits than having a contact, family or otherwise to help you get a job

Young people at age 26 in full-time employment earned, on average, 4.3% more if they had said at age 16 that they had a contact to help them get a job (typically 40% did), controlling for a wide range of background factors (sample of 1,234, statistically significant at 5% level).

Among just those young people who had said they didn't have a contact to help them get a job, if they had participated in a programme of careers talks with outside speakers (typically 84% had), they would earn 8.5% more on average than those who hadn't (sample of 692, statistically significant at 5% level). Whereas those who did say they had a contact saw no average wage difference as a result of school-based careers talks.

2. Positive wage effects manifest, on average, for outside speakers, but not for internal school careers activity. However, outside speakers only achieve their potential when lots of internal school careers activity takes place around them

Each careers talk with an outside speaker contributed 0.7% to 0.9% in higher wages at age 26 (samples of 571 to 781, statistically significant at 5% level). However, internal school-based careers discussions were not associated with an average effect – e.g. the number of timetabled classes or other classes in which careers were discussed, personal contact with staff to discuss their career, or having a careers officer interview.

However, careers talks with outside speakers were perceived as more useful were associated with higher wages among schools which were in the top half of the spectrum for providing such internal careers activity. Just as school staff do not have all the skills to do it themselves, neither do volunteers visit a school in a vacuum – we must all work closely together to prepare young people for the world of work.

3. However, to use such school-mediated activities to compensate for prior disadvantage will require a different approach to what happens naturally and what tends to happen today – proactive intervention is required

Children from more privileged socio-economic backgrounds, as measured by their mother's job on a standard six-point scale, typically described career talks with outside speakers as less helpful, but got more benefit from those same talks.

Recent case studies in Britain similarly identify that privileged students tend to benefit from higher quality employer activities. For instance:

• Private schools invest more in and make greater use of their alumni network for careers activities;

- Schools with more students from families on benefits (FSM ratio) found it harder to get work placements in the health sector for their students who wanted to study medicine at university;
- An analysis of five state schools in the West Midlands found that in four of the schools there was a close link between the percentage of parents in professional jobs and the percentage of students who went on work experience placements with high-paying professional firms.

One school from the West Midlands study provides hope that we can break the tendency of careers activities to reinforce social privilege. This school bucked the trend as a result of the school and the teachers being proactive in organising the work experience placements for the students, rather than requesting parents and students to lead on finding placements wherever possible.

It is possible to use school-based careers activities to raise wages for those from poorer backgrounds, but only if those activities are targeted at those groups and properly funded to be high quality, personalised activities integrated into a school environment that prioritises careers education.

Further information

Visit Education and Employers Research webpages for slides.

For more information or access to papers and presentations: Email chris@cspres.co.uk or via @chris_percy

"With a degree I'll get a good job." A role for employers in UCAS decision-making?

Dr Susan McGrath (UP2UNI)

Summary

Despite a widely-held belief amongst UCAS applicants that having a degree enhances employment prospects, this research found poor understanding of links between courses, universities and graduate roles. Using a series of card-sort tasks designed for the project, Year 13 students described how they generated a longlist, then selected a shortlist for their UCAS form. State-sector students sometimes expressed career expectations unlikely to be fulfilled by their choices and made few references to employer engagement in their UCAS decision-making. In contrast, independent-sector students described an informed decision-making process in which employer engagement was an integral part of the UCAS process.

Why the research was undertaken

The task of choosing five courses from many thousands of options is complex, but the mechanisms by which young people achieve this are under-researched. The primary purpose of this research was to contribute to existing knowledge by devising a methodology able to unpick the UCAS decision-making process in sufficient detail to identify specific knowledge and understanding of the HE-sector, and to measure the impact of this on decision-making behaviour and UCAS outcomes. An applicant-centred, psychological approach to understanding patterns of progression to university offered a means of filling this gap in knowledge.

National datasets consistently demonstrate that young people from less-advantaged backgrounds are under-represented in prestigious universities, on prestigious degree courses and in many professions. Concern with these apparent inequities in social class appears not only in the academic literature but also in the mainstream press, often implying that some students deliberately avoid prestigious universities, courses or careers, based on a belief that certain types of university are not for them. This assumes that young people are making informed choices, underpinned by knowledge and understanding of the hierarchy amongst UK universities and the links between UCAS choices and career prospects. This research explored the veracity of such assumptions.

How the research was undertaken

An applicant-centred approach to exploring UCAS decision making had the potential to offer a new insight on progression and required a novel approach to data collection. A wide range of techniques were considered, and card-sorting demonstrated a capacity to elicit responses that generated a body of rich data. Card-sort tasks created for the study were embedded within an interview format, 'scaffolding' the applicant's reflections of a process that sometimes covered several years.

Fieldwork centres were chosen to reflect the range of 16-19 provision, including both BTEC and A level students in school sixth-forms, a sixth-form college and an FE college. The centres were incrementally different in their orientation to higher education, from a vocational centre with little history of progression to higher education, to an independent school with a strong history of progression to Russell Group

universities. Six cohorts of students (56 in total) were interviewed at a stage in the UCAS process when they had received most of their offers and were choosing the two universities to accept as their Firm and Insurance places.

The card-sorts produced quantitative data that measured knowledge of 115 UK universities, the number and type of sources of information used to research universities, the number and type of universities longlisted and shortlisted, preference between universities and confidence of obtaining a place. The card-sort tasks also proved an effective 'thinking aloud' technique, with spontaneous comments generating qualitative data that linked the tasks to the interview questions and helped to achieve a seamless interview experience.

What the research found

Quantitative data revealed significant differences between cohorts in the number and type of universities considered, longlisted and shortlisted, and the number and type of sources of information used to research universities. Qualitative data showed a widely-held belief that having a degree was the route to a good job, but many students expressed career aspirations unlikely to be met by their chosen course. Every student was concerned with quality and wanted to enter a good university, but the concept of 'good' was determined by what they knew about the HE-sector. Strong knowledge structure was linked to 'cold' reasoning and a macro-focussed approach drawing on objective data sources. Weak knowledge structure was linked to 'hot' reasoning and a micro-focussed approach heavily reliant on friends and family, who knew little more than the student.

All five state-sector cohorts had some students whose approach to UCAS could be described as 'decision making under conditions of ignorance'. There were several negative consequences:

- Some did not use all five of their UCAS options, applying only to one or two personally recommended universities, reducing their chance of obtaining a place
- Some were unaware of any hierarchy amongst universities, and even those who appeared to understand that employers may not regard all universities as 'equal' did not know *which* universities are considered prestigious.
- Many expressed a simplistic belief that degrees with a vocational title would automatically qualify them for a professional career, unaware that some employers might prefer an academic degree or that professional qualifications might have to be acquired after graduation to be fully qualified.
- Very few had consulted any form of labour market information, and many had expectations of entering a professional or managerial role with a commensurate salary, unaware that their chosen course made this unlikely

In sharp contrast, students in the independent-sector cohort all described a *curriculum* for UCAS, giving remarkably similar accounts of how they 'worked' on UCAS alongside their A levels. There were many references to employer engagement, often beginning as early as year 10. This included periods of work experience, participation in vocationally-relevant courses accredited by professional bodies, career-relevant mentoring, mock interviews with visiting employers, attendance at careers conferences and networking dinners hosted by the school. For these students, UCAS decision-making appeared to be an integral part of career planning.

In theory, UCAS offers comprehensive information about courses and universities including links to graduate destination data, and a transparent application process. But effective use of UCAS requires prior knowledge of the HE-sector and the links between degrees and careers. Employer engagement has considerable potential to inform UCAS decision making, but it seems that the students most in need of this engagement may be the least likely to receive it.

Further information

Further information can be obtained from Dr Susan McGrath, Co-Director UP2UNI.

Email: <u>susan.mcgrath@up2uni.org</u>

Vulnerable young people, employers and VET

Professor Morag MacDonald, David Kane and **Dr James Williams** (Birmingham City University)

Summary

This European project comprising partners representing Austria, Bulgaria, Italy, Romania and the UK, investigated the difficulties faced by vulnerable young people wishing to obtain sustainable vocational education and training. Through a series of interlinked work packages, the project mapped the current situation, identified best practice, brought practitioners together and identified the needs of employers. One of the key findings is that when working with vulnerable youngsters, individualised support is essential. Whatever limitations young people face due to their social environment, learning disabilities or health problems, they all require encouragement, empowerment and guidance throughout their journey into vocational education and training.

Context

The most vulnerable young people in our society face particular difficulties in obtaining and sustaining vocational education and training and work placements. There is a need for work to support VET providers, including both trainers/colleges and employers, as well as the learners themselves, in ensuring that this group of young people are successful in gaining sustainable employment. There are concerns that too many young people are leaving school without qualifications and employability skills. The most vulnerable young people fit this category: often, they leave compulsory education with no identifiable skills and no support. Whilst school can play an important part here, it is vital to enable a range of other organisations to contribute, particularly employers who should be encouraged to engage. Specifically, it is important to identify what employers expect from vulnerable young people in the workplace and how they can address issues that arise resulting from vulnerability. This project promotes partnership working amongst public and private organisations to support the most vulnerable young people to succeed and build their own social and cultural capital.

Method

The project used a mixed methods approach of documentary analysis, interviews and questionnaire surveys to inform the creation of the online educational resources (OER). The project involved five main activities across five EU partner countries: 1) An evidence base that informed the OER; 2) sharing practice visits; 3) developing a network; 4) creation of the OER; 5) evaluating the OER through discussion with employers and trainers.

The evidence base comprised two elements: a) an analysis of current policy and approaches in the partner countries through desk-based research; and b) a set of case studies of specific programmes or activities designed to improve the prospects of vulnerable young people.

The sharing practice visits highlighted activities taking place in three different partner countries, all with the specific aim of providing opportunities for young people to access and sustain VET and employment. In the UK, we visited a regional network of trainers; in Romania, we visited Timisoara prison to see how young people are prepared for the workplace; in Austria, we visited SpaceLab, an organisation that provides a safe place for vulnerable young people to engage in learning and reflection.

The professional network was developed both to promote the project activity and to widen the discussion about the needs of vulnerable young people, employers, training and policy makers. It includes a wide range of different stakeholders across the EU including training providers, government bodies, employers and non-profit organisations.

The core output of the project are the OER, which comprise a) an online Handbook for employers and training providers/professionals who work or wish to work with vulnerable young people and b) a set of additional resources that focus on the different partner experiences.

The OER were subject to a piloting and evaluation exercise with potential users including, for example, employers and service providers, via an online questionnaire completed by users from all partner countries. This exercise provided valuable feedback that enabled the resources to be finalised.

Findings

During the implementation of the project, our original definition and pre-conceptions of vulnerable young people were widened and challenged by the partners and key stakeholders. For example, in Austria, young people who experience and are recovering from brain injury exhibit key vulnerabilities and this group was missing from our original list of vulnerable groups. In addition, the needs of young prisoners was highlighted and demonstrated the depth of their vulnerability with regard to obtaining and sustaining training and employment. This indicates that the concept of vulnerability covers many groups who, due to the fluidity of the definition, require continuing social support of varying degrees and levels of intensity.

Pre-conceptions about employers were also challenged. Originally, it was assumed that employers were not interested in employing young vulnerable people when, in reality, their attitudes are often due to a lack of understanding of vulnerability and not knowing where to access help or how to support a young vulnerable person in the workplace. The Handbook produced addresses this issue and will hopefully act to support employers and young vulnerable people.

The employer experience is nuanced and this needs to be addressed by future work in this area. Engagement with UK employers revealed that, in certain circumstances, a well-intentioned desire to help can have a negative impact. For example, one employer talked at the UK Multiplier event about a situation where a young person's wage was increased, which resulted in them losing benefit payments. This made it impossible for the young person to pay for their housing.

The extent to which employers and VET providers can provide support for vulnerable young people can often be curtailed due to difficult economic situations, especially for SMEs. Also, in some partner countries, changes in policy surrounding apprenticeships and VET have occurred making it complex for employers to navigate the changes. For example, both the UK and Bulgarian partners reported that there had been significant change in government policy over recent decades. In the UK, recent changes in support for apprenticeships have been controversial and confusing for many employers, with a concomitant impact on young people seeking VET and apprenticeships. In this climate, there is a tendency for the vulnerable to be over-looked and further marginalised. In Bulgaria, 'VET development in the country has been hampered due to constant changes to the VET Act over the last 13 years. Similarly,

no uniform system of apprenticeship currently exists.' Above all, the EU's Youth Guarantee, designed to promote a comprehensive approach that combines education, employment and vocational training, has had mixed success in the different partner countries.

Further information

The project website can be located here: <u>https://www.positivepartnerships.eu/</u>

Measuring the Wider Impacts of Apprenticeships – the Apprenticeship Wellbeing Survey

Gillian Wylie, Dr Lynne Robson and Dr Patrick Watt (Skills Development Scotland - SDS)

Summary

This study provides the first estimates of the wellbeing effects associated with participation in Modern Apprenticeships (MAs) in Scotland. Comparisons are made with the wellbeing of the Scottish population at large. A telephone survey of over 2,000 MAs, who left their apprenticeship between 1-3 years ago, was completed in early 2018. The results highlighted that MAs generally report higher levels of wellbeing than the general population.

Context

The research forms part of a wider piece of work to measure the long-term outcomes of apprenticeships to individuals, employers and society. The <u>long-term outcomes framework</u> (developed for Skills Development Scotland by the OECD) details how this is being carried out. Over the past decade, there has been a growing interest in defining and measuring wellbeing in the UK. The creation of the <u>National Wellbeing Programme</u> in 2010 and the creation of the <u>What Works Centre for Wellbeing</u> in 2014 displays this. In Scotland, the <u>Oxfam Humankind Index</u> was launched in 2012 and the Scottish Government's <u>National Performance Framework</u> includes several wellbeing indicators. Poor levels of wellbeing can have an effect on the economy, employers and individuals through reducing productivity, poor health behaviours, increased absence and making lower quality decisions (<u>Cottini and Lucifora</u>, 2013). Additionally, recent research with parents of young people in Scotland has shown the importance parents now place on their child being 'happy' in whatever route they take (<u>SDS 2018</u>).

Method

A comprehensive literature review was conducted in late 2017 to investigate the factors that can influence wellbeing and to review existing studies looking at the impact of learning on wellbeing. This highlighted the scale of factors that can affect subjective wellbeing and the limited literature of the role of learning on wellbeing – particularly work-based learning.

A telephone survey was developed, building on the questions asked in two previous MA Outcomes Surveys (completed in 2012 and 2016, which examined the short to medium term impacts of apprenticeships) and the subjective wellbeing questions developed by the Office of National Statistics. The Contact Centre at Skills Development Scotland conducted the telephone interviews, achieving over 2,000 interviews with MA leavers 12-36 months post training. The sample size is sufficient enough to allow analysis by individual framework². Statistical analysis was conducted to investigate

- Average levels of wellbeing
- Differences across frameworks, levels, achievement and personal characteristics
- The significance levels of these differences

In addition, a 'deep dive' was conducted to gain further insight into these results. This includes follow up focus groups (with a focus on speaking to under-represented groups) and further statistical analysis to examine what 'drives' wellbeing. This is ongoing at the time of writing.

Findings

MAs report high levels of wellbeing, **higher than the general population** on satisfaction, worthwhile and happiness measures. However, MAs also report higher anxiety levels than the general population in the 16-19 and 25+ age categories. People who **complete** their MA are significantly more likely to feel satisfied with their life and less likely to be anxious. Early findings from the focus groups indicates that this may come from a sense of fulfilment from completing and a feeling of career progression.

There are a few differences between **frameworks** (or 'subject area'). Interestingly, those in Social Services and Healthcare frameworks report significantly higher levels of feeling that their life is worthwhile compared to those in Business and Administration, IT and Telecommunications and Retail. Focus group discussions indicate that people seek different things from their job. While those in Social Services careers may seek a job that is 'worthwhile', those in IT sectors seek fulfilment from their job in other ways – most notably, financially. There are no real differences in wellbeing scores between **males and females**. However, females do report feeling more anxious than males. This finding is in line with the general population. Focus group participants report that females are more likely to report being more anxious, rather than actually feeling more anxious – indicating that a response bias may be at play.

Perhaps unsurprisingly, we also find that the MA levers who are currently **employed** report significantly higher levels of wellbeing than those who are currently unemployed. Many studies have reported the large and significant negative effect that being out of work can have on wellbeing.

An open-ended question to measure the **attribution** of the apprenticeship on wellbeing showed high levels of attribution and positive effects on wellbeing. Individuals reported that the apprenticeship improved their wellbeing by gaining confidence, increasing their opportunities and gaining new knowledge. A minority of negative responses focussed on the apprenticeship having little impact on wellbeing if the apprenticeship had already been doing their job for a long length of time prior to starting the training.

Personal and career development was also examined. There were high levels of this reported, with the proportion of respondents stating that they had received a pay rise or a promotion larger in this currently study (MA leavers 12-36 months post training) than in the previous short-term MA Outcomes study (6-9 months post training). The proportion of people in employment remains high.

Further information

For further information on the Apprenticeship Long Term Outcomes project, visit here.

² MA frameworks are subject areas or sectors