It is well-known, that despite robust employment growth, the UK lags behind in productivity compared to many OECD countries. While the UK has a relatively high supply of university-educated workers, there is a serious shortfall of workers with technical and professional skills and too many with low skills. However, increasing the supply of technical and professional skills is crucial for productivity and economic growth. While over 40% of 16-19 year olds in further education follow technical and professional courses, the routes through to higher-level training are not always clear or widely understood.

The English vocational education system currently faces three major challenges:

1) A lack of coherence in the post-16 education landscape, with a lack of clear progression pathways from lower level technical and professional qualifications to higher levels, which is crucial in order to build the capacity within the workforce to train future generations.

2) A large number and range of providers (public and private). Do they have the collective capability of delivering high quality professional and technical education?

3) A longstanding history of employer underinvestment and disengagement.

Against this background, the Ministerial Seminar on Professional and Technical Education Routes, jointly organised by the Centre for Vocational Education, and the Departments for Education and for Business, Innovation and Skills, asked experts to share their vision of what an education system that can deliver high quality professional and technical skills at intermediate and higher levels should look like. Andreas Schleicher, OECD head of education and skills, introduced the meeting with an overview of the state of the English intermediate skills and education compared to other OECD countries.

Delegates were invited to address the following broad question, which was then the focus of discussion at the seminar:

What should we do to address the issues that face technical and professional education in this country? The answer could include consideration of:
What provision (e.g. curriculum and qualifications) is needed to deliver high-quality technical and professional education, and why?

Which providers (e.g. schools, colleges, universities, independent training providers) are needed to deliver high-quality technical and professional education, and why?

How do we ensure that there are clear and coherent routes from initial skills development to the most advanced technical and professional training?

The Submissions

Seventeen submissions were made by delegates in advance, typically focusing on the principles that underlie a good professional and technical education system. A number of strong common themes emerge from the notes:

**Single National Standard** – a number of delegates highlighted the need to deliver a single national standard within each route to provide clarity and transferability. These standards should be flexible to allow specialisation; the management of specialisms could be organised at a local level to reflect skills needs in the local labour market. There was a clear view that the standards should have strong employer sponsorship, and not be the property of awarding bodies.

**Reorganisation of Further Education around hubs of technical specialisation** – the Further Education (FE) college was seen by most delegates as the prime provider of Professional and Technical Education (PTE), as they have a strong engagement with employers. There was support for specialisation at an advanced level being concentrated rather than dispersed, so that providers would have the scale to supply the best teaching and facilities, with other providers grouped around these ‘hubs’.

It was also seen as important to facilitate clearer pathways between PTE routes and higher education. This may have an effect on students’ incentives to choose PTE routes.

**Employer engagement** – the need for good employment engagement was common to most delegates’ ideas. Employers were seen as important to provide funding and workplace training facilities, as well as leadership and recognition of qualifications. Mechanisms to strengthen this engagement include the use of sector bodies, encouraging the movement of teaching staff into the industry and back, and better business support through General Training Associations.

**Curriculum and qualifications** – the need to include general and functional skills, as well as sector specialisms, was repeatedly highlighted. Most delegates also argued that PTE should focus more on higher level skills (levels 4 and 5), with a high minimum standard (e.g. framed in terms of duration or level). However, others recognised the role of some level 2 courses to fill key skill gaps. There was also discussion of qualification reforms, particularly for the 16-18 year olds.
The Seminar

The discussion at the seminar was organised around the three key component questions asked to delegates in advance. It is impossible to do justice to the stimulating and wide-ranging discussion that followed. The following is a brief synopsis of the main themes.

What qualifications does our economy need?

The current system offers a wide ranging variety of pathways and qualifications, of different length, level and degree of recognition. A better system of professional and technical education (PTE) needs more transparent and clear upper secondary routes. This starts with the post-16 offer, which should be rigorous, coherent and of comparable duration to that in other countries with well-developed PTE systems.

The complexity of the English system and the sheer number of qualifications militates against the signalling function that qualifications should perform to employers, teachers and students. Consolidating the number of qualifications to a much smaller number of standards is crucial, while maintaining sufficient flexibility in these routes to allow specialisation (which might be managed at a local level). Giving employers a role in developing the standards is also important if they are to be valued in the workplace. Furthermore, to safeguard quality, a credible and rigorous assessment system must be in place. Otherwise qualifications have little value as a signal.

Other aspects of a good system of professional and technical education are that it should be adaptable to changing economic and technological needs. It should provide sufficient general skills, equipping individuals to acquire new skills in an environment where the labour market and technology can change in ways that are difficult to predict. There must be a strong link to employers, where individuals acquire hands-on experience and job specific skills from more experienced workers.

It is crucial that vocational education routes are understood by everyone and comparable across firms. The apprenticeship trailblazers, which are new apprenticeship standards developed jointly by employers and training providers, are a step in the right direction. However, while employer engagement is crucial, the individual employer is not best equipped to design curricula, as their incentives may lead to too an over-emphasis on the their specific needs (at the expense of more general, transferable skills). For apprenticeships to be attractive to employers, they need to be of sufficiently long duration to recoup a return on investment and there needs to be stability in the policy environment (not funding rules that are regularly changing). For routes to be attractive to highly able students, there need to be clear progression possibilities and a qualification that has currency in the labour market (beyond a single employer).

What providers should deliver PTE?

Providers of high quality PTE need to be financially sound, have high teaching quality, and strong leadership that is outward looking with a capacity to engage with local needs. Many technical occupations require specialist equipment and staff to teach at a level that ensures the skills provided meet the latest technological standards. The quality of the educational experience will be largely a function of student/teacher and student/employer interactions.
The current system does not encourage specialisation but what is perceived an unhealthy competition between public and private providers which means infrastructures are replicated and resources are spread too thinly. Too often colleges do not have the resources to update their equipment. Many FE colleges find recruitment of high quality staff to be a real challenge.

One aspect of the debate is whether new specialist colleges need to be created to deliver professional and technical education or whether specialisation needs to be fostered within the existing institutional structure. If the latter, should colleges continue to teach a range of subjects or should colleges be encouraged to focus on particular subjects? In all cases, some consideration needs to be given to the scope of provision within regions and how different providers of education relate to each other (for example, in terms of progression). There was also a consensus that government intervention would be needed to achieve specialisation and restructuring.

There is a debate with regard to the role of providers of higher education in the delivery of PTE. Some argued that the main provider of PTE should be FE colleges, which have a strong link to employers, and that the general model of Higher Education Institutions (HEI) is not well suited to deliver employer-focused training. Others suggest that at least some HEIs are equipped to deliver PTE, having a broader curriculum than what is commonly assumed. In either case, institutions need to have strong links with employers and there is a case for more integration between FE and HEIs, particularly as the prospect of university education remains an attraction to many learners including those within the PTE system. A big issue is the funding situation of FE colleges vis-à-vis HEIs. If the former are to attract students who might otherwise go directly to HEIs, there needs to be more of level playing field. It was pointed out that when the government in Singapore created fairer funding between their equivalent FE and HE institutions, the former became very popular with students.

How do we ensure that there are clear paths to progression?

One of the biggest challenges facing PTE is a lack of well-known and recognised paths of progression from lower to higher levels. Compared to the academic route, where A-levels are a clear and well-established route to higher education, PTE often fails to offer a “prize” whether in terms of (anticipated) career prospects or as entry to higher education. Even though some such qualifications, such as the BTECs, are accepted as entry qualifications to higher education, this is not a general rule with respect to post-16 qualifications. Qualifications that are truly equivalent in content and rigour, should be regarded as equivalent when it comes to accessing higher level education (which again raises the issues of simplification, coherence and rigour in the post-16 offer). Individuals and schools need to be aware of what different routes potentially lead to in terms of education and labour market prospects. The importance of good career guidance and information from school and beyond cannot be underestimated.

For PTE to lead to good career progression for students, there needs to be employer engagement in how this is designed. This might be facilitated through designing a framework through which employer bodies could be licensed to develop standards. It might be possible to build on those structures that already exist – for example through the Sector Skill Councils.
CVER’s view of key points

To conclude, we would pull out the following key points from this process:

- The ability of FE to offer high quality technical education at Level 3 and above has been undermined by successive government funding regimes. These have prioritised certification as the primary outcome without sufficient regard to level or specialisation. FE needs to be rethought and rebuilt to provide the capacity to offer cutting-edge technical/professional education and training both full and part-time to Level 4 and above. This could best be achieved by rationalisation and specialisation.

- PTE providers need to be able to offer high quality teaching with up-to-date equipment. This suggests the need for specialisation. There also needs to be better integration between education providers at a regional level (including HEIs). Appropriate re-structuring will not happen without government intervention. Specialist colleges that provide PTE cannot do a good job or attract highly-able students if they are inadequately resourced.

- Good PTE needs to have the following ingredients: a qualification with currency; sufficient general content (i.e. useful across firms and that facilitates life-long learning); employer involvement; a certain degree of flexibility to allow for the needs of the local labour market, although avoiding the dangers of fragmentation and loss of transferability.

- The post-16 offer is not good enough for students considering PTE as an alternative to A-levels. For more people to be willing to go down this route, there needs to be a clear and substantive offer of a pathway that leads to a qualification that is valued by employers and by HEIs – and has transparent progression routes in education and employment.

- The OECD has pointed out that England is not well-served by the recent proliferation of awarding bodies and of vocational qualifications offered. Of these, the BTEC brand is one of those with the strongest brand recognition and, in its traditional form – a two-year grouped certificate/diploma with strong maths and technical components, it could meet the need for a high-quality technical/professional pathway to Levels 3 and 4 with recognition from employers.

- Having established such a pathway, we need to find a way of incentivising young people to start on the pathway and ‘stay the course’. Part of the solution involves employer participation in curriculum development, work experience and employment opportunities. The other part is the development of progression routes to Level 4 and above in FE and a funding regime for students and institutions at least as favourable as that for HE. For these characteristics to influence students, high quality careers information and advice is needed throughout secondary schooling and beyond.

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