Delegate Notes for the 9 July Summit on Professional & Technical Education Routes

Seventeen delegate notes have been submitted for the 9 July summit. Thirteen are from delegates (number submitted joint or corporate notes) and four from BIS/DfE officials. A list of the delegates and which have submitted notes is below, and a copy of all the notes is attached.

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?
## Attendees

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<th>Name</th>
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<td>Alison Fuller</td>
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<td>Alison Wolf</td>
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<td>Andreas Schleicher</td>
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<td>Skills Director, OECD</td>
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<td>Andy Dickerson</td>
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<td>Sheffield University, CVER</td>
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<td>Ann Hodgson</td>
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<td>Professor Post-Compulsory Education, Institute of Education</td>
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<td>Cathy Walsh</td>
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<td>Principal, Barking &amp; Dagenham College</td>
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<td>Chris Husbands</td>
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<td>Director of the Institute of Education (UCL); chair of the independent Skills</td>
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<td>Claudia Hupkau</td>
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<td>Dave Phoenix</td>
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<td>David Russell</td>
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<td>David Willetts</td>
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<td>Chief Executive, Resolution Foundation</td>
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<td>Frank McLoughlin</td>
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<td>Gavan Conlan</td>
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<td>Hilary Steedman</td>
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<td>James O’Shaughnessy</td>
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<td>Julian Gravatt</td>
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<td>Juliet Chua</td>
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<td>Moira McKerracher</td>
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<td>Deputy Director, UKCES</td>
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<td>Natasha Porter</td>
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<td>Head of Education at the Policy Exchange</td>
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<td>Nigel Thomas</td>
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<td>Ruth Hannant</td>
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<td>Sandra McNally</td>
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<td>Director of Centre for Vocational Education Research, LSE</td>
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<td>Stefan Speckesser</td>
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<td>Toby Peyton-Jones</td>
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<td>UKCES Commissioner + HR Director of Siemens UK</td>
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<td>Warwick Sharp</td>
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<td>Ewart Keep</td>
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<td>Director of Skills Knowledge and Organisational Performance (Oxford University)</td>
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1. **Ann Hodgson, Professor Post-Compulsory Education, Institute of Education – Attending**

   *co. author Ken Spours, UCL Institute of Education*

Few would dispute the importance of building a strong English work-based route involving Traineeships and Apprenticeships. Successive governments, however, have adopted this policy emphasis and have been unable to succeed in increasing the number of these programmes, particularly for 16-19 year olds. It is our contention that previous approaches to change, which have largely been based on reform of qualifications and apprenticeship frameworks, are not the optimum way forward and that more profound whole-system change is required.

**The importance of ‘policy memory’ and a ‘whole system approach’**

The problem of the size and status of the work-based route for 16-19 year olds is historical, cultural and structural. Since the late-1980s the majority of young people staying on in education beyond 16 have been in full-time programmes. This has been primarily due to the fact that employers have not been fully embedded within the education system, as they are in countries such as Germany or Switzerland, so colleges (and sometimes schools and independent training providers) have had to substitute for workplaces as sites of vocational learning. Thus the first thing that needs to change is the relationship between the education system and employment. Moreover, it has always been the case that vocational education for young people has been negatively affected by the pull of the stronger, higher status academic route. History tells us that any approach to reform that ignores this relationship will result in a low status vocational education. It is, therefore, necessary to consider the whole of 16-19 education rather than simply focusing on one part of it. In the current context that means not just a consideration of A Levels, Traineeships and Apprenticeships, that jointly only account for around half of the 16-19 year old cohort, but also what happens to those referred to elsewhere as ‘the Missing Middle’.

**Building a stronger TVET System**

We therefore see the expansion and improvement of Traineeships and Apprenticeships within the broader goal of building a stronger *TVET System*, founded on a range of system shifts.

1. **A transformation in the relationship between education providers and employers.** This will mean changes on both sides. The ‘Two-Way Street’ concept developed in the CAVTL Report (and now operating as a principle for partnership between employers and TVET providers in some parts of the country) recognises that both parties benefit when they collaborate around curriculum development, pedagogy, specialist facilities and training equipment and at the same time begin to make changes to production practices to encourage innovation and better skills utilisation in the workplace.

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2. Commission for Adult Vocational Learning (2013) *It’s about work...* http://repository.excellencegateway.org.uk/fedora/objects/eg:5937/datastreams/DOC/content
2. **Colleges as local/ regional TVET hubs** - this type of ‘Two-Way Street’ working means that colleges need to be clearer about their vocational specialisations, based largely on their local/regional economy. We would suggest that it is these organisations that have the scale, expertise and facilities to play a leadership role in the TVET System. At a time of limited resources, it will be important to concentrate specialist facilities and staff expertise in a smaller number of institutions that act as hubs in their locality/region and actively involve employers in all aspects of the TVET System, including joint business ventures that could be particularly helpful for SMEs.3

3. **Other providers playing their part** – if further education colleges are going to take a decisive step in the direction of TVET and vocational specialisation then the other education providers in the locality (schools, sixth form colleges, independent learning providers, UTCs, Studio Schools) need to collaborate and play a reciprocal role in creating the progression routes and skills escalators for all parts of the 16-19 cohort at whatever stage or level they are.

4. **More focused vocational professional development** – evidence from a number of projects sponsored by the Education and Training Foundation (e.g. Teach Too, Two-Way Street Leadership Exchange Programme) suggests that this system shift will require a new approach to professional development for those working in TVET. Colleges need to become much more familiar with the latest developments in industry and business with a focus on co-creation of learning opportunities for both learners and employees.

5. **Curriculum and qualifications** – history suggests that nationally designed vocational qualifications conceived separately from general qualifications are doomed to failure (e.g. GNVQs, 14-19 Diplomas). It is our contention that a National Baccalaureate System that includes all types of learning for 14-19 year olds, but has strong regionally/locally determined technical elements could create a new synthesis between vocational specialist knowledge and skills and the fundamental competences, such as maths, English, research and entrepreneurship, that are required for both work and life in the 21st Century.

6. **The role of the national** – a strong TVET System at the local and regional levels will not thrive unless there is a supportive national framework. Funding, inspection, performance measures, professional development, curriculum and qualifications can all either inhibit or incentivise education provider and employer behaviour. These policy steers would need to support collaboration and joint accountability rather than the competition and individual institutional autonomy that inhibit strong TVET development.

**Finally**

Tackling a deep-seated problem like the status and volume of vocational education will take time. A starting point for development of the TVET System might be to pilot ‘regional high skills ecosystems’ in certain parts of the country – e.g. London and Manchester - where the governance structures might make this possible.

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2. Chris Husbands, Director of the Institute of Education (USL); chair of the independent Skills Taskforce – Attending

How can we improve technical and professional education in this country?

- What provision (curriculum, qualifications) is needed, and why?
- Which providers (e.g. schools, colleges, HEIs) are needed, and why?
- How do we ensure clear and coherent routes from initial skills development to the most advanced technical and professional training?

1. **Upper secondary pathways**

Securing a high quality vocational offer and clear vocational routes for 14-19 learners is a key step in improving technical and professional education.

**Provision**

a. Beyond the ‘A-level and HE’ route there are very few clear structures for young people to follow, from GCSE onwards. This is exacerbated by the institutional complexity of 14-19 provision, more so since the emergence of UTCs and studio schools, and as FE colleges consider provision for 14-16 year olds.

b. There is also a risk that apprenticeships, as currently configured, cannot fulfil their full potential. England’s main competitor countries in Europe offer up to four times the number of apprenticeships offered in England. Their apprenticeships are level 3 qualifications, two to five years in duration, with at least a day a week of off-the-job learning as well as significant on-the-job training. There is a case for focusing apprenticeship at level 3 and above as the central plank of vocational pathways in England. This would require the redesign and renaming of what is currently level 2 apprenticeship provision.

c. There is a need for a legal underpinning and clear standards for apprenticeships; these frameworks should allow space for providers to tailor programmes to local employer needs.

**Providers**

d. The FE college system should be refocused on providing high quality, specialist, intermediate level vocational training for young people. This would need to be supported by much stronger employer engagement, which would itself require greater ambition among employers for a higher skill workforce.

e. A more activist ‘middle tier’, broadly conceived, is also required to link providers and employers at local level, and support streamlined quality assurance arrangements. UKCES, regional arms of sector bodies and LEPs, working collaboratively, could provide the basis of such an infrastructure.

f. Some colleges will be equipped to offer progression to technical learning at level 4 and above. The FE and HE sectors need to work more closely to create pathways to higher vocational training.

g. Much of the expansion of HE in recent years has come through the development of highly diverse vocational programmes. These need to be integrated into a new vocational framework, to facilitate greater articulation across the sectors.
2. Pathways to degree-level vocational training
   a. The case of higher apprenticeships highlights considerations beyond provision, providers and pathways, the questions set for the seminar – in particular funding and regulatory issues. (Although as one example within upper secondary provision, incentive arrangements in schools and colleges can lead them to provide sub-optimal advice to young people on education and training options).
   b. Most higher apprenticeship delivery remains through colleges – as of March 2015 only three universities were lead contractors, and few were listed on the Register of Training Organisations. In broad terms, there may be parallels between higher apprenticeships and Initial Teacher Education (ITE) and/or NHS contracts in terms of there being funding/regulatory barriers to engagement. For example:
   c. Provision is based around a set of apprenticeship standards and related funding cap bands. Employers select a lead provider to co-ordinate their training and assessment delivery; they agree a price for their delivery with the provider, co-funded by government up to the cap. It is not clear that this small-scale, year-on-year commissioning, based around benchmark pricing, is sustainable for HEIs.
   d. There is tension in balancing employer needs with the HEI role as quality owner.
   e. Is this training for particular employers, or training for the profession?
   f. For the longer term, there is the question of whether the line between higher apprenticeships and vocationally-oriented degrees will become blurred as HEIs’ operating environment changes. Several factors are driving a more vocational orientation on the part of (some) HEIs: higher fees; growing employability orientation from students; stronger competition for students; declining proportion of entrants with solely A-level qualifications; competition from alternative providers/reinvigorated apprenticeship route. HEIs already face a growing body of prospective students with a mix of academic and vocational entry qualifications, predicted to be two-thirds of young people by 2017; the number of young UK BTEC students applying to universities, for example, has increased by 50% since 2011.
   g. For prospective apprentices, employer demand for these qualifications will be key. Will employers privilege higher apprenticeship candidates over degree holders?
   h. As indicated earlier, employer attitudes and engagement remains an issue – linked to short termism and lack of ambition for their markets and workforces. Recent IOE/Nuffield research has shown employers’ tendency to use existing employees for apprenticeship. This might be explained by the fact that employers regard apprentices as a significant cost; by using existing staff, employers reduce these costs. Can we realistically expect to drive the growth of apprenticeships through larger employer contributions as opposed to public subsidy?
   i. There are very few incentives for academics to spend time in industry, and important barriers, not least the Research Excellence Framework.

3. Ewert Keep – Director of Skills Knowledge and Organisational Performance (Oxford University) – Unable to attend
Better education and training routes from school and college to highly-skilled employment

I have assumed that BIS’s Dual Mandate consultation paper represents a partial starting point for this exercise, even if many of the details in it are up for discussion.

My first point is that in planning any new initiatives around technical and professional education (TPE), it would make sense to do so once the outcomes of some of the other ongoing and related reforms have become rather clearer, including those in vocational qualifications and apprenticeships. Plainly apprenticeships ought to have a major role to play in addressing TPE needs.

Second, at this stage the government’s definition of TPE is not particularly clear. This may reflect the fact that it potentially covers a massive range of employment – in terms of occupations, pay levels and skills requirements. To take just one potential sub-set of TPE – associate professional – this could cover a nuclear industry instrumentation technician, but also an estate agent. Their skill requirements are very different.

It is also important not to become fixate on the notion that all TPE means ‘higher level’ skill. In the Dual Mandate paper there is an implicit assumption that whatever TPE is, in future the vast bulk of it will be at Level 3 and above. In the real world, Level 2 provision in both apprenticeships but also in FE colleges (pre and post-19) is not set to vanish any time soon, not least as it reflects massive volumes of very real employer need, and there are structural reasons embedded in the nature of our labour market and job structures (particularly within many service sector organisations and occupations) that mean that demand at L2 and below will remain strong for the foreseeable future. To illustrate this, here are the current Top 10 (by volume) apprenticeship frameworks (all ages, all providers):

1. Health and social care – L2
2. Health and social care – L3
3. Business and administration – L2
4. Customer service – L2
5. Management – L2
6. Management – L3
7. Business and administration – L3
8. Children and young people’s workforce – L3
9. Improving operational performance – L2
10. Retail – L2

It is worth noting that if you calculate the top 10 in a different way, engineering appears in the table.

Policy seems to be developing an emphasis on ‘clear and coherent routes from initial to advanced skills development’. There are two potential dangers in current thinking on this. First, the Dual Mandate paper appeared to obsess about initial E&T and give almost no weight to continuing professional development and skills updating/upgrading for adult workers as they progress in jobs and careers. If funding and provision is front-loaded so that individuals have to have acquired the qualification and experience needed to move beyond Level 3 at or before age 18/19 then a large proportion of those who might benefit
will not be able to progress, and the skills supply system will fail to address adult skills needs. The OECD’s *Beyond Schools* report (from whence the label ‘technical and professional’ is borrowed) makes it very clear that in many countries the bulk of this activity takes place post-19. Second, the policy model seems to be of vertical, hierarchical progression, whereby individuals move steadily upward through the qualification levels. In the real world, a lot of professional and technical development takes place through lateral (and sometimes even ‘downward’) moves as skills are broadened or adapted to new requirements.

If progress is to be made, the involvement of employers is vital. It is interesting that in the list of providers in the Minister’s letter inviting us to the event, employers are conspicuous by their total absence. This is a curious and telling omission. 35 years ago, the norm was that technician training was provided by major employers like ICI and BP, with the off-the-job element being provided at HND/HNC level by their local FE college, and today there still remain some firms, such as Jaguar Land Rover, who make major investments in technician level provision. If employers are not to be active partners in any new developments, then it is likely that policy will fail. There are two reasons for this. First, employers will need to pay for much of this activity, at least in part. Second, the workplace provides the location in which very large amounts of on and through the job learning takes place, and unless this capacity is harnessed in tandem with off-the-job provision, adult training becomes more costly and far less useful. The best model for much post-19 TPE would be part-time, with the student in employment, the workplace providing on-the-job learning and an off-the-job element provided by FE or HE (in other words, the original model for Foundation Degrees).

This brings us to who might best provide TPE. The great danger, as past experience shows, is that yet another expansion of university provision becomes the kneejerk reaction. Plainly, in some areas and occupations, HEIs have an important role to play. One example would be the Sheffield University Catapult Centre’s work on apprenticeships in advanced manufacturing. However, in other occupations and for some types of provision, FE colleges are the ones with the links to the employers and with a closer appreciation of and capacity to deliver on the skill needs in the TPE field.

One of the key problems with much initial TPE provision over the last 20 years has been the assumption that expanding the supply of graduates offered the solution. One of the main outcomes of the massification of HE has been the sometimes poor usage of graduate skills in jobs that required something different. My own Centre’s work on the graduatisation of estate agencies provides one example of this tendency. Another comes from Scotland, where a few years ago life science industry employers complained (correctly) that the life science graduates they were recruiting to be laboratory technicians lacked the lab skills required. This was bad news on two fronts. First, that life science degree courses had had lab time cut down to save money. Second, that instead of training lab technicians, employers were using graduates for this role. The solution was possibly even more wrong – the Scottish Funding Council paid Forth Valley (FE) College to run a conversion course for life science graduates to equip them with the practical skills to undertake relatively low-level lab technician roles.

Finally, there are examples of best practice available, upon which further policy development could be founded. For instance, the NHS’s Skills Escalator approach to linking career and skills development is worth serious study.
4. Dave Phoenix, LSBU – Attending

A premise for our response:

As we talk about developing “better education and training routes to highly skilled employment”, we need to consider and restate our aims. We must not, I think, thoughtlessly conflate “skills and training” with “technical and professional education”.

In this context, there has perhaps been too much focus on training and not enough on education. We should not be aiming at creating a workforce suitably trained only at a single point in time, but at an educated workforce that is enabled to progress personally, socially and professionally over their working life. We need well-trained employees; but we want them educated enough to contribute actively to employers, and to develop as jobs, skills requirements, employers, markets and economies change.

If we always train simply for specific jobs that exist at the present, we will always have a workforce failing to meet its potential in terms of productivity, earnings and social mobility. “Technical and professional education” must be, and must be seen as, just that – an education applied to a particular professional pathway. If it is, or is seen as, simply training in a higher level skill, without the prospect of professional and personal advancement, then parents, schools and individual pupils will see it always as a second rate path.

Some of our leading “professions” require high levels of education. Medicine, the Law and Accountancy are vocational qualifications. Until we equate other forms of vocational education with these and offer similar career pathways, we will never make routes into science, engineering and technology attractive to our young people, their parents and their headmasters.

When we think about apprenticeship pathways, should we, for example, think in terms of pathways that would, over the working life of an individual, deliver a similar earnings differential as would apply between a newly qualified doctor and a consultant? Do professional doctorates have a function in this and where do the Skills Councils and Professional Bodies sit?

Apprenticeships must be employer backed; but they must also provide a genuinely educational component. Otherwise, they cannot be an alternative “educational” pathway – just an alternative (training based) pathway. Apprenticeships (and other professional and technical education) need a properly accredited educational component; which means education at a given level, not just training at a given level.

Potential areas for discussion.

1) What provision (eg curriculum and qualifications) is needed to deliver high-quality technical and professional education, and why?
   - Higher quality maths and English teaching in schools
   - A proper 14-19 curriculum that in-stills the skills and pleasure of application as well as learning – are courses still too focused on 14-16 then 16-18 so overburdening students and staff and preventing more innovative use of a 4 year framework?
   - Academic qualifications (eg A-levels) which bend to meet “vocational” qualifications (not just the other way round)
• Facility for young people to take courses at different levels at the same time (in FE and HE)
• Standalone level 4 and 5 qualifications ie HNC and HNDs should be more widely promoted
• Level 3, 4 and 5 qualifications (BTECs, HNCs, HNDs) should be included in apprenticeships. (We do not need a new set of qualifications).
• Incorporation of degrees and masters into degree level apprenticeships rather than inventing further frameworks

2) **Which providers (eg schools, colleges, universities, independent training providers) are needed to deliver high-quality technical and professional education, and why?**

- **Schools** – need to strengthen maths, English and employability skills
- **Colleges** – must offer range of courses determined by employment opportunities
- **Colleges** - could be required to establish clear educational pathways with local schools and universities based on a government determined model
- **Universities** – should be able to offer level courses and levels 3,4,5,6,7 to meet employment opportunities seamlessly (without Ofsted and SFA issues).
- **Independent training providers** – should have the opportunity to compete with the above, but only on a level playing field in terms of regulation and quality assurance.
- **Student funding must be simplified to avoid issues around SFA-SLC transition**

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

- We need not only routes but information about them; measurement that drives promotion of them; and to make them attractive as pathways to careers not just training for a job.
- Need to consider output based indicators of quality – not just numbers starting programmes

I would also suggest the following area may be of interest:

4) **What is the best way to fund high-quality technical and professional education, taking into account the relative beneficiaries – individual, employer and state?**

Analysis by London Economics commissioned by London South Bank University underlines the attractiveness of employer sponsored degrees; it shows the value in monetary terms to graduates, employers and the Exchequer while not adversely affecting the institutions which provide those degrees. They examined relative contributions and resource flows associated with undergraduate degree funding comparing the current baseline scenario where the Exchequer funds degrees with the scenario where employers co-finance students who working within firms.
When employers sponsor degrees, the costs to the government amount to £2674 or 13%. This compares with almost £30,000 or 87% for traditional route students taking a loan. Furthermore the lifetime value of the degree is more than a third greater for graduates while the Exchequer benefit, at £130,000, is 19% more. The major differences are that employers contribute towards the tuition fee and that employees ‘earn while they learn’, alleviating the need for student maintenance grants, maintenance and fee together with the write-off associated with the RAB charge.

Employers make this level of contribution when the scarcity of skills they need makes “growing their own” more cost effective than hiring skilled staff on the open market (often using expensive recruiters). It is often forgotten that whilst the university and college fees are significant, these are outweighed by the cost of salary and day release. This investment is also balanced by the high levels of loyalty and therefore retention that this route provides. Importantly this is retention of staff which have the skills to leave, but choose not to.

In the employer sponsored route, the costs / benefits seem to balance for all parties. The employer gets a well-educated employee trained in their way of working; the employee gets a transferable qualification, salary and excellent experience. This is a more balanced route than perhaps some low paid apprenticeships offer; and is less costly to the tax payer. The challenge is perhaps to make this employer-sponsored model work in lower skilled occupations where there is less of skills shortage. Here we need to create more educated, more productive workers with the skills and education to make them attractive to a range of employers. Balanced effectively that will make education and training more attractive to young people as they will see it as the beginning of a career. It will also encourage employers to invest in productivity to get better value out of their employees.
5. Natasha Porter, Head of Education at the Policy Exchange - Attending

What should we do to address the issues that face technical and professional education in this country?

- It is reasonably clear that there is a skills shortage at levels 4 and 5. These are currently being met by some employers operating in low(er) skills equilibrium, others substituting foreign labour (especially in construction), and other substituting graduate labour (from both the UK and Europe)
- Higher level vocational and technical qualifications have reasonable labour market value but considerably less than undergraduate degrees

Institutional weaknesses

- Some universities are offering such qualifications – especially HNDs / HNCs and Foundation Degrees – and some are doing it well. But they have a temptation to convert these into academic pathways and / or progression onto honours degrees
- In the medium term, with abolition of Student Number Controls, these qualifications might become less attractive to universities
- The incentives to go to university at 19 are encouraging more and more to go to university. This is good for non traditional university students, however some institutions have increasing drop-out rates and low percentages of graduates going into graduate employment. This suggests some of these students are unsuitable for honours degrees, but being pushed into it through an imbalanced funding system
- FE colleges ‘agile and responsive’. This is a strength, but also a weakness
- FE colleges very consumed (physically and strategically) with 16-19 changes including maths and English re-sits and managing funding shocks. Dual mandate not in alignment
- Apprenticeship focus on number targets rather than quality means these are also focused on short courses at level 3 and below. Approximately 30 of approved 340 apprenticeship frameworks are at level 4 or above.

Supply and demand questions around their increase

- How much demand from potential students is there?
  - For young people (aged 19) – there isn't a viable route that isn't HE or an Apprenticeship or into a job with informal or other training
  - For adults / re-trainers – revealed preferences suggests not much training takes place on this cohort – does that suggest lack of demand?
- How much demand from employers is there?
  - Only 1639 frameworks exist for L4 and L5 (compared to 5394 at level 3) with relatively limited employer engagement in setting them up
  - Do colleges and training providers report many requests for qualifications at this level to be provided? Some evidence from specific industries (engineering, accountancy) that this works well when offered
- Do providers want to offer such qualifications on the supply side?
Are there lots of courses and qualifications being offered and not taken up?

**Principles for an effective system**

- Although we should be institution neutral overall, the default assumption should be that FE colleges best for taking the lead in the most instance: HE will always focus on honours degrees, FE can do short cycle and respond to need more effectively, also this area is a core part of FE historic mission
- Employers must be hugely involved; at this level even more so than at lower levels.
- There should be competitive neutrality between all pathways and routes offered to all individuals over the age of 19 with regards to funding available
- Any government funding should in principle sit with the individual, other than Apprenticeships which are job linked and should sit with employer
- These qualifications and pathways can’t just be for young people – the system must allow for element of retraining and career changing later in life
- Training should be of ‘long duration’ (in practice at least 12 months)
- There must be clear opportunities and incentives for supply to respond to demand for qualifications – can’t expect institutions to generate it themselves, particularly in current context
- Similarly, this may need government to at least initially pump prime some element of latent demand
- The overall system should be at best cost neutral and ideally less than now in the context of BIS cuts. In practice this will mean a reallocation from HE to FE
1. Introduction

Language
An important starting point for the Commission on Adult Vocational Teaching and Learning was to reclaim the language of ‘vocational education and training’ (VET). We saw an opportunity to strengthen the connections with the international professional VET community, as a way of raising the esteem of vocational teaching and learning at home. We recognise that increasingly the term ‘professional and technical education’ is being used, in line with the OECD’s recommendation in its Skills Beyond Schools report (2014)⁴. For clarity, we continue to use term VET in this paper, but suggest that it might be time to open up the debate about the realignment of the language for this important area of work.

The value of work
The Commission on Adult Vocational Teaching and Learning (CAVTL) highlighted the need for a fundamental debate about what we value and hold in high esteem in the world of work. It called for a VET system that would produce ‘a home-grown pipeline of skilled individuals, who can design, develop and deliver the sophisticated technology and high quality products and services which will enable the UK to compete at the highest level’.

A VET system
That VET system should work as a ‘two-way street’, not providers operating as a separate ‘sector’. Historically, the education sector has tried to engage employers on its own terms, or employers have tried to engage the education sector on their terms. But the old supply and demand paradigm is not fit for the 21st century. We need a genuinely collaborative approach which is based on a shared understanding of the problems to be solved, the potential solutions, and the business benefits of working together, for both employers and education providers.

It isn't easy. It requires changing and building relationships not structures, joint responsibility not just vertical accountability, with implications for government and its agencies as well as employers and education providers.

2. Curriculum and qualifications

Qualifications are important, but as kitemarks of learning programmes, rather than the definition of a curriculum. Curriculum design should be at the centre of a VET system – so that providers and employers are directly involved in shaping programmes that reflect the up-to-date needs of occupations and workplaces and which are based on an aspirational concept of competence. The funding regime for technical and professional education should be based on funding programmes rather than qualifications.

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All vocational, technical and professional education should be able to demonstrate the four CAVTL characteristics:

1. Have a clear line of sight to work so that students and apprentices know how what they are learning will help them to perform in a job;
2. Be delivered by ‘dual professional’ teachers and trainers who combine occupational and pedagogical expertise;
3. Have access to industry-standard facilities, reflecting how technology is transforming work;
4. Show clear escalators to higher level vocational learning which develops and combines deep knowledge and skills.

3. Providers

Vocational, technical and professional education should be delivered by providers and employers who are proud to make it the focus of their business. This means it should (a) be the highest level (aspirational) provision for their students/apprentices and staff; and (b) distinctively excellent - demonstrating the four CAVTL characteristics, underpinned by genuine employer engagement to enable strong connections between on and off-the-job learning, research and innovation.

Groupings of providers should ensure that there is a substantial volume of provision across their offer at levels 3, 4 and 5. There should be ladders both within and between organisations to enable progression from programmes at level 2 and below to provision at level 3 and above, so that students can see the escalators to higher level vocational learning, even if these are not within the same institution.

4. Progression

A return to prosperity will depend on us being much more ambitious about the capacity of everyone - individuals, large and small employers, and providers - to raise their game. We need high quality vocational education that can respond to and prepare us all for changes in work, advances in knowledge and technology, and the increasing demand for people with higher levels of skill.

We need a VET system that encourages aspiration, mobility and progression for all, not just one that offers an alternative route to higher level skills for A level and university graduates.

The framework of level 4 and above vocational pathways and qualifications needs clarity, and the future of, and relationship between, HNDs and HNCs, Foundation Degrees, higher and degree apprenticeships needs to be clear and understood. There should be both work-based and study-based routes to developing higher level vocational and technical expertise.

All higher level vocational programmes should be co-designed and delivered by employers and providers, and supported by strengthened careers information and advice, which shows not just the qualification progression routes available, but how vocational courses lead to real jobs.
7. David Russell, CEO - The Education & Training Foundation – Attending

Overview
The below slide shows the features of an excellent education system; and in particular an excellent professional and technical education (PTE) system. It has many inter-related aspects, and creating system excellence requires a joined up strategic approach. The areas of Education & Training Foundation input are shown. Other areas are for Government; Ofqual; employers; professional bodies and others.

Background
The OECD’s Skills Beyond Schools report (2014)\(^5\) set out the percentage of adults aged 20-45 with short-cycle professional education and training as their highest qualification. The figures range from Canada with just under 35% to the Netherlands with 3%. England has 10%. Professor Alison Wolf’s (2015) recent report\(^6\) highlights the small number of qualifications completed at level 4 in each of the 4 years from 2009-10 to 2012-13 – ‘less than 30,000 in a population of nearly 60 million’.

So what would be the right percentage?

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\(^6\) Wolf, A., Issues and ideas. Heading for the precipice: can further and higher education funding policies be sustained? The Policy Institute at King’s College London, June 2015
The answer varies by economic sector and occupation; the nature of the work to be undertaken; the way jobs are designed; and how people work together to make the most effective use of their talents. A new target for more technical and professional education will on its own, be insufficient. Policy must be sector-specific, from top to bottom.

Leading the development of technical and professional education requires a sophisticated and strategic engagement with employers, in order to design programmes for current and futures workers that genuinely contribute to improving productivity.

The ETF is learning from leading edge practice in the further education and training sector about how to do this well – through our Teach Too programme, Two-way Street leadership exchanges, and by working with BIS and the new National Colleges to identify and share what works.

**What provision (e.g. curriculum and qualifications) is needed to deliver high-quality technical and professional education, and why?**

All technical and professional education should be able to demonstrate the four CAVTL characteristics of excellent vocational teaching and learning, underpinned by a strong commitment to employer engagement at all levels. In so doing, provision should be agile in keeping up with the changes taking place in fast-developing businesses: teachers should be keeping their occupational knowledge and skills up to date; they should be able to support and/or simulate work-based training practices with others; and provision should make use of new machinery and techniques. The qualifications framework should be sufficiently flexible to enable providers and employers to keep curricula updated.

Notwithstanding this need for flexibility, it will be important to ensure clarity in the framework of level 4 and above technical and professional pathways. The increasing range of higher apprenticeships emerging through the trailblazer reforms and the introduction of degree apprenticeships, alongside HNCs, HNDs and foundation degrees risks causing confusion for students, apprentices, their parents and employers. This will not support the task of raising the status of technical and professional education.

Based on a good level of consultation with employers, our Making Maths and English Work for All report earlier this year highlighted the potential for functional skills to support progression for learners on vocational pathways. Ensuring there are opportunities for students on level 3 and above technical and professional education programmes to continue to develop their functional maths and English skills would support the long term goal of raising the quality and status of such provision.

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

Professor Alison Wolf’s recent report (2015:74) highlights two characteristics of universities which ‘undermine their ability to provide good education and training in some areas’. Firstly, they are self-contained and separate from the workplace. Secondly, university teachers, however ‘vocational’ their speciality, are making their careers as academics and researchers, not as practitioners of a profession. For colleges and training providers, on the other hand, there is a growing recognition that engagement with employers should sit at the core of their business – indeed for apprenticeship providers, it already does. The
CAVTL report has provided a catalyst for a renewed focus on co-design and delivery of curriculum, involving providers and employers. Delivering higher level technical and professional provision will require the development of new capabilities within the education and training workforce. There are examples where this is starting to happen, as providers judiciously develop first their level 4 provision, and then look to extend progression pathways for students to levels 5 and 6, as teachers gain in confidence. There are also examples of provider-employer partnerships that have opened up research and development opportunities for vocational teachers: not academic research, but research based on the changing needs of the industry which has led to workplace and curriculum innovation. Supporting such opportunities for teachers raises the quality and status of technical and professional provision.

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

We should take care not to prescribe progression routes, but we do need pathways that are visible to young people and adults to encourage aspiration, mobility and progression. Pathways, including those for teachers, should be co-designed and delivered by employers and providers, so that individuals’ personal and educational progression can be linked to opportunities for occupational progression - through employers’ wider job design and productivity strategies, and professional bodies’ registration requirements.
The challenges facing technical and professional education in England are complex and there is no magic bullet to resolve these overnight. However, this does not mean there are no solutions or that the current system is fundamentally broken. Whilst change is certainly needed in some areas, there are positive elements in the current system including many examples of strong leadership and good teaching which can be built on.

Below we suggest eight principles that should be taken into account in developing the way forward.

1. Employers should lead on skills and government should enable them

Strong employer leadership is essential to tackling skills and productivity challenges. We need employers, working with each other and with their employees, to take greater responsibility for developing skills and jobs for future competitiveness. The direction of travel is positive and we welcome the level of employer involvement in development of apprenticeship frameworks and Tech levels. Government should continue to support employer leadership, individually and in partnerships. We think this is a fundamental principle that needs to underpin the future direction.

2. A stable policy environment should be maintained over the next decade

A clear direction of travel needs to be set for technical and professional education but any changes that result from this will need time to embed and to demonstrate impact. There needs to be a stable policy environment to let this happen. Different ways of working will take time to mature and embed and a shifting policy environment will inhibit rather than support this.

3. There needs to be a clear line of sight between technical and professional education and work

Employer involvement is integral to strong technical and professional education. UKCES research shows that 66% of employers say work experience is critical or significant when recruiting. The majority of employers who take on young people find them well prepared for work, but for the minority who don’t, lack of experience is highlighted as the main reason. Employers and education need to be better connected to ensure that all young people have the opportunity to gain experience that will make their transition to the workplace easier.

Employers also need to be intrinsically involved in the development of provision. However, within this the workplace needs to be retained as a key site of learning to avoid creating a disconnect between the qualification and the place of learning.

4. Strong technical and professional educational systems start with nationally recognised industry led standards

National Occupational Standards are the raw material on which high quality apprenticeships and vocational study programmes are built. They give confidence to employers that apprentices are following training that will lead them to full industry
competence, and that qualified new recruits will have had a similar grounding wherever they have trained. To individuals they offer a guarantee that their apprenticeship or training course will result in the recognition they deserve and the breadth of skills they need to develop their career with an employer, change jobs within an industry, or move across industries.

Pressure on public finances, coupled with the trend towards young people staying on in education longer, has led to increased interest in ensuring that the 16-18 phase really counts in terms of preparation for the next stage – whether that is work or further education. Current government research indicates that 90 per cent of 19-24 level 2 apprentices in England already have a full level 2 qualification and three quarters have GCSEs above grade C. Eliminating unnecessary duplication of learning and ensuring that individuals are studying something meaningful calls for better alignment between apprenticeships and the vocational programmes that lead into them. An agreed national occupational specification, or standard, that describes the fully competent worker is one way of achieving this. Not only can it underpin apprenticeships, it also offers a common target for those on vocational programmes to aim for. Standards are also used as the basis for upskilling those in work, contributing to better job design and training programmes and helping businesses make the most of their people, and people make the most of their jobs.

Standards in themselves do not guarantee a quality experience for individuals or for employers - they need to be combined with good teaching and trusted assessment - but they are an essential starting point. UKCES will shortly be publishing proposals for reformed National Occupational Standards that offer a new flexible format and put employers at the heart of their development.

5. Outcome agreements should be developed to better align technical and professional education with the needs of the local economy

A greater level of devolution brings the opportunity to ensure that technical and professional education is meeting local as well as sector needs. We think development of local outcome agreements can support this. Outcome agreements would bring together local education and training providers, employers and representative organisations to identify both the skill needs of a local area and the solutions to address them. Partners would then be held accountable for delivery of their parts of the agreement.

We think there are a number of benefits to this approach. Firstly outcome agreements would provide a way to better align technical and professional education with the needs of the local area. Secondly, they would provide a way to develop a different, more collaborative way of working together. Thirdly outcome agreements provide a way to reposition accountability and potentially funding (on a longer timescale) to meet local priorities.

By strengthening local partnership working outcome agreements may also help to address some of the inconsistencies that we currently see in the availability of opportunities for young people to connect with business. Currently there is a ‘post-code’ lottery of opportunities for work experience and work inspiration, with excellent practice in some areas and ‘cold spots’ in others. The current situation in relation to business education links could be reviewed to build on best practice that. This could be joined up with exploring the
career guidance activity that schools and colleges are providing and how the two types of activity can be better aligned.

6. There should be greater alignment between the funding systems for all levels of technical and professional education

The EFA, SFA and HEFCE have different funding models which is a complication for any institutions that have more than one funding stream and potentially for employers and individuals. Trailblazer funding (which applies to new Higher Apprenticeship frameworks and to Degree Apprenticeships) is different again. The complexity also potentially limits progression routes. Funding should be simplified and streamlined between different levels and type of institution to make it easier for different institutions to deliver different types of provision and for employers and individuals to understand how to progress to higher levels.

7. Further education colleges should be supported to deliver higher level technical skills

The OECD identified that higher level technical and professional education has fallen through the gap between our further and higher education systems. Developments such as National Colleges are encouraging and have the potential to help fill this gap. In considering how to increase higher level technical and professional provision we think that there needs to be a simple, coherent and consistent provider architecture which should build on what we already have.

We think the role that existing further education colleges can play in higher level technical and professional skills should be considered. This would involve colleges developing locally relevant specialisms which local outcome agreements would help support. There are many colleges leading the way on this but change needs to be widespread across the sector.

8. There needs to be alignment between apprenticeships and Tech levels

There are two routes to deliver technical and professional education for 14-19 year olds – apprenticeships and Tech levels. Over the last two years employer partnerships have been developing simpler and higher level standards and assessment strategies for apprenticeships. At the same time employers have also been involved in endorsing the new Tech Levels for 16-19 year olds and Tech Awards for 14-16 year olds. These two routes need to be closely aligned in terms of employer leadership, accountability and assessment so that they can be viewed as different routes to occupational competence and a good career.

The developments in apprenticeships and Tech levels have strengthened employer involvement in technical and professional education and this is very welcome. However, the level of employer involvement is currently different. We think there is an increased role for employers in development of Tech levels, potentially through the employer groups that have come together to develop the apprenticeship trailblazers.
In this note we define technical education and professional education separately. Technical education is defined as science, engineering and technology (SET) related education and training at Levels 3-5. Professional education is Level 3-plus vocational training in the non-SET fields. This distinction is important since there are particular challenges for technical education that do not apply to professional education, not least the dire shortages of skilled workers within the technical fields. This reflects the realities of the labour market and needs to be recognised explicitly in policy documents; conflating technical and professional education is unhelpful.

Technical education should be at the heart of driving productivity through skills. Yet, as the OECD and others report, England continues to underperform in this realm. As currently arranged, the FE system appears incapable of comprehensively delivering the skills required for the country to move to a more productive economy. Employers consistently complain that they cannot recruit technicians with the appropriate skills and that this is affecting their ability to take on further production orders. A clear vision and accompanying strategy is required that delivers: (1) a set of qualifications respected by employers which thus has value in the labour market; (2) an infrastructure that delivers high-quality teaching using industry-standard facilities; and (3) a straightforward funding system that incentivises employers, individuals and colleges to participate in training that results in productivity gains.

High-quality technical education is expensive, requiring industry-standard facilities and expert staff, and commonly including specialist training that is only needed by relatively small numbers of individuals. Currently, although many colleges advertise the kinds of technical courses that employers want, courses often do not run because an individual college cannot attract sufficient numbers of learners to make them financially viable – the so called ‘tyranny of small numbers’.

One way to achieve a step-change in FE is to facilitate a new breed of specialist institutions that focus on excellence in a particular field. These specialist institutes, drawn from within the existing FE estate, would have a clear mission, be built on effective local industry and university partnerships, and enjoy strong leadership and world-class teachers and equipment. In this vision, perhaps 100 ‘Technical Institutes’ would focus on technical education, amalgamating supply and demand to deliver economically viable, high-quality technical education. Difficult-to-recruit SET teachers and expensive industry-standard equipment would be efficiently concentrated in these Technical Institutes, contrasting with the current model where over 200 colleges struggle to attract and retain these scarce resources. Other colleges would cease to offer technical education and specialise in other broad sector areas, eg: Business Administration (inc Law and accountancy); Health, Public Services & Care; or Retail & Commercial Enterprise (inc hairdressing, catering, leisure & tourism). These specialist institutes would be home to the very best technical and professional education and act as beacons of excellence both to young people and to employers (potentially unlocking greater private-sector involvement and funding).

FE institutions have been driven to offer courses that will attract large group sizes and are low-cost to deliver, often regardless of whether these courses match the needs of the labour market. The consequences for technical education in a local area are duplication of cheaper-to-run provision across several colleges, and a lack of flexibility to be responsive to employer need for specialist provision. Specialist institutes would offer a broad
occupationally-focused curriculum based on underpinning principles in the relevant disciplines. The focus would be on helping learners to achieve qualifications at Levels 3, 4 and 5. The purpose of teaching at lower levels would be to provide a scaffold to help learners reach this aspiration. The curriculum would be required to meet accredited national standards while reflecting local labour market priorities.

The decentralisation of skills responsibility to LEPs and City Regions provides an opportunity to introduce specialist institutions as part of coherent local strategies, by driving a rationalisation of provision based on the needs of a local economy. However, public policy decisions (eg around national priorities, the choice and standards of qualifications which may be offered, the type of institutions which may be funded, etc) must remain at the national level, providing a fixed framework in which decentralisation is allowed to occur. Ideally, a move to specialised institutions would happen organically through the process of decentralisation, with local partners recognising that continuing to pursue a strategy in which all colleges offered all curriculum areas and competed for learners was neither efficient nor effective. Regrettably however, we do not believe this organic shift will occur. Instead, greater specialisation will require intervention from central government, whether by encouraging LEPs and City Regions through non-statutory guidance or, if necessary, through directive policy and funding constraints. Furthermore, in technical education, we believe government should encourage some or all of the new National Colleges to become fully-rounded Technical Institutes. This would mean National Colleges keeping their higher-level (Level 4+) specialist industry focus (eg on Nuclear) but expanding in scope to deliver a broad range of world-class technical education (across science, engineering, and IT) at Level 3. Catapult Centres too should be encouraged to establish Technical Institutes on their sites. In the original vision for Catapults they were to have a training function but, with the exception of the Advanced Manufacturing Catapult, they have been slow to embrace this.

Qualifications obtained across the skills sector tend to be concentrated at low levels. Apprenticeship numbers are also overwhelmingly in areas that are cheap to deliver. In 2013/14, two-thirds of apprenticeship starts were at Level 2; and only 23% were in SET sectors (falling to 13% for the over-24s). Unless there is some ring-fencing or other financial incentive put in place, the current drive towards 3 million apprenticeship starts by 2020 is unlikely to improve this situation. Government must prioritise provision – whether apprenticeships or other training – which both offers highly positive benefits for learners and drives economic growth. At the very least, government should adopt a target of ensuring that the proportion of apprenticeships: (a) at Level 3; and (b) in SET-related occupations, has not decreased by 2020.

A key role for government is to ensure all employers of people in particular occupations are able to have a say, firstly in setting occupational standards for their industry, and then the qualifications that derive from these standards. It is unrealistic to expect large numbers of employers to organise themselves to carry out this work. If strong, independent, institutions, such as the professional bodies, unions and employers were enabled to work in partnership to take greater ownership of vocational qualifications, it would be possible to develop qualifications that meet the needs of the individual learner, their potential employer and the broader economy.

One of the trailblazer apprenticeship innovations has been the engagement of professional bodies in ensuring that apprenticeship standards align to professional registration
standards. Professional bodies bring currency, status, transparency and stability to the qualifications system. Professional standards act as stable benchmarks that do not change when government changes, and thus act as a guarantee of broader occupational competence. Government should commit to move, over time, to funding only technical and professional qualifications that align to professional standards. For technical education this would be the standards for registered technicians in science (RSciTech), engineering (EngTech), and IT (RITTech).

Qualifications continue to play a role within the technical and professional landscape. However, focusing solely on qualifications provides only a partial view of success. Arguably, other measures are more important, such as whether people progress into employment or onto further learning, and the impact of education and training on lifetime earnings. We are therefore very supportive of recent work to match datasets across BIS, DfE, DWP and HMRC.

Finally, we encourage CVER to explore whether there are better mechanisms for identifying what skills the labour market requires. A recent IES workshop identified the potential for using the US occupational system (O*NET) to be translated into the UK context giving a much clearer specification of what knowledge, skills and behaviours are required by different occupations. It is this real labour market intelligence that should be driving technical and professional education and Gatsby would be happy to collaborate on any initiative with such an objective.
10. Professor Alison Fuller – UCL Institute of Education – Attending
    co. author, Professor Lorna Unwin

1. Introduction
The current approach to technical and professional training lacks the level of consistency, intensity and support required to provide young people and adults with an adequate platform for progression in both education and the labour market or to produce the intermediate skills (Levels 3-5) required by the economy. It takes an impoverished and short-term view of the skills and knowledge required in the workplace, and has a distorted sense of employers’ capacity to plan for and invest in good quality training. In the context of an ageing workforce, we should also be concerned with the paucity of opportunities available to adults wishing to retrain, and develop new skills.

2. Lack of clear purpose and robust labour market currency
Currently, 16-24 year olds are presented with a complex variety of pathways/programmes of different lengths and levels, leading to qualifications with different exchange values provided by organisations of varying quality. The degree of choice varies from one geographical area to another as does the extent of a work-based component, the amount of genuine off-the-job training/education, and the strength of connections between the providers and employers. Setting out to navigate this bewildering landscape has been made increasingly difficult due to the collapse in careers advice. Though variety might be appealing, there is a noticeable confusion of purpose here. There are, of course, notable exceptions to this story - some world-class apprenticeships and excellent full-time vocational programmes, but they shine as beacons in a foggy landscape and continue to be seen as exceptions rather than the foundations on which to build a better and more equitable system.

3. Ways forward
What provision is needed to deliver high quality technical and professional education? How do we ensure clear and coherent routes from initial skills development to the most advanced technical and professional training?

- Develop a standardised post-secondary occupation-based twin-track of intermediate/technical level apprenticeships and full-time vocational programmes leading to full Level 3 or L4/5 attainment of 3 or 4 years duration with mandatory work placements for the full-time track (see The Netherlands for model supported by employers).
- Extend intensity of full-time mode of attendance, the current model of 15/16 hours a week is weak compared with models of full-time (approx. 30 hours) post-secondary provision in countries with stronger technical and professional education routes.
- Fluctuations in demand for apprentices can then be off-set by full-time track and latter can serve employment areas where apprenticeships are difficult to sustain. Base design on ‘expansive characteristics’.
- Ensure the currency of qualifications is recognised for entry to bachelor degree/professional programmes (concept of dual/hybrid currency).
- Build on strength of UK’s flexible FE/HE interface. Stop current within-Level variability (‘thin’ Level 3 as opposed to ‘full-fat’ Level 3).
- Ensure programmes articulate, where possible, with professional body registration
requirement and professional ladders of qualifications and progression.

- Enable adults to take accelerated versions of these programmes if they can ‘prove’ appropriate prior experience and competence
- Stop using apprenticeship as a vehicle for (only) accrediting existing competence (‘conversion’ device) rather than a substantial programme of occupational learning.

Which providers are needed to deliver high-quality technical and professional education?

The focus of attention should be on developing holistic capacity connecting providers with well-trained specialist vocational teachers/trainers with cognate colleagues in HE and in workplaces to create permeability and to distill knowledge and innovation into intermediate and sub-degree programmes. This FE/HE capacity needs to be at the heart of local hubs, which support and involve employers in business-led skills solutions. We must stop treating employers as an homogenous lump - many employers struggle with workforce development because they themselves have not participated in good quality training and some have poor basic skills. They need access to high quality business support (of the type provided by the best Group Training Associations), not just being ‘sold’ training/qualifications. Employers who have consistently shown they provide excellent training could be asked to take on more apprentices (distributed through supply chains in the case of large organisations and shared on a sector basis by smaller ones) and provide the work placements for full-time students.

Sample References
What is the meaning technical and professional skills?
Technical and professional skills is defined as advanced skills development related to on the job training. This does not always require a work placed setting although evidence shows that the best technical education happens when students are in work or have direct access to the work place.

What does this look like?
There should be a set of national sector / industry standards that enshrine the types and level of advanced skills required, which could be translated into curriculum and qualification requirements. These could include higher level apprenticeships, technical degrees, part time higher level (4+) technical and professional certification / qualifications.

Qualifications need to be more explicit regarding what learners know, can do and apply, in what setting and to what level. There is the recognition that employers value the skill level of the individual rather than the qualification, hence skill levels being shaped by national industrial strategies and priorities, which allow local and regional flexibilities and responsiveness would be better.

The route into advanced qualifications as well as technical and professional qualifications needs to be well mapped and explicitly proven to enhance the skills for key roles within industry sectors. There needs to be greater consideration to how all providers contribute to the agenda for the development and acquisition of advanced skills to support local and regional needs. The development of basic into advanced level skills should start in primary schools and continue throughout the learner’s journey.

At present, current assessments strategies are a limiting factor in the development of skills acquisition and are described and defined by academic language. A broader range of assessment is required to demonstrate the application of the skills acquired to ensure understanding i.e. theory and practice is integral. Consideration also needs to be given to the destination measure from the DfE or the BIS outcome based success measures to determine the rate of sustained employment and by implication the value for money of the investment.

Although, it is recognised there needs to be a set of national standards, flexibility is required to allow local advanced skills needs to be met, thus ensuring employers know that learners work ready, within an every changing world of work. This could be facilitated by the commissioning of locally designed services based on employers’ needs and devolved validating powers with employers central to this.

How do we achieve this?
We need to value and recognise advanced skills development as a continuum, which does not only happen in further education but needs to begin in primary and continue throughout secondary, through further into higher education. For example, the national curriculum is delivered in primary schools through the use of project based collaborative learning focusing on the development of wider skills as well as knowledge and understanding. In many colleges, collaborative project based learning which engages employers also takes place. However, this does not happen at secondary education where the focus is on the acquisition and assessment of knowledge divorced from the acquisition and assessment of skills. Hence, post 16 we are starting with a skills deficit for many of our young people.
The significance of these wider skills including creativity, enterprise, teamwork and leadership cannot be underestimated, yet at secondary level, they are almost invisible.

Many colleges are best placed to deliver the technical and professional skills that the economy needs as they are genuinely close to employers and the workplace. They utilise different environments to support ‘on the job’ training and the best have the capacity and expertise, through highly trained technical experts, to keep abreast of all the changes which take place in a fast-developing industry. However, it is recognised that ‘one size’ does not fit all and there needs to be a genuine two way partnership between employers and education / training providers using incentives to encourage greater collaboration for local skills solutions.
What provision is needed to deliver high quality technical and professional education

Developing a stronger technical and professional system requires facing up to the attractions of the mainstream university system.

Higher education in England has many excellent features whether judged in terms of international ratings, graduate completion/employment or research. Only 43% of those leaving education participate in higher education but more than 75% of 13 year olds say they are very or fairly likely to go to university. The English university system is built on a residential, full-time, three-year model with tuition fees at £9,000 and an average student loan debt above £40,000. Graduates are more likely to be in work and to secure higher paid work than non-graduates but there are pockets of graduate unemployment and as many as 40% of graduates are in non-graduate occupations five years after graduation.

Alternatives to full-time degree study in England have diminished and there are declining numbers of part-time students. People who have not started a university course find there are fewer alternatives than there were in the past in England or they would find elsewhere (for example the USA, South Korea or Ireland). The numbers of 20-29 year olds in learning is low compared to the OECD average.

The gradual relaxation of student number controls and their abolition in 2015 is likely to result in more students paying £9,000 fees for courses in institutions in the top half of the league tables (which does not necessarily mean a strong graduate employment record).

The government’s plans to focus more on university destinations. This may help to rectify the balance but action is also needed to strengthen careers advice in schools, to protect funding for high quality technical education for 16 to 18 year olds, to extend advanced level FE loans to those aged 19 to protect funding for courses, to create an alternative validation route to university and Pearson and to develop new employment models.

Many career have become graduate-only in the last twenty years in a drive to raise status but this happened because there was a perceived lack of technical, professional or apprenticeship alternatives. A starting fee of £40,000 is not good for students from low income families and isn’t good for the services themselves. Government may wish to look at the 5 million people working in the public services as a starting point for a different approach.

What providers are needed to deliver high quality technical and professional education?

A strong professional and technical education system needs strong institutions but England already has a mixed economy and will continue to have one. The 150 universities are unlikely to be right vehicles because of their focus on research and on higher levels of

7 DFE Longitudinal study of young people, November 2014, Page 102
8 IFS Payback Time, 2014
9 OECD Education at a Glance, 2014
study. Private training providers are unlikely to offer the stability unless government can offer long-term contracts.

FE colleges can provide the firmest anchors for the system because of their track record, their responsiveness to local and business needs, their expert staff and their industry-standard facilities. The average general FE college teaches more than 2,000 16-18 year olds, trains more than 1,000 apprentices and educates more than 5,000 adults, around 500 of whom take higher education courses. Colleges will undergo significant change in the next few years but offer the scale to cross-subsidise important specialist provision.

**How do we ensure there are clear and coherent routes?**

The two government departments involved (DFE and BIS) need to work together to ensure that young people have appropriate information to make good choices at 14, 16 and 18. The departments also need to ensure that funding policy and qualification regulation policy helps institutions develop programmes which support progression from Level 2 at 16 and 17 to Level 3 and 4 at 18 and over.

Money isn’t everything but it makes a difference. The three main sources of funds are government, individuals themselves and employers. Government revenue spending on adult skills (including 19+ apprenticeships) was cut from £3 billion in 2009-10 to £2 billion in 2015-16\(^{10}\) and there will be further spending cuts as a result of government’s plans to secure a balanced budget by 2018. As government withdraws revenue support, it needs to help secure funding from individuals via an extension of the student loan scheme and from employers perhaps via levies. Government also needs to work towards a more predictable policy environment to support institutions and employers to make their own investments.

13. Centre for Vocational Education Research – Attending

**What should we do to address the issues that face technical and professional education in this country?**

1. **What provision (e.g. curriculum and qualifications) is needed to deliver high-quality technical and professional education, and why?**

One priority is to reform the system for school leavers. In contrast to many other countries, we have lacked a stable, consistent, well-regulated technical education offer with brand recognition equal to that of A-level. While the A-level is a single qualification with different awarding bodies, vocational qualifications are ‘owned’ by different awarding bodies (and paid for with taxpayers’ money). Some of these are well known (such as BTEC, owned by Pearson, or City and Guilds qualifications, HNCs or HNDs). Others are less well known. The path to which different vocational options will lead is often unclear to school leavers, teachers and employers. This means that qualifications cannot perform their role, which is to act as a signal of skills and knowledge that are acquired over a course of study that is well known. Employers need to know what they are getting; learners need a qualification that will enable them to work for a variety of employers.

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\(^{10}\) AoC calculations from Skills Funding Agency accounts and grant letter
The vocational course of study needs to be sufficiently broad such that learners become equipped to work on a variety of tasks within an occupation. Furthermore, learners need to be sufficiently skilled to acquire further learning later in life if the labour market changes (e.g. due to technological change). Hence, the general components of learning (e.g. good literacy and numeracy) are important within vocational courses of study. The progression possibilities in further/higher education should be clear to learners in advance of applying to a course of study.

The post-16 offer needs to be simple with a fixed duration - two years is the minimum in most countries. Assessment should command the confidence of employers. Local and regional businesses should be consulted on the sectoral and occupational specialisation offered within the programme of study, and this should reflect regional skill needs and future plans. There needs to be a balance between learners’ need for general, transferable training with the employers’ desire for more specific training. Employers have an important responsibility if the productivity advantages of having a better VE system are going to be realised. Not only should employers have a role in the design of the qualification but they also need to consider what happens after that (i.e. how skills will be utilised; what form of apprenticeship or other form of on-the-job training will be provided to new workers).

England already has many hundreds of vocational and professional qualifications. It should be possible to identify those that lead to successful labour market transitions and good wage returns in each sector and integrate these into a wider programme of general technical education (maths, English and underpinning sectoral knowledge). It would be preferable if the school-leaver’s qualification (i.e. the vocational alternative to A-levels) operated in the same way as A-levels, with different awarding bodies offering the same qualification and not different awarding bodies creating their own versions (with different names).

At this stage in students' education, while choice of a specific occupation/profession should be kept open, at least half the study programme should consist of the general education required to operate efficiently in an occupational/professional field. Work experience should be designed to motivate, inform choice and develop understanding of what is needed for employability.

Students would be expected to apply themselves for the full duration of the programme of study in the same way that students on the A-level course do. To achieve this level of motivation and commitment from students, teaching will need to be innovative but in addition an incentive to complete comparable to the offer of a university place (the outcome for most A-level students) is also needed. The technical/professional programme should offer all students a UCAS style application process at the beginning of their second year for a Level 3+ apprenticeship or full-time university level study depending on the level of course completed. As with A-level, successful programme completion should result in the offer of an apprenticeship or further full-time study.

2. Which providers (e.g. schools, colleges, universities, independent training providers) are needed to deliver high-quality technical and professional education, and why?
Teachers of the calibre to provide high quality technical/professional education to a high standard are in short supply. To take full advantage of their skills and achieve economic class sizes, provision should ideally be concentrated in larger institutions with the facilities to offer some hands-on technical workshop or similar experience. This would argue for using the facilities of Further Education colleges. There is no reason to exclude private provision if it can meet the programme requirements and there are almost certainly a number of providers who could do so. Some school sixth forms might also be able to offer the programme in certain sectors. Schools could choose to specialise in such a way that the full range of programmes could be covered in a given local area.

It is important to build on existing capacity in the sector (in terms of excellence in provision and leadership) rather than require brand new structures, as otherwise existing institutional capital may be lost.

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

Schools would need to ensure that their students are fully aware of the opportunities offered by the technical/professional programmes. While all students should do GCSEs, they need to be advised about the consequences of their subject choice and grades for later options (e.g. Physics for those wanting to follow engineering programmes).

The two year technical/professional programme offered post-GCSE would be offered at two levels, intermediate and advanced and last two years. The intermediate programme would normally lead to a Level 3 apprenticeship depending on achievement in the final examination. The advanced course would lead to a Level 4 apprenticeship or full-time University study. Access to the intermediate and advanced programme would depend on prior GCSE achievements - possibly at Level 1 for the intermediate course (5 GCSE passes including Maths and English at D or E grade). For the advanced programme access would depend on 5 GCSE passes at Level 2 and also include 3 separate sciences.

Are these expectations unrealistic? Not if we look at other European countries where course of a similar length and rigour have been provided for many years enabling around three quarters of a cohort to enter the labour market with a qualification at Level 3 or higher. Of these, around half follow full-time technical/professional courses or apprenticeships.
What should we do to address the issues that face technical and professional education in this country?

The current system is delivering nowhere near the amount of technicians we need. The OECD has highlighted that two thirds of EU employment growth will be in the technicians and associate professional category. And yet the OECD also reports that in England less than 10% of learners in England are studying to levels 4 and 5 as their highest qualification (16th out of 20 countries).

The Institute of Public Policy Research analysed UKCES forecasts to show that that 3.6m new or replacement medium-skilled jobs will be required in the UK over the next 10 years. This implies that by 2020 we will need an average of 300,000 new medium-skilled workers entering the labour force each year in England. However in 2014/15 there were only 95,000 studying vocational qualifications at levels 4-6. So significant action needs to be taken to increase the numbers of learners taking the professional and technical education route.

Developing National Colleges and increasing the number of Higher Apprenticeships will contribute to increasing numbers, but much more needs to be done, including:

1. **Promote equal esteem between the academic and professional and technical education (PTE) routes**

Lack of esteem for the PTE route is a huge problem, and is shared by young people and those that have the biggest influence on their choice of career or educational route: parents and teachers. Surveys show that:

- only one quarter of parents judge vocational education to be worthwhile;
- 65% of teachers would rarely or never advise a student to take an apprenticeship if they had the grades required for university entry;
- while 57% of parents said that a young person with a plumbing qualification or apprenticeship was ‘very employable’, only 16% hoped their child would take an Apprenticeship (‘Apprenticeships are good – but not for my child’).
- amongst employed 18-33 year olds, 26.5% of those who followed a vocational path after school said that their school actively discouraged their decision, with only around a third saying their schools actively supported their choice.

Given these attitudes it is highly unlikely that young people will be given the right careers advice. It is also highly unlikely that we will get either the quality or the quantity of young people taking the PTE route.

**Actions that might be taken include:**

- Working with the Behavioural Insights Team (“Nudge” tactics) to design interventions to boost learner demand.
- Public figures eg. Ministers, media personalities held up as examples of successful progression through the PTE route.
• Amend the Statutory Schools Guidance on Careers Advice to clearly set out the benefits of the PTE route, giving it equal status with the academic option.

• Careers and Enterprise Company Enterprise Advisers to work with schools in making students aware of the benefits of pursuing a PTE route.

• Develop a protocol setting out principles for allowing FEC staff access to schools (restricted access for FECs is a significant problem).

• Promote utilisation of earnings data and other outcome-based success measures, and encourage providers and third parties to make the data available and accessible to a wide range of users.

• Schools to hold an annual Apprenticeships Day.

• An Apprenticeships study pack to be made available to year 7s.

• Implement parity of funding arrangements: this lack of esteem is re-inforced by tertiary funding arrangements whereby a learner of the same age studying at the same level on an FE course does not have access to the same government support as a learner studying in an HE course. This is particularly evident regarding maintenance support, while FE loans are not available for courses at levels 5 and 6. This limits mobility, competition and choice, and incentivises full-time degrees over other qualifications that employers or learners may value. If the finance offer isn’t right, it makes it very difficult to get the PTE offer right.

2. Develop and simply the professional and technical education offer, with clear lines of sight from school through to degrees and professional qualifications and on to the workplace. People need to know the PTE offer is both available and possible: the OECD referred to English higher vocational education as a “Hidden World” and the CAVTL similarly described it as a “Secret Garden”.

We should explore the potential for developing Institutes of Technology which, alongside National Colleges could:

• represent a clear and coherent route from school through to degree level, and then on to the workplace;
• increase the capacity, capability and responsiveness of the FE sector to deliver world-class PTE;
• have strong employer involvement in the design, delivery and assessment of qualifications and investment in provision – particularly at local level, for example testing and developing Local Outcome Agreements;
• deliver the proposed 16-19 technical baccalaureates, Higher Apprenticeships, Foundation Degrees and HND/Cs.
15. Polly Simpson – Department for Education

What should we do to address the issues that face technical and professional education in this country?

**Key principles of an education system**

- Enabling young people to adapt to uncertain future labour market (multiple careers, technological change), equipping them with skills and knowledge, not just qualifications.
- Equal generosity of support across vocational and academic options (in particular, funding)
- Flexibility to move between pathways and especially to re-enter education at any point.

**Routes through education**

**Secondary**

A limited number of broad routes (like Sweden) (with minor variations within), with emphasis on basic skills for all (even if just ‘reinforcing’ previous learning), breadth of subjects studied, in particular no student studying all ‘sciences’ or all ‘arts’; non-assessed components to develop cross cutting skills (work experience, citizenship); project-based learning\(^\text{11}\).

- **Academic route** (as a transition from the current) all must take English, maths, science, humanities, and creative subject then extras. Compulsory subjects can be as minors and could be non-assessed (e.g. creative subject could be fulfilled through compulsory design or through demonstrated creative component of other courses).
- **Technical route** like French Tech Bacc, which will include general education as above but would likely be non-assessed, and should include a ‘contrasting’ subject. Alternatively can do apprenticeship at L3+ (or L2 as long as it proceeds directly into a L3) with extended off-the-job training (full day per week or two in college plus own time working). Preferably working towards the same qualifications.
- **Entirely project-based route** (in UTC style institution). No grading but get leaving certificate and statement of projects completed (like when you leave a job and write up what you’ve done for a job application). Would stay in full-time education but complete several projects which incorporate Basic English and maths. Can do part-time and combine with pre-apprenticeship.

\(^\text{11}\) An academic, class-room based and individual style of work is useful because it is an efficient way to increase knowledge in core areas (maths, grammar) which rely on individual competency, ensures that certain areas are covered in a systematic way, and allows for individual assessment to monitor progress. However, almost everyone at some point in their life will have to move to a practical, project-based and collective style (as this is how work is typically done in the workplace).
Limited routes feeding into clear subjects at higher levels (e.g. map the broad routes onto narrower courses).

No university involvement. Institutions must be able to offer the full range of subjects (but because of the reduction in extras would overall not have to offer as broad a curriculum as in FE colleges/SFCs currently). Collaboration between FE and SFC to deliver most technical parts of tech bacc. Emphasis on stronger institutions so learners have community (and getting rid of private providers who aren’t in performance tables).

**Post-secondary**

*Key idea is to match lifestyles so this is no longer a distinguishing factor.*

Encourage FE colleges to develop technical specialisms in collaboration with particular employers/industries (not quite sure about how to deal with splitting off their current functions) and **extend financial support to all learners at post-secondary level (L4+)** to allow them to move across the country to specialisms and live university-style lifestyle. This is a key barrier to technical institutions competing with higher education because they cannot offer a similar lifestyle. (Young people want to escape!). Also it means that they are restricted to the local market (hence why FE colleges have to do such a range of stuff). Including Higher apprenticeships where young people can live by their institution but work at various employers.

*Do not allow FE colleges to actually become universities.*

**Additional thought on workforce**

We won’t have a successful technical education system unless we can make teaching more flexible and desirable and prestigious. Need to create better career pathways for teachers (into educational consultancy, civil service).
16. John Madill, Assistant Director pre-employment and basic skills – BIS

Proposal

A market-driven approach to commissioning of learning

My proposal is to insert a new role between provider and learner. For the purpose of this paper I will call this the “commissioner”. The role of a commissioner would be to actively manage individual “learner accounts”, advising and directing the learner into the career and skills offer that both commissioner and learner can agree would be most beneficial in terms of future prospects. All learner budgets directly funded training and loans would be included in the “learner account”.

Individual learner budgets are essential to minimise cherry-picking. If every learner has a budget attached then every learner is potentially an additional unit of income. There can be no substitution of “easy” for “hard” learners; the money available for the “hard” learners would be available to an alternative commissioner. Additionally, the fact that the money available to the Commissioner was linked to the learner would force the Commissioner to focus on that learner’s needs. Finally, an individual learner budget would incentivise a commissioner to look at all a learner’s skill needs rather than take them individually.

Payment by results would ensure that the commissioner was fully incentivised to act in the rational interests of the learner. The potential to lose money – or make a profit – would act as a driver to give the best advice and procure the most suitable (and effective) skills offer. Results could be based on earnings after 5 years – higher earnings (or an agreed high level of postgraduate study) would lead to higher outcome payments. Time spend NEET would result in potential transfer to another commissioner. Additional premia could be payable for outcomes in fields the Government considers to be of added value to the UK (e.g. STEM).

Commissioners could be a range of actors or consortia: colleges, universities, businesses, sector bodies, third-sector. The key element is that any commissioner could try and attract any learner. The commissioner would design a bespoke offer based on what they believed most likely to deliver the most success. Learners would then choose between commissioners. This would introduce competition.

Learner budgets – and outcome levels – would vary according to the qualifications the learner has on leaving school, as well as recognised disadvantage “triggers” such as learning disability or having spent time in care.

Argument

In recent years, BIS has undertaken a number of pieces of work to try and align provider incentives with those of the taxpayer. These include:

- Outcome-based success measures – Outcome information on which learners can base choices, and on which poorly-performing providers can be removed
- Econometric analysis of the impact of skills – demonstrating aggregate effectiveness of skills
- Policy development on how incentives can be linked to outcomes rather than qualifications.
These have had mixed results. They demonstrate clear value for skills provision in aggregate, but variation between different interventions. We know that higher skills bring higher rewards, but there is also a range of difference between provision at the same level. There are different reasons. Training in some sectors leads to better outcomes than in others (although these may be a skewed average), there are vast quality differences between provision in the same fields, and not all learners are equal in terms of the amount and nature of support they need.

While learners are driving the current skills offer, they have different objectives from the taxpayer (as represented by BIS and the SFA). Learners, in particular younger learners, are attracted by the chance to try and start a career in a subject of interest to them. The choice of subject often reflects behavioural and cultural factors where arts, media and business are more popular than STEM subjects. Additionally, learners may choose to spend taxpayer’s money in pursuing a career with high rewards but below-average opportunities, as current loans and fees policy mean they personally lose little if they fail.

Therefore, the disparity of objectives mean that the market is not functioning well. “Traditional” proposals include holding providers to account for learner outcomes (normally securing employment or higher wages) and “individual learner budgets”, where learners are given an allowance to choose the training needs they feel would suit them. Both of these would fail the test of creating an effective market. Greater accountability for providers would lead to “cherry picking” of learners to avid learners with multiple or complex needs. This is exacerbated by the current unit offer which links accountability to a sub-element of any learner’s needs. Meanwhile, full learner choice would not address the behavioural issues above that encourage learners to follow an ambition that may not be sustainable, personally or economically. And underpinning both is the belief that there will always be a second (and third, and fourth) chance for any learner who does not make the grade at the lower levels due to the high welfare costs of unemployment. If you fail, you can have another go so where is the incentive to succeed?

Introducing Commissioners would square this circle, as it would build in the concept of a third party actively advising the learner and managing the account. As commissioner rewards would be aligned to taxpayer priorities rather than (often false) market signals it would rebalance the nature of the offer available to the learner. And the ability for some commissioners to be independent of training providers (although for efficiency purposes not all need be) should create a level of competition that will ensure transparency.

**Impact on the training offer**

As the training is commissioned on behalf of the learner, and subject to payment by results, the Commissioners have an in-built incentive to identify the highest quality training offer and route to high skills and outcomes. The market approach would mean commissioners should be willing to pay more to providers with a strong track record as this would give them the most chance of securing their own outcome payment. In turn, this would create a need for both commissioners and providers to develop the most transparent offer possible in order to attract the individual learner.

The market would also effectively choose the curriculum and qualifications that would have most currency as these would lead to the jobs and earnings that would secure the highest outcome payment.
Objective – what do we want to achieve?
For young people to have a clear and genuine choice of routes at age 16 up, each one combining education, training and work experience relevant to, and validated by, employers and subject experts. The set of routes should provide access points to all the main sectors in the UK economy and open up job opportunities that are often hidden to young people. Older career chancers should be able to take those parts of the routes relevant that enable them to retrain in a new industry area.

What is the problem we are trying to solve?
Some vocational progression routes are clear, eg, catering, beauty therapy, plumbing; and, when taught well by a good provider, can lead to high quality outcomes. But, too many important areas of industry don’t have any clear routes in (even from HE); too many have become largely graduate entry (making them invisible to non-graduates); too many routes don’t offer progression beyond level 3; and too many are too specific for the many young people who don’t really know what they want to do yet and need the opportunity to try out different areas and occupations.

A major transformation – what needs to be in place?
Curriculum: For levels 2, 3 and 4 the components should be consistent so that all employers have the confidence that someone has a solid education, even if in an area unrelated to the job for which they are now applying. The components should be: maths; English; skills and knowledge particular to the route; enterprise skills (eg, how to set up a business); work experience; personal management and learning skills (eg, those developed through an independent project).

Opportunities for specialisation: Where is the level 2 bricklayer in this model? Some young people will struggle to engage with general classroom-based content but are not yet mature enough for an apprenticeship. The balance within the industry-relevant skills and knowledge should be towards a range of options so that young people can try different areas of industry or specialise, rather than a broad-brush and general curriculum.

Progression: It is hard to combine in one curriculum the practical skills that can keep young people engaged and make them attractive to an employer with the academic content to enable them to study in HE. This requires more than one solution: 1) Design level 4 and 5 curricula at the same time as 2 and 3, so that at the outset there are directly-related degree level courses available for people to progress onto; 2) Allow for specialisation so that people can explore what they are capable of and choose their progression route according to preference and aptitude; 3) Don’t try to enable any level 3 route “achiever” to be able to take any degree – that will immediately distort the purpose of the routes – if the routes are any good, universities will find ways of offering opportunities, either through level 4 courses or directly onto degrees.

Qualifications: To maintain standards, qualifications have to compare people across a consistent set of skills and knowledge. Each route is too broad to do this without either the content becoming so bland it is meaningless or a credit framework and complex moderation arrangements. Better to create a final certificate which is not a qualification but which acknowledges attainment of a set of qualifications which are themselves high quality and nationally regulated. Also, it is a big decision to remove trusted brands (like BTECs) from the offer when trying to persuade people to take new routes; perhaps
preferable to get awarding organisations to fit their offer to the routes, rather than take on a major reform of the qualifications market at the same time.

Ownership: Government should own the overarching criteria for routes but industry bodies have to be responsible for ensuring that each route offers genuine progression opportunities, reflects industry standards and is educationally coherent. If routes are to include apprenticeships, alongside full and part-time college provision, a good starting point is the trailblazers. However, there are more trailblazers than routes – are they capable of working together under an overarching banner? Or should a National College be created to own each route? This is a different vision from the National Colleges already created which are more industry specific. Who provides the educational integrity to support the intellectual, practical, moral and social development we expect for our young people, as well as the list of skills which people have to be able to demonstrate?

Standards: All countries with vocational routes have an infrastructure to create and maintain the standards which underpin the curricula and qualifications. That inevitably means a bureaucracy which has to be paid for and which is bound to be considered by some to be irrelevant the moment it’s born. Plus, it is unlikely to get real commitment from anything more than a minority of employers in the relevant sectors. But no one seems to have invented anything better so it may be the least-worst scenario. We already have part of this in the UK – National Occupational Standards – but with very limited ownership.

Employers: Only a small minority of employers will engage with this reform in any depth. That is not a failure; it just reflects how focussed employers are on now. The challenge for the route owners will be to engage employers in many and varied ways.

Places to learn: A local technical college resourced to provide all the basic content, supplemented by periods at a local university and with employers, visits to the National College and other employers, and online learning for more specialised content.

Teachers, facilitators and mentors: Teachers who understand how the skills and industry knowledge they have are relevant to the other areas within the same route, plus the ability to support English and maths in a vocational context. This means more training and support so that for recent industry operatives have the skills to teach young people and are committed to more than their specific specialism.

Hearts and minds: The most difficult part of the challenge. Because most people don’t know anything about further education outside of their own experience, they don’t understand the problems and therefore they won’t understand why this reform is the solution. Furthermore, if the reform tries to solve too many problems, Government won’t be able to communicate the solution either (and probably won’t solve any one of them well). Parents are the most risk-adverse people in the system; why jeopardise your child’s future with a new unproven course, even if you know that the alternative is not ideal for him or her? Expect a slow start and to communicate success stories.

Long-term, cross-party commitment: It’s true what people say that significant educational reform takes at least ten years.
Note: This is informed by nearly 15 years in post-16 policy including involvement in the last major attempt to rationalise and improve vocational education. I have absorbed lots of evidence and experience but cited none of it here due to lack of space.

Examples of what reform looks like in practice

David wants to be a surgeon (his Dad is a GP). He knows he needs good A level grades and be able to demonstrate potential to get a place at medical school. He chooses Chemistry, Physics, Biology and Maths A levels and organises voluntary work at the local hospital.

Mohammed wants to be a footballer although he’s not managed to get signed for a club youth programme so he is beginning to think, rather vaguely, of sports journalism or coaching. He opts for the Sports, Leisure and Cultural Industries route, full-time at college. This gives him lots of basic skills and knowledge (continuation of maths and English, grounding in how businesses in these industries operate and how to set one up, marketing, events management, customer service) and the chance to try different areas through options and work experience. After two years of being exposed to a wide range of opportunities, he takes on a Higher Apprenticeship with one of the major tour operators and is now running sports clubs for kids in Majorca and training as a junior manager.

Katy has no idea what she wants or what she is capable of. She has always struggled at school and left with a few mediocre GCSEs. She starts on the Health and Social Care route because she thinks she might work with children. Within a few months she has effectively dropped out but is picked up by the college learning mentor who is clear that she will have to do one of the routes on offer. As a way back in, she is given a placement in a charity shop where she turns out to be popular with the customers and good at selling things. She is allowed to switch to the Retail route, even though it is part way through the year, so that she doesn’t become NEET. She still struggles with the academic work and at the end of the year moves onto a traineeship which leads to an apprenticeship with Debenhams.

Helene also doesn’t know what she wants to do but is quite interested in forensic science. She starts science A levels but struggles with the step up from GCSEs. She switches to the Applied Science route because the academic science content is balanced with the its practical application of it in realistic industry settings; the skills she is learning in the scenarios she encounters are directly related (and sometimes identical) to science-based jobs in industry and have been set out by the National College and Professional Institutes. She flourishes and is sponsored by Pfizer to take a degree in Life Sciences at a good university.

What would happen now?

David: the same – this is a well-trodden and well understood progression route.

Mohammed: Takes a BTEC National in sports coaching. Struggles to get a coaching job afterwards (excess supply of qualified people) but also to work out how to transfer his skills to related areas. Gets a job in a call centre and is still there five years later. Runs a kids’ football team in his spare time.
Katy: She gets as far as the charity shop and signs up to a new course but cannot start until the new academic year. In the six months she is NEET, she disappears under the radar – the college considers it has done its duty by allowing her to re-start. She doesn’t; she doesn’t know about traineeships; and thinks she isn’t qualified for an apprenticeship. Five years later she has two children and rent arrears.

Helene: Struggles through, mainly because her parents don’t think there is an alternative. Gets Ds and Es so can’t get a university place. Gets a job in an estate agents. Five years later she’s doing OK but is a bit dissatisfied. However, her sense of failure and lack of clear options hold her back from having another go at getting a science-based job.