

## Consultation for the “Building our Industrial Strategy” Green Paper

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We intend to address the consultation questions that relate to ‘developing skills’ which are:

10. What more can we do to improve basic skills? How can we make a success of the new transition year? Should we change the way that those resitting basic qualifications study, to focus more on basic skills excellence?
11. Do you agree with the different elements of the vision for the new technical education system set out here? Are there further lessons from other countries’ systems?
12. How can we make the application process for further education colleges and apprenticeships clearer and simpler, drawing lessons from the higher education sector?
13. What skills shortages do we have or expect to have, in particular sectors or local areas, and how can we link the skills needs of industry to skills provision by educational institutions in local areas?
14. How can we enable and encourage people to retrain and upskill throughout their working lives, particularly in places where industries are changing or declining? Are there particular sectors where this could be appropriate?

### Improving Basic Skills

It is right to emphasise basic skills for the reasons discussed in the Green Paper. The UK lags behind other countries (as shown by PIAAC). However, in addition, recent research and empirical evidence has underlined the importance of fostering and developing a set of skills, which are often over-looked in the policy debate: namely, non-cognitive skills. This term is an umbrella term that includes a range of skills and traits, such as personality, soft skills, and socio-emotional skills. Employers have signalled the need to focus on these skills for long now, and while some targeted programmes have started to be implemented, a national strategy is currently still missing.

Gutman and Schoon (2013) reviewed a number of programmes and policies interventions to address and foster the non-cognitive skills, such as mentoring programmes, service learning programmes,

outdoor adventure programmes, and social and emotional learning (SEL) programmes. These interventions have different effects on the targeted groups, with on average a positive effect on these skills, but some of them, such as SEL programmes can be implemented in the school context, and even included in curricula.

Another useful review has been provided by Kautz et al. (2014), which shows that early childhood and elementary school programmes have typically higher and long-lasting effects. As the Nobel laureate James Heckman has widely underlined in his seminal research, policies focusing on these skills are a fundamental part of a national portfolio of policies. In particular, he advocates for a greater focus in childhood and schools educational programmes on both cognitive and non-cognitive skills development, and the inclusions of these skills in the evaluation of the effectiveness of these programmes.

From our own CVER research on young people engaged in vocational education Below Level 2 and more recently, the evaluation of the traineeship programme, we find evidence that learning in education programmes with low level technical skills has beneficial effects on the access to apprenticeships, labour market participation and earnings (Dorsett et al. 2017; Hedges et al. 2017). These programmes include the acquisition of basic skills in numeracy and literacy, but they also – and especially the Traineeship programme – engage young people to acquire non-cognitive skills such as conscientiousness, self-discipline, perseverance, cooperation and willingness to be managed by more senior/adult employees. In our view, these are equally essential ingredients to success on the labour market, and the presence of young people in the workplace seems to be particularly helpful. The transition year should aim to represent both cognitive and non-cognitive skills.

If the aim of the transition year is to bring students up to ‘level 3’ courses, it will require supporting at least 25% of a cohort (see Hupkau et al. 2016). This transition year will need to be used to provide effective remedial education in English and maths as well as helping students to identify a course the following year that is suitable for their interests and talents. Good careers information and advice will be a very important part of this. As a high proportion of these students have special needs or come from an economically disadvantaged background (indicated by eligibility to receive free school meals), it is important that this transition year is properly resourced and staffed by people with appropriate expertise.

For students who find it very difficult to pass GCSE English/maths, new approaches do need to be tried and evaluated that would enable them to acquire sufficient literacy and numeracy to access courses and enable them to progress within the labour market. In terms of research, it is important to open up the ‘black-box’ of remediation strategies and identify which types of intervention have an impact on students’ outcomes and in what context. There are some recent reviews of evaluation evidence (Maughan et al. 2016; Van Effenterre, 2017), although a shortage of strategies with a strong evidence base. However, there is some good evidence that face-to-face mentoring can have positive effects. Another interesting finding is that combined approaches (such as academic support services and financial incentives) can be more effective than the provision of one of these services in isolation.

## Vision for the New Technical Education System

The implementation of Lord Sainsbury’s recommendations would greatly improve the system of technical education. In particular, the simplification of post-16 options and clear ‘routes’ is badly needed (as illustrated by Hupkau et al. 2016 for example).

It is very important that there is some cohesiveness between the reform of post-16 education and the development of new apprenticeship frameworks. For example, new apprenticeship standards do not have accreditation in the form of a qualification. Unwin (2017) reviews the experience of other countries and in all the countries examined finds that nationally recognised and validated forms of accreditation are regarded as important and apprentices receive some form of certificate or diploma. Apprenticeships need to be formulated with the needs of students (and their future employers) in mind and not only the need of current employers. Qualifications play a signalling role in the education system generally, as well as in the labour market. It is not at all clear why they have been abandoned in the reforms to apprenticeships and we suggest that this be reconsidered urgently.

In England, the minimum duration of apprenticeships is extremely short (12 months) whereas in other countries the minimum duration is at least 2 years (see Unwin, 2017). It is very important that apprenticeships (as well as technical education generally) have sufficient breadth such that young people are able to move from one industry to another if and when the labour market changes. In reforming technical education and apprenticeships, the issue of transferability of skills needs to be given serious consideration.

There are some signs that apprenticeship reforms are being driven through too fast – which will be to the detriment to the policy in the medium term. For example, the recent procurement process raised very serious concerns with many strong providers left off the list (including FE colleges and universities with many years of experience and good Ofsted ratings). It does not serve students or employers well if the track record of providers is not given due weight in the procurement process and if apprenticeship standards are approved without an assessor in place. Successful apprenticeship systems in other countries involve all stakeholders (not only employers) and have rigorous processes in place. We recommend that the development of appropriate structures is given priority over speed in how apprenticeships (as well as technical education more generally) are reformed.

## Improving the application process for FE Colleges and Apprenticeships

The Green Paper suggests creating a course-finding process for technical education similar to the UCAS process. This is an excellent idea in principle. At the very least, students should be able to easily access information about post-16 opportunities in their area (from all providers receiving public money, including schools). It would also be useful to have a national portal for apprenticeships (which hasn't happened with the National Apprenticeship Service). If this is too complicated for all types of apprenticeship, it would be useful to have portals developed for different vocational sectors where opportunities for young people exist. This might be developed in the context of the 15 routes proposed in the Post-16 Plan. Alternatively (or as well as), it would also be useful to do this by region.

## Skill shortages

The primary data source for skills shortages in the UK is the Employer Skills Surveys (ESS), undertaken biennially and UK-wide since 2011. Information on two types of skill shortages is collected; specifically, the inability of firms to fill vacancies due to a lack of appropriate skills in the external labour market, and firms having individuals amongst their current workforce who lack the skills to perform their jobs at the appropriate level.

Considering first the external skill shortage, the most recent data, from the 2015 ESS survey, show that 19% of establishments had a vacancy at the time of the survey (UKCES, 2016). Of these, 23% (so 6% of all employers) were finding it hard to fill their vacancies due to a shortage of skills available in the external labour market. This density figure (skills-shortage vacancies as a proportion of all

vacancies) has increased from 16% in 2011, suggesting that as the economy has moved out of recession, skills shortages have been more keenly felt.

This density of skills shortage vacancies differs substantially across sectors. The sectors with the highest proportion of such vacancies are Electricity/gas/water (35%), Construction (35%), Transport and Communications (31%), and Manufacturing (30%). The sectors least affected by skills shortages are Education (16%) and Public Administration (9%). The nature of the sectors most affected would suggest that it is manual jobs that are most likely to experience skills shortages, and a classification of density by occupational grouping confirms this, with the highest density for Skilled trades (43%) followed by machine operatives (32%). Professionals (32%) and Associate professionals (22%) also show relatively high densities.

The density of skills shortage vacancies also differs across regions, though by a smaller extent than across sectors and occupations. This has been most recently considered in the 2013 version of the Employer's Skills Survey. The highest proportions of vacancies that are hard to fill due to a shortage of skills are observed in the South-East (27%), East of England (26%), London (23%) and the North-West (23%), while the lowest proportions are observed in the South-West (17%) and Yorkshire and Humberside (17%). It therefore appears that external skills shortages are more keenly felt in more prosperous and faster growing regions. Disaggregating regions into smaller areas by Local Enterprise Partnership (LEP), reveals more variation in skills shortage density, though the general pattern remains similar, with the LEPs with the highest proportions of skills shortage all being in the North-West or East and South-East and the lowest proportions observed mostly in the North-East and Yorkshire, and the South-West.

Employers in the ESS also report on internal skill gaps, i.e. whether any of their employees are not fully proficient in their jobs. 14% of employers responded that this was the case for them. Contrary to the results for external skill shortages, the proportion of employers affected by such skill gaps is lower in 2015 than in previous years though in terms of the proportion of all workers who are not fully proficient, there has been little recent change.

As with skills shortage vacancies, the proportion of internal skills gaps varies by sector, with Manufacturing (7.2%) and Hotels and catering (also 7.2%) having the highest percentage of workers with insufficient skills, showing that internal skills shortages can occur together with external shortages (Manufacturing) or without (Hotels).

The Employer Skills Survey also asks employers to report the skills that are in short supply. Very similar responses are given for both external and internal skill gaps. In both cases, it is the technical 'specialist skills needed for the role' that are most likely to be in short supply either internally and externally. Other skills in the technical list that employers report to be difficult to find include complex problem-solving, product knowledge, and numerical skills, whilst amongst the softer skills, time management, customer-handling, team working, and management skills are most often mentioned.

### **Linking the skills needs of industry to provision by educational institutions in local areas?**

A criticism of vocational and technical education in England has been the incentive structure which has rewarded providers for meeting numerical targets rather than providing the skills needed by students and employers. There have been changes to address this problem – for example, providing funding via employers so that they become the purchasers of training providers' services. Further improvements that could be made include the following:

1. The provision of more data on skill needs and skill shortages at the local level to guide young people's decisions (discussed above).
2. Representative bodies of both providers and employers are needed, with close communication and co-operation between the two. Trained intermediaries are also needed to engage and coordinate the

discussion of the various stakeholders. On the employer side, Local Enterprise Partnerships (LEPs) provide a forum for local employers to come together with local council representatives, in which such issues concerning skills needs and shortages can be discussed. This is not an easy task, and requires employer representatives to see beyond their own short-term needs to take account of other wider area and sectoral needs, and not just at the current point in time, but also trying to predict future skill needs. While the largest local employers obviously have an important voice to be heard given the volume of employment that they provide, it is important that SMEs with their own particular needs are represented on such bodies. On the side of colleges and training providers, it is perhaps even harder to create a representative body of suppliers, attempting to stimulate co-operation whilst at the same time acknowledging that they are competing for the declining amounts of funding. It nevertheless remains important, to avoid the duplication of effort involved with employers talking separately to individual providers.

3. Following discussions between employer and provider representatives about the local skill needs, a major issue to be addressed is how to undertake any required changes in provision to satisfy those skill needs. Colleges and other providers will need to decide how they wish to respond themselves, making decisions about the area and level of qualifications they want to provide, and whether they want to fill identified gaps in provision not being considered by other providers. The benefits of co-operation to reduce duplication here are obvious. In a co-ordinated local response, it may be that colleges and providers decide to specialise in different particular areas and perhaps some will attempt to become new Institutes of Technology. With any change in provision, or change of syllabus within existing provision, attention also needs to be given to how it would be taught. Those with recent experience in industry may be best placed to understand the changes, and thought needs to be given to how instructors from industry can be used to work alongside teachers and trainers in colleges and providers.

4. The last point refers to utilisation of skills produced. The policy focus in the area of vocational and technical training has traditionally been on the supply of skills, with the implicit assumption being that they will be used in the labour market. A 'demand-pull' model needs to be considered just as much as a 'supply-push' model, however, to provide the best circumstances for firms to create the higher-skill jobs that use the newly qualified learners appropriately. This may come through product and labour market regulations and the application of infrastructure funding, but also requires a change in corporate strategy in some cases from a low value added/low cost model to a high value added/high cost model, together with the development of managerial skills and abilities to help managers make decisions with longer-term goals rather than as short-term fixes. In the context of the utilisation of skills, it is pleasing to see skills development being placed into part of the wider Industrial Strategy, thus recognising that skills policy cannot be independent of industrial policy.

In CVER, work that we are currently doing will address some of the above issues, in particular point 1 about the provision of more information. Academic research on the labour market outcomes of qualification acquisition has typically estimated wage differentials between individuals with and without such qualifications, to derive the value that the labour market places on them. Our work looks at the utilisation of the skills developed in those qualifications, by considering the tasks that former learners undertake in their jobs, and evaluating the extent to which such tasks match the skills obtained in their qualifications. Undertaking the analysis by local labour market areas will reveal any differences in skill shortages, skill under-utilisation and skill mismatch by area.

## Re-training and upskilling

For the prime age population, further education and training have been identified in the literature as effective mechanisms to achieve useful outcomes for people affected by industrial structural

change/individual unemployment compared to other interventions, such as (temporary) employment or active job creation in public work programmes (Card et al. 2015). However, further training can be delivered by a variety of mechanisms, and the specific mechanism chosen is relevant to the success of the programme. Fitzenberger et al. (2006) estimate the long-term impacts of specific skills training for the adult population in Germany. These interventions vary between short- and medium-term interventions for the “Provision of Specific Professional Skills and Techniques” (which result in certificates for specific qualifications), working in “Practice Firms” (not generating qualifications) to more long-term “Retraining” programmes, which qualify different occupational fields towards qualifications similar to Level 3 qualifications in the UK.

The findings of this study are quite interesting for the specific type of intervention needed to help people regaining employment:

- First, all of the interventions compared to continuing job search for the unemployed show positive labour market effects/return to employment. However, the more expensive long-term interventions qualifying to different occupational trajectories are less effective than supporting people to acquire specific skills or to modernise their existing skills.
- Second, at least for unemployed adults, on-the-job qualifications in practice firms (where people learn by observation/engage in practice while they continue to obtain benefit payments from the employment office), were not superior to classroom-based interventions.
- Third, long-term gains created by Further Education and Training have to be contrasted to the longer duration of the programmes and cost differentials. In longer periods, people withdraw from the labour market for a longer time and have initially lower (re-)employment chances compared to other programmes or people continuing job search. This results in high individual costs of programme participation relative to benefits, which would have to be considered in design of interventions as other programme costs (e.g. cost of education provider).

A similar finding emerged from our own previous research on “Work-Based Learning for Adults” (Speckesser and Bewley 2006), which shows that Short Job-Focused Training results in the same long-term employment effects (40 months after the intervention) than a more costly longer-term options.

In conclusion, while there is robust evidence of the benefits of publicly sponsored labour market training as part of Active Labour Market Policy to facilitate labour reallocation in situations of structural change/move people out of unemployment, such programmes have to be carefully designed to avoid adverse effects and should target specific skills. In terms of benefits of public intervention, it is also important that participants have a sufficiently long period left in the labour market to benefit from the skills intervention, so that the individual costs (not to work for the duration of the programme) are more than recovered by the gains achieved after the intervention. Therefore, skills interventions should be subject to an ex-ante cost-benefit appraisal to evidence the social benefits.

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