Higher, Further, Faster, More

Improving higher level professional and technical education

Natasha Porter and Jonathan Simons
Higher, Further, Faster, More

Improving higher level professional and technical education

Natasha Porter and Jonathan Simons
About the Authors

Natasha Porter is Deputy Head of Education at Policy Exchange and a former FE student. She is a Teach First ambassador from the ‘06 cohort with almost a decade of experience as a teacher and leader in inner city secondary schools. Before joining Policy Exchange, Natasha was a senior leader and founding teacher at King Solomon Academy. Natasha is a governor of a maintained school in London and is also a governor of a new free school opening in 2016.

Jonathan Simons is Head of Education at Policy Exchange where he directs all research within the Unit. Prior to joining Policy Exchange in 2013, Jonathan worked as a Director at Serco Group in their education practice, and has also been Head of Education in the Prime Minister’s Strategy Unit. He is Co-Founder and Chair of Governors of the Greenwich Free School, which opened in 2012.
## Contents

- About the Authors                                                                 2
- Policy Exchange’s Education Unit                                                 4
- Acknowledgments                                                                5
- Executive Summary                                                            6

1. The Importance of Skills and the Missing Elements                              16
2. Delivery of Level 4 and 5 Qualifications                                       24
3. Principles of an Appropriate System and Government Reforms to Date             45
4. Recommendations                                                              51

Appendix: Write up of the roundtable hosted by Policy Exchange during the course of this report 65
Policy Exchange believes in the liberation of learning – improving education outcomes by freeing up institutions and individuals to maximise opportunities to support children, young people and adults in the system. We love working in education because it is profoundly optimistic – it speaks to a better tomorrow.

**For more information about our work visit:**
www.policyexchange.org.uk/education-and-arts
or contact one of the team:

Jonathan Simons, Head of Unit:
jonathan.simons@policyexchange.org.uk /@PXEducation

Natasha Porter, Deputy Head of Education:
natasha.porter@policyexchange.org.uk /@NPorterPX
Acknowledgments

We are very grateful to the support of Wates Group, and to the Construction Industry Training Board (CITB), which allowed this paper to be researched and written. We are also very grateful to OCR for their support of a roundtable to discuss the issues and consider some draft recommendations in this paper, and for their parent organisation Cambridge Assessment’s ongoing support for Policy Exchange’s education work.

Many thanks go to all those who we met with for this report and hosted visits. Particular thanks go to Professor Alison Wolf; Martin Doel and Julian Gravatt at Association of Colleges; Nick Linford; and Andy Westwood.
Executive Summary

“The current situation is financially unsustainable. It is deeply inequitable in its allocation of resources. It is also inefficient and bad for the “human capital development”, which increasingly drives and justifies education policy. In post-19 education, we are producing vanishingly small numbers of higher technician level qualifications, while massively increasing the output of generalist bachelor’s degrees and low-level vocational qualifications. We are doing so because of the financial incentives and administrative structures that governments themselves have created, not because of labour market demand, and the imbalance looks set to worsen yet further. We therefore need, as a matter of urgency, to start thinking about post-19 funding and provision in a far more integrated way.”

Thus concludes Professor Alison Wolf in her recent research piece on Further Education (FE) and Higher Education (HE) funding.

There is no doubt that the FE system, or to be more precise, the adult skills element of it, stands at a crossroads. The funding changes since 2010 are stark. Whilst universities have increased their income significantly (mainly through a large increase in tuition fees and increase in student numbers, more than compensating for a cut in teaching grant), FE college income has fallen significantly, despite an increase in volume of 16–18 funding:

![FE college and university income changes 2009/10 to 2015/16](chart)

This is at a time when the role of higher learning institutions to support the government's agenda has never been more important. Whether around the efforts
to increase productivity, to support the growth of a Northern Powerhouse, to help create 3 million new Apprenticeships, or to facilitate the growth of mid level and higher level professional and technical skills for future economic growth, England needs a diverse and thriving post-secondary education infrastructure. Undoubtedly we have a world leading HE system. Government needs to ensure that we have a similar FE system as well.

This is particularly the case when it comes to what this report terms higher level professional and technical education – what is known as Level 4 and 5 qualifications in education jargon, or “post-secondary, sub tertiary qualifications” in the OECD’s even less plainspoken terminology. Specifically, this means the type of technical and associate professional skills that are increasingly important in the labour market, and are required training for science and engineering technicians, financial analysts, paralegals, construction managers, account executives, operations managers, IT assistants, air traffic controllers, building and fire inspectors, and so on. Survey data of employers shows that this is an area where employers are already struggling to recruit, for example:

- The Royal Academy of Engineering forecasts that the UK economy requires 830,000 more engineers by 2020;
- A quarter (28%) of firms who need technicians qualified in science, technology, engineering or maths already report difficulty recruiting, and a third (35%) anticipate problems in the next three years;
- 20% more construction staff are required in London and the South East from 2014–2017 compared to 2010–2013, with a particular focus on skilled construction workers and managers;
- The UK will require an additional 500,000 technicians between now and 2022 (defined as those with Level 3 and Level 4 skills), including at least 200,000 in agriculture/horticulture.

Part of this represents replacement demand – i.e. needing to recruit a new generation of engineers to replace the large numbers of those who are currently aged 55 and over, and due to retire shortly. But there is also, (with all due caveats as to the precision of labour market forecasting,) likely to be a total expansion in that section of the labour market. Data from the government agency the UK Commission for Employment and Skills (UKCES) suggests that technical and associate professions will need to be one of the areas of labour market growth in the UK, in common with many other developed countries – the OECD forecasts two thirds of all EU employment growth will need to be in this area over the next decade. These shortages being reported are a consequence therefore both of strong predicted labour market growth, but also a weak starting position. Fewer than 10% of 25–40 year-olds in England have a post-secondary vocational qualification as their highest qualification. In contrast, in the US 22% of the labour force take associate degrees or postsecondary certificates; in Austria, around 20% of the cohort graduate with a post-secondary qualification from a vocational college; in South Korea a third of each age cohort enters polytechnics; and in Scotland a third of each cohort undertake courses shorter than a full degree.

There has been significant government focus on this area – principally through Apprenticeships. Since 2010, there have been over 2 million Apprenticeship starts,
and 3 million more are forecast to be created between 2015–2010. This is very welcome indeed. Yet very small numbers of Apprenticeships have to date been at the higher level – though it is a fast area of growth and new Degree Apprenticeships have just been announced, alongside other areas of policy development such as an Apprenticeship levy and the creation of elite Institutes of Technology. The policy question is how to build on these strong approaches, and ensure that the funding and infrastructure is sufficient to drive a growth in technical training more broadly.

The fundamental issue, this report concludes, is that there is a systematic imbalance between the two halves of our tertiary education system. The FE sector is in a position of great risk. As the National Audit Office (NAO) concludes: “The further education college sector is experiencing rapidly declining financial health, and lacks a clear process to inform decisions about local provision”. By 2015/16, more than 1 in 4 of the entire FE college network could be financially inadequate – defined as “a significant risk of being unable to fulfil contractual obligations” – or in other words, effectively bankrupt and unable to continue.

By contrast, the university sector has never been healthier. Income is at record levels, with an operating surplus of 3.9% recorded for 2013/14. Universities spent a combined total of £3.25 billion on capital in 2013/14, a rise of 23% compared to 2012/13. The sector as a whole now also holds a staggeringly high level of discretionary reserves. Even after accounting for pension liabilities and the deficit within the universities pension scheme, operational reserves for the sector stand at £12.3 billion, or 48% of the entire annual operating income of the university sector.

Ensuring that the UK can increase its training of higher level professional and technical education means both halves of the system need to be healthy. Universities can and do play an important role in this provision – 10% of UK domiciled full-time students (and 28% of part time students) are enrolled on programmes such as foundation degrees and HNDs. There are 46,000 students in England whose employer pays the majority of their course fees, largely because
the courses are highly vocational, having been designed with employers. A further 95,000 students have their fees paid by a public sector body, mostly in education, health and social care. There are also good examples of universities who work with FE colleges, businesses and their local area to become a hub for extremely high level professional and technical expertise. There are a range of good examples of what can be called “HE in FE” – universities and colleges working closely together to deliver higher level qualifications in a mixed setting or largely in a college. It would therefore be a mistake to conclude, and this report does not, that universities can and should play no role in the provision of higher level professional and technical education.

But within an institution blind approach in individual circumstances, there are reasons to think that all other things being equal, FE is the most suitable place for higher level professional and technical education. This is, for one thing, one half of FE’s core remit – focused, high quality technical education linked to labour market needs. Secondly, and relatedly, a university will tend, all things being equal, towards academic drift – this being, after all, the core purpose of a university. This means that technical and professional training within a university setting risks, (in terms of course design, workforce qualifications, and in prestige,) being overly focused on theory above practice. The McLoughlin commission on effective workplace training concluded that there were four facets of effective provision: a clear line of sight to work on all vocational programmes; “dual professional” teachers and trainers who combine occupational and pedagogical expertise, and are trusted and given the time to develop partnerships and curricula with employers; access to industry-standard facilities and resources reflecting the ways in which technology is transforming work; and clear escalators to higher level vocational learning, developing and combining deep knowledge and skills. All other things being equal, FE colleges are more likely to be able to deliver on these principles.

The report concludes that achieving a strong, unified system to deliver higher level skills will take time – particularly in a context of spending restrictions and a weak institutional architecture on the FE side. Achieving it will also not come naturally – both because of the weaknesses in provision identified in FE, and because of the strong imbalances in funding between the FE sector and the HE sector identified above.

This leads to three overall conclusions:

- Firstly, that simply leaving the system as it is – even without the prospect of further funding cuts – will not naturally lead to an increase in the provision of these skills, despite labour market shortages. There does, therefore, need to be some form of intervention if government decides that, as this report believes, more of such skills are needed.
- Secondly, that even noting ongoing work to manage declining funding (for example the area reviews of post 16 provision currently underway),
further action needs to be taken in the short term to avoid the risk of further deterioration of the FE sector, which would render any long term shift towards greater use of that sector more difficult.

Thirdly, in the longer term, to avoid ongoing priming and intervention by the government, action needs to focus on achieving a competitively neutral system of post-secondary education with a unified funding system under user control.

This report believes that such conclusions are in line with government policy. The recommendations below are therefore in support of such an agenda, and of the actions that need to take place from the Spending Review later this year, and throughout this Parliament to make it happen:

1. In the forthcoming Spending Review, BIS must seek to safeguard the FE sector as much as possible by delivering savings from within the HE sector that are cashable and score in government accounts in the near term – specifically, by requiring universities to meet from within their own revenues some or all of the requirements around high cost subjects and widening participation. In 2015–2016, the Higher Education Funding Council for England (HEFCE) allocated £532 million to supporting widening participation funding, differential support for London costs, and some small sums for high cost and high area provision (NB this does not include the larger sum of funding for high cost STEM provision, which is excluded from consideration here). None of these funds are without merit – indeed they represent important public policy objectives and recognise that universities should be compensated for the additional costs of, for example, working to ensure students from disadvantaged backgrounds come to and stay at university, or that science courses can be delivered. However, in the context of a challenging Spending Review, where BIS will be required to deliver savings of perhaps 25% to 40%, BIS should consider whether universities should not only be required to maintain their responsibilities in these areas, but to now partially fund them themselves – i.e. that some or all of the £532m HEFCE funding set out above to do this should be withdrawn. In effect, this would require universities to deliver efficiencies in their provision and/or use some of their (sometimes very large) reserves to fund such provision. Importantly, any remaining grant should be reallocated on a tapered basis, so that any residual HEFCE funding in this area be used to offset differential reserves, so that universities with smallest reserves are given the largest funding. This would indeed, deliberately, act an incentive not to hold reserves over a certain limit.

Such a move would, undeniably, be controversial. But it is analogous to the settlement reached between the government and the BBC recently, where a non government institution takes on the costs of a government commitment (in
that instance, the provision of free TV licences for pensioners) and delivers a cashable saving to government. In both instances, a case can be made that such institutions have the funding available to take on such a commitment, with some reform to their own business models, and government would expect and monitor their compliance with this commitment with no consequent reduction in core business. With regards to universities, for example, BIS should be perfectly clear that they would not expect to see any reduction in efforts to recruit and retain students from disadvantaged backgrounds. Similarly, it would not expect to see any diminution of subjects taught in London, or the closing or winding down of STEM undergraduate courses in response. Rather, it would expect universities to reform themselves and deliver greater efficiency of spend in order to free up resources to make up for the partial or total withdrawal of some elements of HEFCE grant.

It is also likely to be fiercely resisted by the university sector, on the grounds that a “robbing Peter to pay Paul” approach would be short sighted and misguided. To be clear, as noted above, this report welcomes the world beating HE sector we have in this country and the strong role it can play in professional and technical education, and the prudence of holding some level of reserves in times of uncertainty. But the facts are stark. Across the public sector, departments will be asked for cuts of something in the order of 25%-40% between now and 2020. Although it need not be in theory, in practice universities and FE colleges are in a zero sum game for resources (or a sub zero sum game) from within the BIS budget – and are, as noted above, effective substitutes for each other. The question to ask, therefore, is not “would cuts be harmful”, but “where would cuts be least harmful in the context in which we find ourselves”. The answer is that when looking at the post 19 education and training system as a coherent whole, the HE element is significantly better funded than its FE counterpart, has substantial cash reserves which could be better utilised than sitting in banks, and has made insufficient progress on efficiency savings to date when set against either FE or any other public service. This then is the case for a reallocation of resources away from HE to protect FE.

2. **Alongside this, BIS should seek to accelerate the development of National Colleges and Institutes of Technology as flagships for developing higher level technical and professional skills.** National Colleges and the new Institutes of Technology represent an outstanding model for bringing together sets of learning, employers, and local geographies and communities to deliver higher level skills. The long term ambition should be a series of National Colleges for all growth sectors in the economy providing a “hub” for higher level skill development, both physically at that college and potentially on some sort of franchised model rolled around across the country. This would sit alongside the maintenance of a smaller network of larger, localised, more generalist FE colleges who would principally be responsible for the provision of second chances for those who have not succeeded in the school system. It would be possible, and indeed often desirable, for National Colleges and Institutes of Technology to be closely linked into FE colleges. Indeed they should commonly “grow out” from them, with the FE college offering a wider range of qualifications alongside in order to ensure financial viability of provision, as well as not artificially dividing one type of college from another.
There should not be a fixed model of how such flagship provision grows or is provided.

In order to promote the development and prestige of these flagship institutions, there are two specific changes that BIS should make. Firstly, **BIS should commit to allowing such colleges to award their own higher level technical and vocational qualifications, rather than franchise with a university, and should allow colleges that have created their own qualifications to themselves franchise them out to other colleges to provide wider access to them** (with quality safeguards enshrined as part of this process, as franchising universities do currently). Allowing National Colleges and Institutes of Technology to design, accredit and award their own qualifications – contingent upon sustained engagement and approval from relevant employers and industry bodies – would immediately grant these institutions status. Allowing such colleges to then franchise this awarding would also allow the expertise and quality of sector leading training to be spread around the country, so students are not restricted from the chance to access such training by geography. Secondly, **BIS should further loosen the current restrictions around Equivalent Level Qualifications or repeat qualifications for students studying at such institutions at Levels 4 and 5.** The current rules on do not allow government funding (via loans or grants) to support adults studying for a qualification equal to one they already have in another field, with certain limited exceptions at degree level. Subject to resources in the Spending Review, BIS should widen these exemptions to include not just students studying certain specific subjects at universities but to cover any student accepted onto a qualification at one of the new National Colleges/Institutes of Technology.

These two recommendations would, we believe, address the first two overall conclusions above – that action needs to be taken to grow higher level professional and technical skills, and that in the short term this requires protecting the financial health of FE. In the longer term, however, more deep seated structural changes need to be made to address the third conclusion above; that government should look to deliver a competitively neutral system of post-secondary education with a unified funding system under user control.

Therefore, this report further recommends that:

3. **Government should commit to move towards one single student loan system that encompasses all post 19 training (other than specialist provision) whether undertaken in FE or HE. Furthermore, this new single funding system, as opposed to being a “single shot” loan book, should operate as a draw down account with a lifetime balance.** At present, a student going to a university is entitled to a reasonably financially generous loan system both for tuition and maintenance. A student going to FE is entitled to partial government support for a Level 4 qualification if aged 19–23, and a poorly understood loan for Level 4 if aged 24+. For students taking Level 5 courses, unless deemed Higher Education (such as HNDs), there is no funding available at all. Increasingly, as government considers a unified system of post-secondary training, this makes no sense either in equity terms, policy delivery
Executive Summary

terms, or administrative terms. Instead, this report proposes that BIS move to one single, unified loan book and loan offer for all students regardless of the post-secondary qualification undertaken and the institution attended. This would allow for the first time, equitable treatment for loan access for tuition and, crucially, maintenance. From a student’s perspective, he or she would be able to consider all their options and prices knowing that the same system of loans would be available to them regardless of what institution they study at. The other element that should change within the new unified student loan system is a change from what could be termed a “single shot” account to a draw down account where the balance can be accessed multiple times up to the loan limit. This is an essential pre condition to introducing some form of price competition and cost control into the loan system. From a student’s perspective, choosing a hypothetical £6,000 course under this new model – perhaps at a National College or Institute of Technology – over a £9,000 course would allow them to bank the remaining £3,000 a year for later study. This would strongly incentivise them to seek out lower cost courses in certain circumstances or at least compare costs more carefully. Similarly, from a provider side, there would then be a good incentive to price more competitively to respond to this demand. A lifetime cap on loan allocation – for tuition and maintenance – would act as a further overall cost control for government, similar to the model that operates in Australia.

4. Alongside a reworked student loan system, government should extend maintenance support (via loans) for some FE learners. At present, FE students are not entitled to maintenance support at all, outside of a small Discretionary Learner Support fund for colleges and training organisations to allocate to those in particular need. This is because the typical FE student is assumed to either be in some form of work (even for those studying on a full time basis) and/or be living at home whilst studying locally, therefore requiring far lower levels of financial support. However, again, this assumption does not apply for HE, where policymakers assume that the default model for HE is three year, full time residential, often a long way away from previous domicile and requiring extensive maintenance support for living costs. It is therefore important that in a unified post-secondary system, there exists a similar option for at least some of FE – where student experience also allows them to move away and study intensively at a renowned institution.

5. Government should support and recognise Industrial Partnerships as the main route for securing ongoing employer engagement and qualifications, and free up restrictions on existing qualifications. Employer engagement is absolutely essential to ensuring that high level professional and technical qualifications are valued – at this level even more than lower level because of the increasing specificity and complexity that comes with higher level qualifications. Above everything else within this space, what is needed is two things: a sense of stability, and a recognition that most employers do not want to, nor have the time to, engage in a sustained way in qualification design or delivery or steering of the system. With that in mind, three things ought to be done.

a. Firstly, engagement on sector designed and industry approved qualifications should principally be via the National Colleges and Institutes of Technology. As noted above, such institutions should only
be approved if they can demonstrate sustained employer engagement including in qualification design and approval. The creation of these institutes and their control over qualifications would remove one of the major barriers to sustained employer engagement, which is the feeling that too often colleges are not responsive enough to their needs.

b. **Secondly, the existing infrastructure of Industrial Partnerships should be expanded as the route for sector engagement.** IPs have so far resisted the temptation to turn inwards or become overly dependent on grant funding. They have also been building relationships with LEPs in many areas and engaging in discussions around spatial reform such as the new combined authorities.\(^1\) Although such partnerships are still relatively new and there remain areas for improvement, the start they have made and engagement they have secured ought to be maintained and built on, rather than a new scheme developed with the consequent disruption and need to build up awareness of yet another plan.

c. **Thirdly, qualifications which are offered by Awarding Organisations ought to continue but be freed up for wider use.** Alongside qualifications developed and validated by colleges are some professional and technical qualifications that are well known and recognised in this space – including Foundation Degrees, Higher National Certificates and Degrees, AAT qualifications, OCR Cambridge Nationals and Cambridge Technicals, City and Guilds and so on. Approved qualifications from awarding organisations should continue to be offered if there is demand from colleges to offer them and from students in taking them. Yet the restriction on the ability of different organisations to offer Higher National Certificates and Diplomas should be lifted. At present, this is a copyrighted qualification held by one awarding body.

Taken together, there are strong reasons to hope that these recommendations will rebalance the system between HE and FE and lead to a growth in higher level professional and technical qualifications. A unified funding system and combined student loan book will strengthen demand from a proportion of students and adults to access such training. This in turn will help generate confidence amongst FE colleges to supply them – supported by a more positive funding environment and spearheaded by a cohort of National Colleges and Institutes of Technology. The new qualifications and stability in some form of employer engagement will keep feedback loops strong between employers and providers to ensure qualifications remain relevant and robust.

This model can sit quite easily alongside a vibrant HE sector that is likely to continue to grow. There is no conceptual reason why England cannot have a strong traditional HE sector focussing on higher level qualifications (of which many are vocational), as well as a rejuvenated FE sector delivering professional and technical education alongside continued second chances education. That should be BIS’ aim in the Spending Review and beyond in this Parliament, and the recommendations set out above are designed to support that goal.

However, such an outcome is only one scenario – and is definitely towards the optimistic end. A more pessimistic scenario places greater weight on the possibility that the long term cultural weight and prestige of the HE sector will

---

\(^1\) Policy Exchange roundtable discussion with Nick Boles, “Skills and the industrial strategy”, February 2015, held in association with Industrial Partnerships.
mean that further growth in this sector does not complement but instead stifles any growth of higher level professional and technical skills – with increases in student numbers going to university effectively cannibalising those who might otherwise undertake higher level professional and technical qualifications.

It should be made clear that the Government is absolutely right to move to an uncapped system for post-secondary education. There is no magic number about the proportion currently studying tertiary qualifications in England – and indeed, many of our international competitors have higher level of tertiary participation and graduation rates. But a rise in the numbers studying post-secondary is not the same as a rise in the numbers going to university. Indeed universities are often not best suited to meet the principles of high quality professional and technical education set out above. At this stage, there is no evidence to suggest whether the optimistic scenario or pessimistic scenario will prevail. Government should therefore maintain a watching brief on HE expansion alongside making the changes set out in this report. However, should the pessimistic scenario become the central assumption, then the government should consider one final change:

6. Government should consider how it could amend the system of uncapped post-secondary education so that within it, there is a limit on the number of places on qualifications which lead to full honours degrees and which can currently cost up to £9,000. This would mean that the growth in post-secondary study from the uncapped system would then take place principally or entirely in qualifications that would be capped at a lower fee (say £6,000) and would not lead to honours undergraduate degrees. This system can be conceptualised as a “reverse core and margin” policy which operated at the beginning of the last Parliament. This policy allowed universities to recruit as many high performing students as they wanted (those with grades of AAB or above), whilst providing a capped number of lower charged for places that institutions bid for and were allocated by HEFCE. This report suggests that, should changes need to be made, a model be implemented that reverses this– in other words it is the “core” honours degree places which are capped, within an overall uncapped system, and the uncapped growth comes from lower priced courses which do not lead to honours degrees. In practical terms, this would require HEFCE to reassume the role of allocating full honours degree places to institutions in the way that they have done previously. A starting position would be to allocate on the basis of historical allocations for the last year of student number control (with a reasonable degree of latitude for over offering in the first year to recognise the changes in different institutions approaches and size since then), and simply tweak this allocation on an annual basis, as was previous practice.
1

The Importance of Skills and the Missing Elements

Having an economy with sufficient numbers and types of skills is vitally important, both for the country as a whole, but also for individuals within that country. The National Foundation for Economic Research’s (NFER) recent literature review, contra to some earlier work in this area, shows that labour market returns for vocational qualifications are positive and lead to increased chances of employment, with level 3 qualifications and NVQs being especially beneficial. From an individual perspective, having a high level of skills is associated not just with these economic benefits but better health, lower levels of criminality, and greater civic engagement.

So from a government perspective, there is a clear public policy interest in improving overall skill levels of the population. More specifically, government has a range of interests in this area: improving skills is associated with higher levels of employment and hence tax paid, as well as lower levels of benefit payments; to the extent that lower skill acquisition is associated with lower levels of income, an increase in skills might be expected to lead to greater opportunities for social mobility; rebalancing the economy geographically also requires faster economic growth in the North, which will require greater skill acquisition; and politically, large numbers of voters in what can be called the skilled working class or lower middle class social groupings – C1/C23 – value “hard work”, “independence” and “self-reliance”, and would value greater skills to allow them to better themselves.

So the public policy goal is clear – and indeed, has been clear for some time across party boundaries. Improving our economy by improving the education of our labour market has been of interest to the government since before the Robbins’ report into the future of higher education was published in 1963. That report argued “in modern societies the skills and the versatilities required are increasingly those conferred by higher education”. Yet there are still a high number of indications that this country still faces a skills shortage:

- The latest biannual UKCES survey of employers suggested that around three in ten job vacancies are reported to be hard to fill – what are known as skill shortage vacancies;
- The UKCES data also suggests that around 15% of employers report that they have skills gaps within their existing workforce over and above vacancies – these gaps are estimated to be present in around 1 in 20 employees or 5% of the labour force (albeit around three quarters of these are due at least in

part to staff being new and still being trained, that is to say it ought to be a transient problem); and

- There remain sectors of the economy and job roles which report particular skills shortages, as the infographic below shows.

![Figure 1.1: Density of skill-shortage vacancies – occupation, occupation within sector, and by sector](image)

Figures only shown where base greater than 50
Source: Density of skill-shortage vacancies – occupation, occupation within sector, and by sector. UKCES, Employers Skills Survey 2013
These shortages will be worsened by the current position for the skills base. The UK has a long standing problem with what is sometimes termed the “long tail” – that is the proportion of adults with only low level or intermediate skills. The graphic below summarises our international position compared to other OECD nations:

| Table 1.1 |
|---|---|---|---|---|---|
| Low skills (Below upper secondary) | Intermediate skills (Upper secondary) | High skills (Tertiary) |
| **Country** | **% Qualified** | **Rank** | **Country** | **% Qualified** | **Rank** | **Country** | **% Qualified** | **Rank** |
| Japan | 7 | 1 | Czech Republic | 74 | 1 | Canada | 51 | 1 |
| Czech Republic | 7 | 2 | Slovak Republic | 73 | 2 | Japan | 46 | 2 |
| Slovak Republic | 9 | 3 | Poland | 65 | 3 | Israel | 46 | 3 |
| United States | 11 | 4 | Austria | 63 | 4 | United States | 42 | 4 |
| Poland | 11 | 5 | Hungary | 61 | 5 | Korea | 40 | 5 |
| Estonia | 11 | 6 | Slovenia | 59 | 6 | New Zealand | 39 | 6 |
| Canada | 11 | 7 | Germany | 59 | 7 | Finland | 39 | 7 |
| Sweden | 13 | 8 | Estonia | 52 | 8 | Australia | 38 | 8 |
| Germany | 14 | 9 | Sweden | 52 | 9 | Norway | 38 | 9 |
| Switzerland | 14 | 10 | Switzerland | 50 | 10 | Ireland | 38 | 10 |
| Slovenia | 16 | 11 | EU21 average | 48 | n/a | UK | 38 | 11 |
| Finland | 16 | 12 | United States | 47 | 11 | Estonia | 36 | 12 |
| Israel | 17 | 13 | Japan | 47 | 12 | Switzerland | 35 | 13 |
| Austria | 18 | 14 | Finland | 44 | 13 | Sweden | 35 | 14 |
| Norway | 18 | 15 | OECD average | 44 | n/a | Belgium | 35 | 15 |
| Hungary | 18 | 16 | Norway | 44 | 14 | Iceland | 34 | 16 |
| Korea | 19 | 17 | Denmark | 43 | 15 | Denmark | 34 | 17 |
| Denmark | 23 | 18 | France | 42 | 16 | Spain | 32 | 18 |
| EU21 average | 24 | n/a | Italy | 41 | 17 | Netherlands | 32 | 19 |
| OECD average | 25 | n/a | Greece | 41 | 18 | OECD average | 32 | n/a |
| **UK** | 26 | 19 | Korea | 41 | 19 | France | 30 | 20 |
| New Zealand | 26 | 20 | Luxembourg | 41 | 20 | Luxembourg | 30 | 21 |
| Australia | 26 | 21 | Netherlands | 40 | 21 | EU21 average | 29 | n/a |
| Ireland | 27 | 22 | Canada | 37 | 22 | Germany | 28 | 22 |
| Netherlands | 28 | 23 | Iceland | 37 | 23 | Greece | 26 | 23 |
| France | 28 | 24 | UK | 37 | 24 | Slovenia | 25 | 24 |
| Belgium | 29 | 25 | Belgium | 37 | 25 | Poland | 24 | 25 |
| Iceland | 29 | 26 | Israel | 37 | 26 | Hungary | 21 | 26 |
| Luxembourg | 30 | 27 | Australia | 36 | 27 | Austria | 19 | 27 |
| Greece | 33 | 28 | Ireland | 36 | 28 | Slovak Republic | 18 | 28 |
| Italy | 44 | 29 | New Zealand | 35 | 29 | Czech Republic | 18 | 29 |
| Spain | 46 | 30 | Spain | 22 | 30 | Mexico | 17 | 30 |
| Mexico | 64 | 31 | Mexico | 19 | 31 | Portugal | 17 | 31 |
| Portugal | 65 | 32 | Turkey | 18 | 32 | Italy | 14 | 32 |
| Turkey | 68 | 33 | Portugal | 17 | 33 | Turkey | 14 | 33 |

Source: UKCES, UK skill levels and international competitiveness
The projections for labour market growth in this country also suggest an increase in jobs which require intermediate or higher level skills, alongside a growth of lower level skills. This is made up through a shrinking of what are traditional lower middle or clerical style jobs, which are being destroyed through automation, technology and globalisation. By 2020, the Skills Commission estimate that half of all jobs in the UK labour market will be in upper occupational levels, defined as managerial, professional or associate professional:

There are a number of public policy issues which spring from this data – including the one which traditionally gets the most focus, which is the proportion of adults with no or low level skills who are finding themselves excluded from the labour market. However, this report is focused on the gap in what we term here higher level technical and professional level skills. In the education qualification framework, these are associated with Level 4 and 5 skills (and to a lesser extent Level 3 and Level 6). These are sometimes also known as technician level skills, or associate professional level qualifications. The recent HEPI report in this area summarises how they are defined:
The table above from the Skills Commission identifies this as a growth area (in the light blue section of growth just above the squeezed middle), as does some data from the Employers Skills Survey from 2013. There is also a range of data from specific industries which suggests an emerging gap in this area:

- The Royal Academy of Engineering forecasts that the UK economy requires 830,000 more engineers by 2025;5
- A quarter (28%) of firms who need technicians qualified in science, technology, engineering or maths already report difficulty recruiting and a third (35%) anticipate problems in the next three years;6
- 20% more construction staff are required in London and the South East from 2014–2017 compared to 2010–2013, with a particular focus on skilled construction workers and managers;7
- The UK will require an additional 500,000 technicians between now and 2022 (defined as those with Level 3 and Level 4 skills), including at least 200,000 in agriculture and horticulture.8

Looking internationally, the OECD has identified the UK as an outlier in this regard with the extent to which these qualifications and skill levels exist. As the recent BIS consultation on this issue under the Coalition summarised:9

---

5 Royal Academy of Engineering, “Jobs and growth: the importance of engineering skills to the economy”, October 2012.
6 CBI/Pearson Skills Survey 2014.
Fewer than 10% of 25–40 year-olds in England have a postsecondary vocational qualification as their highest qualification. In contrast:

- "In the US 22% of the labour force take associate degrees or postsecondary certificates;
- "In Austria, around 20% of the cohort graduate with a post-secondary qualification from a vocational college;
- "In South Korea a third of each age cohort enters polytechnics; and
- "In Scotland a third of each cohort undertake courses shorter than a full degree."

Other countries are also predicting growth in these areas. For example, the OECD report quoted above includes a recent US projection which showed that nearly one-third of job vacancies by 2018 will require "some post-secondary qualification, but less than a four year degree". This skill level correlates with the "technicians and associate professionals" category, which the OECD also forecast "nearly two third of overall employment growth in the European Union" to be in.\textsuperscript{10}

It is worth noting at this point that this is not an argument for setting some form of target for the UK to increase its ranking within OECD, at least not in the traditional sense of state led funding increasing the supply of skills. Firstly, it is not clear that the current public spending situation makes such a target achievable. Indeed, as Keep et al argue, the projected funding situation is likely to see the UK decline in its share of expenditure devoted to post-secondary education and training. Secondly, it is not clear whether such an acquisition is desirable. Various institutions including HEPI and Skope set out that there are some reasons to be sceptical of a simple comparison of skill levels compared to international competitors.\textsuperscript{11} There are reasons why the UK economy has both the supply and, crucially, demand for skills that it does. A simple comparison that, for example, South Korea trains far more young people in technical education than us may simply reflect a different economic and technical base. Absent a parallel shift on the demand side or change to the nature and structure of the economy, such a supply increase will simply lead to over qualifications. Indeed, there is some evidence to suggest this is already happening, with a high proportion of graduate labour currently being employed in non-graduate professions. It is also important to note that the UK will also need an expansion of lower skills – for example in hospitality, in the care sector, and in construction, where the biggest demands are actually at Levels 2 and 3.

The substitution of graduate labour is one of four answers to the question of, if such skill levels are frequently reported for a sustained period of time, why there has not been a corresponding increase in supply?

- **There is not a shortage at Level 4 and 5, or at least not one we should meet:** In his pamphlet for the SMF, Robbins Rebooted,\textsuperscript{12} Liam Byrne argued in the importance of educating workers to level 6 and above, arguing that the automation of white collar jobs will create an urgent need to restructure our economy. The report claims that the only way to increase our GDP and adapt to that is to increase our knowledge economy and university educated population — in other words, a focus on Level 4 and 5 is a misnomer. More broadly, questions have been raised over the extent to which employer surveys accurately pick up shortages. Under this analysis, it is easy to say “skills

\textsuperscript{10} "Skills beyond schools – The OECD review of Postsecondary Vocational Education and Training", OECD.

\textsuperscript{11} For instance see Keep, “What Does Skills Policy Look Like Now the Money Has Run Out?”, 2014.

shortages" because consciously or subconsciously it relieves an employer of a burden to solve the issue. It is just as logical to argue that there is a shortage at the current wage offered by the firm, or the culture in the firm means no one is willing to go there.13

- **Low skills equilibrium**: As identified in 2009 by UKCES, some parts of the UK economy experience a low skills equilibrium.14 Low demand for skilled labour at a local level can lead to a limited supply of a skilled workforce. This results in a local economy which competes on cost rather than quality, and makes it difficult for firms to start producing higher quality goods and requiring higher skills as it requires a changed way of working and new business market. A widespread emergence of a low skills equilibrium can lead to economic stagnation that is not improved by boosting the supply of skills. Sheffield’s City Deal highlighted that the main issue in some of their local sectors is not a skills gap, it is that existing skills are under-used and there are not enough opportunities for progression.15 This is supported by UKCES data from 2013, which found that 16% of the workforce (4.3 million workers) had skills and qualifications above those required by their current roles.16 Under this hypothesis, a shortage of Level 4 and 5 skills is being met by various firms operating at levels which do not require Level 4 and 5 capabilities—they are operating in a suboptimal low(er) skills equilibrium.

- **Substitution of migrant labour**: The number of foreign born people of working age has more than doubled since 1993 and is now slightly more than 6 million.17 Research has shown that for some companies, recruiting migrants to fill skills gaps has enabled them to expand,18 and a survey in 2014 showed that organisations employing EU migrant workers are more likely to have reported business growth in the past two years than those who employed no migrants. Although these migrant workers are typically filling low-skilled job gaps, ONS data shows that EU migrants are still being employed to fill higher level skills shortages too, with 39% of them in highly skilled jobs.19 Taken together, it is reasonable to assume that in some sectors—particularly construction and hospitality—migrant labour is substituting for a lack of home grown skills.

- **Substitution of graduate labour**: ONS data shows that 47% of recent graduates in 2013 were employed in non-graduate jobs. Even though employment rates for graduates are higher than non graduates, 26% of graduates in 2013 were in upper middle skill level jobs, which could reasonably be defined as requiring Level 4 or 5 jobs.20 ONS migrant data referred to above also shows that almost 60% of EU migrants working in low-skilled jobs are graduates. In other words, a ready pool of trained labour, paid for by others, which requires little or no investment from the employer and do not command higher wages is an attractive proposition which employers are reasonably and rationally using.

On balance, this report concludes that there is a policy case for seeking to improve Level 4 and 5 supply. This is because all the reasons why the shortage might not be being met are sub optimal from the widest public policy point of view. A low skills equilibrium is, by definition, lower down the value chain than a high skills equilibrium which will generate greater economic value both for the
taxpayer and employees. A substitution of graduate labour is inefficient, as well as costly to the taxpayer, given the cost that accrues through the state subsidy to each graduate. And although disputed by pure free marketeers, it is reasonable for politicians to want to preference in the long term a supply of domestic labour to meet domestic labour market needs, both for reasons of national identity and also because the costs that accrue to the state if such domestic labour is displaced.21

To that extent, regardless of OECD rankings, it seems clear that certain sectors of the economy are reporting labour market shortages at these levels of skill, and that the impact of these shortages is unhelpful. The rest of this report considers how this shortage can be met.

---

21 This line of argument is not to accept the lump of labour fallacy— but it simply to note that if there is a substitution currently going on at any fixed wage level, and that unemployment or lower skilled substitution is also going on with domestic labour at the same time, that in the short run, there is a fixed demand for such skills and there is a displacement effect from migrant labour.
2
Delivery of Level 4 and 5 Qualifications

Figure 2.1: Adult (19+) FE and Skills Participation by Level (2009/10 to 2013/14)

Figure 2.2: Adult (19+) FE and Skills Achievement by Level (2009/10 to 2013/14)
The charts above\(^{22}\) show that take up of Level 4 and 5 qualifications is very small. The largest proportion of overall training (which includes Apprenticeships, work based learning and classroom based qualifications in FE colleges or through private training providers) is at Level 2, followed by Level 3, with Level 4 some way below. In 2013/14 there were 36,400 19+ learners for Level 4+ provision in further education.

The government focus over the last Parliament has been to grow Apprenticeships as a proportion of the charts above. However, despite significant increases in total provision, the Level 4+ Apprenticeships (known as Higher Apprenticeships) remain similarly a very small part of the overall total.\(^{23}\)

The growth of Level 4+ Apprenticeships has been rapid in proportional terms – from 1,700 in 2009/10 to 18,100 in 2013/14. The growth overall has been largely made up by take up from the over 25s:

---

\(^{22}\) BIS, “Further education and skills: statistical first release – learner participation, outcomes and level of highest qualification held”, June 2015, table 1. Note that learner volumes before 2011/2012 were accounted for using a different method of calculating learners numbers so are not strictly comparable; the effect is to diminish learner volumes for all subsequent years by approximately 2% compared to previous years. However, given that BIS produce versions of this chart on a similar time series basis but with this caveat, we have adopted a similar principle.

\(^{23}\) BIS, “Further education and skills: statistical first release – learner participation, outcomes and level of highest qualification held”, June 2015, table 5.
In addition, a further proportion of the cohort study a Foundation Degree. In 2013/14, almost 52,000 people were studying for a Foundation Degree (Level 5) in universities (reported separately from the data above because it is funded and regulated as an HE qualification). However, these numbers have declined considerably since 2009–10, where almost 85,000 students undertook this qualification.

![Figure 2.5: Foundation Degree starts, 2009/10 to 2013/14](image)

Source: HESA, HE student enrolments by mode of study, sex, level of study and domicile 2009/10 to 2013/14

In fact, by taking a slightly longer time series including all of the qualifications above Level 3, but below Level 6/undergraduate degree – what we term here “post-secondary, sub tertiary qualifications”, and comparing the trends against undergraduate degrees and postgraduate degrees, we see a sharply contrasting picture:24

![Figure 2.6: Uptake of post-secondary sub tertiary qualifications, 2005/06 to 2012/13](image)

24 BIS, FE and Skills Learner Participation on Level 4 and above courses (2005/06 to 2012/13), September 2014. The “post-secondary, sub tertiary” grouping is made up of Higher Apprenticeships, NVQs, HNDs and HNCs (all taken through FE colleges), as well as HNDs and HNCs taken through higher education institutions, Foundation Degrees, Diplomas and Certificates of Higher Education.
These small numbers are not because the flow of people with appropriate starter qualifications to undertake these Level 4+ courses are low – as the corresponding growth in undergraduate degrees (which require the same Level 3 start qualification) show. DfE data shows that by the age of 19, 56% of students attain a level 3 qualification (approximately 300,000 young people) with 9.2% holding a recognised technical qualification at that level.25 Across the adult age range in total, a reasonably constant 20%–21% of the population hold Level 3 qualifications as their highest, or 6.5 million to 7 million people.26 In other words, there is a large proportion of people who are qualified to move on to further learning but are not doing so – and of those who do progress from Level 3, the majority are doing so into Level 6 undergraduate qualifications rather than Level 4 and 5 higher level professional and technical qualifications.

As the data above shows, the two institutions where higher level technical and professional skills are formally delivered and accredited are the HE system and the FE system.27

Universities and HE
The university system in the UK is undoubtedly world class, and represents what is often termed the “jewel in the crown” of the education system. It is highly prestigious, well regarded, and competes on a global scale for students, staff, and research. Given the relatively small size of the UK internationally, and the total investment in HE, it is also often said that universities “punch above their weight”. Universities UK, the sector body, describe the sector as a “strategic asset to the UK”.

Table 2.1: Times Higher Education World University Rankings 2014–2015

<table>
<thead>
<tr>
<th>Rank</th>
<th>University and country</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CalTech (USA)</td>
</tr>
<tr>
<td>2</td>
<td>Harvard (USA)</td>
</tr>
<tr>
<td>3</td>
<td>Oxford (UK)</td>
</tr>
<tr>
<td>4</td>
<td>Stanford (USA)</td>
</tr>
<tr>
<td>5</td>
<td>Cambridge (UK)</td>
</tr>
<tr>
<td>6</td>
<td>MIT (USA)</td>
</tr>
<tr>
<td>7</td>
<td>Princeton (USA)</td>
</tr>
<tr>
<td>8</td>
<td>University of California, Berkeley (USA)</td>
</tr>
<tr>
<td>9=</td>
<td>Imperial College London (UK)</td>
</tr>
<tr>
<td>9=</td>
<td>Yale (USA)</td>
</tr>
</tbody>
</table>

In recent times, there have been significant changes to the funding structure of universities – most notably the introduction in 1998 and then subsequent two instances of raising of tuition fees in 2004 and 2012. The effect has been to increase significantly the funding available to universities over this time period.28

---

26 BIS, “Further education and skills: statistical first release – learner participation, outcomes and level of highest qualification held”, June 2015, table 13.1. The figure is made up of adults’ highest qualifications for those aged between 19 to 64 so changes on an annual basis as adults flow into and out of this group – as the younger population flows in with increasingly high level of qualifications, the overall cohort number shifts – hence between 2008 and 2014 the proportion of those who hold Level 3 has risen from 20.2 % to 21.6 %, or 6.3m to 7m people.
27 The FE system is made up of FE colleges and independent training providers. Although the latter are far more numerous in institutional terms, FE colleges provide the training for the vast bulk of adult learners (at all levels). Often the institutions will work in parallel, with FE colleges subcontracting elements of delivery to independent training providers. The analysis from hereon in deals largely with FE colleges as institutions.
28 HESA time series data, “Income and expenditure by universities in the UK”. Note that HESA only records individual UK nation spend from 2009 onwards so this data shows all UK spend for continuity purposes, even though different home nations took different approaches to funding via tuition fees against state spending.
Despite the increases in tuition fees in England meaning a rise in the proportion of expenditure financed by the individual rather than the state, it is still worth noting that the state is directly responsible for funding at least a third of university income in England directly. If the RAB charge of 45% is factored in (the proportion of student loans which the government expects will not be repaid and hence will be written off with the cost therefore being borne by the state), then the proportion of university income in 2013/14 financed by the state rises to 60%.

“...If the RAB charge of 45% is factored in, then the proportion of university income in 2013/14 financed by the state rises to 60%.”
This rise in income has been matched by a similar, albeit slightly smaller, rise in expenditure. The net effect has been a significant strengthening in universities’ financial position over time, as the graph below (over a slightly different time period) shows:

The most recent data (from 2013/14) shows a continued improvement in this position, with a rise in operating surplus of 5.1% from 2012/13 to 2013/14, equal to a total of 3.9% of the sector’s income. Broken down by institutions, there is understandably a high level of variation, with 13 institutions recording deficits and some recording surpluses well in excess of 10%.  

Most importantly for the purposes of this paper, years of consecutive surpluses have allowed universities both to expand spending on non recurrent items of
expenditure (i.e. capital) and to build up reserves. Universities spent a combined total of £3.25 billion on capital in 13/14, a rise of 23% compared to 12/13. The sector as a whole now also holds what is frankly a staggeringly high level of discretionary reserves. Even after accounting for pension liabilities and the deficit within the universities pension scheme, operational reserves for the sector stand at £12.3 billion, or 48% of the entire annual operating income of the university sector – a rise of 6.7% in one year (despite having invested close to £1 billion of reserves into capital as part of the £3.25 billion expenditure noted above). Again, such reserves are understandably not spread evenly across the sector, as the graph below shows (Note that this graph below shows reserves of 64.4% because it excludes accounting for the impact of pension spend; as noted above, when this is accounted for then reserves fall to 48%).

The HEFCE report also highlights some weaknesses in the sector performance. It notes that a small number of institutions are in deficit, as highlighted above. It also suggests that “the sector reported a sustainability gap (difference between the level of surplus achieved by the sector and the level required to cover the full economic costs of its activities) of £883 million; a deterioration against the position in 2012–13, when the sustainability gap was £870 million. This means that, in the medium to long term, some institutions will need to generate larger surpluses to make progress towards covering the full economic costs of their activities to secure their long-term sustainability”. This will be hampered, the report suggests, by increased cost pressures including a continued capital backlog, greater need to report pension deficits, and strategic risks around future student flows (particularly international students).

However, this report concludes that such risks, in comparison to other elements of the public sector (and especially FE), are low. They also do not take account of any savings from further efficiency gains and redeployment of resources, where this report believes there is significant room for improvement. The HEFCE report highlights a cumulative saving of £1.1 billion over the last three years of 2011/12 to 2013/14. However, when set against total expenditure over those three years of £73.2 billion on the same basis, this represents an efficiency saving of just 1.5% –
miniscule in comparison to efficiency savings that have been delivered in other public services over a similar time period. Both HEFCE and Professor Ian Diamond, the reviewer of efficiency in the sector, argue that this drive will need to be continued. This report suggests that a better description of that task would be “significantly increased”.

This increase in income and expenditure reflects a growth in the number of first time full time undergraduates going to university, despite the rise in fees to £9,000 showing a temporary dip in 2012/13, which was almost entirely reversed the following year.

![Figure 2.12: Number of first year full time undergraduate students at UK universities, 2009–2013](image)

However, when looking at total composition of student places, the picture is more mixed, with full time undergraduate growth (and full time postgraduate growth) being accompanied by significant falls in part time numbers for both undergraduate and post graduate study:

![Figure 2.13: Composition of student places at UK universities, 2009/10 to 2013/14](image)
This rise in undergraduate numbers reflects a combination of circumstances.

- Firstly, it reflects the continuing realisation that university offers a good deal for (predominantly) young people who take up full time undergraduate places, with a continuing high promised graduate premium and a generous financial support system, even after increases in fees which provides maintenance support whilst studying, (of which some was on a non repayable grant basis, now removed).

- Secondly, it reflects a paucity of (attractive) alternatives. The changing labour market means that the proportion of jobs open to school leavers continues to diminish (though the growth in Apprenticeship numbers aims to provide an alternative). It also reflects the unattractiveness of much vocational or technical study, of which more below.

- Thirdly, it reflects deliberate government policy to increase student numbers – from the Blair “50% target” of the last Labour government through to moves to uncap student numbers under the Coalition and the current Conservative government – initially for universities recruiting students with grades of AAB or above, moving to ABB and from this September, for all students. The government also focused on increasing the supply of places through partially opening up options for alternative providers of higher education to operate, and for students attending such courses to have (partial) access to the student loan book.

As all the incentives aligned, it was unsurprising that universities sought to take more students, and students indicated a willingness to go for further study.

What does all of this mean with regard to provision for higher level professional and technical education in higher education institutions? Three things are worth noting:

Firstly, some universities are world class in the provision of professional and technical education which they provide, linked closely to both the national and local labour market. Firstly, many honours degrees are actually vocational themselves (in that they are linked to a particular vocation) – these are more commonly known as professional degrees and include law, medicine, dentistry, engineering, ICT, some physical sciences and so on. More specifically, particular universities often specialise in this type of higher level professional and technical study – including universities who come together as the University Alliance, for example, or universities that were polytechnics before conversion and still retain a clear technical focus. The university think tank and mission group Million Plus show that 10% of UK domiciled full-time students are enrolled on programmes such as foundation degrees and HNDs that tend to be of vocational and technical nature.
work with FE colleges, businesses and their local area to become a hub for extremely high level professional and technical expertise. Finally, there are a range of good examples of what can be called “HE in FE” — universities and colleges working closely together to deliver higher level qualifications in a mixed setting or largely in a college. This partnership is discussed more in the FE section below. It would therefore be a mistake to conclude, and this report does not, that universities can and should play no role in the provision of higher level professional and technical education.

Box 2.1: University Alliance members’ work on professional and technical education

In the UK, universities alone have been responsible for an average 57% of UK labour productivity gains between 1995 and 2013. University Alliance brings together Britain’s universities for cities and regions. Most were established by or with industry at the time of the industrial revolution to meet the skills needs of new industries and the cities that grew up around them.

We continue to pride ourselves on our links, connections and partnerships with industry and the professions. Our students are on courses co-designed and co-delivered with employers. Up to half of our academics join us to teach directly from practice backgrounds, nearly 40% of our courses are accredited by Professional, Statutory and Regulatory Bodies and most include placements or sandwich years. We specialise in subjects that the economy needs: nursing, teaching, engineering and the creative industries. Although 40% of our students are from low income backgrounds, our students are as likely to get graduate jobs as any others. A high proportion work in the professions for which they trained. Nearly all our nursing students become nurses and nearly all our engineering students become engineers. Consequently, we have a huge transformational impact on individuals and communities around the country and on social mobility within society as a whole.

Alliance universities do many of the things that are valuable in professional and technical education: breaking the classroom mould of traditional higher education; taking higher education learning into the fast-developing industry environment; and recruiting educators from industry. All of our students, whether on an allied health degree, a world-leading animation degree or the UK’s top marine biology degree, are exposed to the latest in industry technology and developments. For example, we have the only engineering school co-established and co-delivered with industry, where students, academics and established engineers work and research side-by-side. We have the UK’s only factory-floor classroom meaning undergraduate and postgraduate students spend all of their studies in industry doing activity-led learning. Our marine biology students are on the shoreline in field centres, not in the classroom.

Excerpt from University Alliance open letter from Professor Steve Webb (UWE), Professor Mary Stuart (Lincoln) and Professor Edward Peck (Nottingham Trent), 26 June 2015

Secondly, there has been a growth in the number and proportion of students going to university with a technical or vocational Level 3 qualification as part of their entry level package. The graph below shows the Level 3 qualifications base for students who entered university in 2006 and 2013. Data for entry in 2014 shows that nearly a quarter of students accepted to university included a BTEC as part of their application.
This is not, however, the same as saying that such students will take up the type of higher level technical qualifications which the BTECs would traditionally be seen as a route towards. Some of them will undertake such qualifications at university. But the data above in chapter 1 shows a significant decline in the specific numbers of students taking HNCs, HNDs or Foundation Degrees at

**Box 2.2: Case study – The Open University and Higher Level Skills**

The Open University has vast experience of working with employers across the UK and globally to provide high quality, innovative teaching and to ensure its qualifications are suitable for today’s ever changing labour market. It works in partnership with many organisations to deliver higher level qualifications, collaborate on new curricula, validate programmes and share expertise.

As an example, The Open University is the UK’s largest provider of health and social care education. It trains nurses for the NHS through a unique work-based Pre-Registration nursing programme, enabling unqualified healthcare assistants to train as registered nurses, while continuing to work. It allows learners to combine the practicality of working with relevant work based learning with the highest quality teaching materials and learning support.

Around 9,000 OU health and social care students are sponsored directly by employers through partnership and commissioning arrangements. For example, an entry level course, “Certificate in Health and Social Care”, has no formal entry requirements and is designed to boost knowledge, build confidence and skills of the individual, resulting in a full HE qualification.

The flexible part-time study pathways are innovative routes which help Trusts meet their strategic workforce planning objectives and the programme attracts widespread interest from across the NHS. The scheme also chimes with the UK Government’s national agenda of widening access, up-skilling the workforce and contributing to productivity.

This is not, however, the same as saying that such students will take up the type of higher level technical qualifications which the BTECs would traditionally be seen as a route towards. Some of them will undertake such qualifications at university. But the data above in chapter 1 shows a significant decline in the specific numbers of students taking HNCs, HNDs or Foundation Degrees at
university. Instead, universities are accepting students with BTECs onto honours degrees (some of which will be vocational as above), due to a desire to increase the total number of students on undergraduate honours degrees, once provision for places was loosened. Similarly, the case of Foundation Degree take up shows how universities respond to demand for high level vocational training, by supplying it on an academic pathway. Foundation Degree numbers grew dramatically from their introduction in 2000 to 2009, during a time when such expansion was uncapped but traditional honours degrees were capped. However, as universities became able to recruit more students onto full time honours degrees, both because of a shrinking cohort and also due to the loosening of number controls, the attractiveness of offering FDs diminished, and numbers fell away dramatically as the data above shows.

Thirdly, there has been a growth in provision of alternative higher qualifications. These were allowed to grow by government, and students were allowed partial access to the student loan book. Because students were limited to £6,000 a year in the support they could access, and providers could only grow place numbers in courses charging £6,000 a year, the natural response was a growth in qualifications within that price bracket which were predominantly HNCs and HNDs. Within the overall sharp decline at universities in general, then, we can see resurgence in many alternative providers offering such qualifications. David Willetts in 2013, whilst Universities Minister, set out “the number of English and EU students claiming support at APs has grown from 13,000 in 2011/12 to 30,000 in 2012/13, and the total public expenditure on these students has risen from £60m to £175m. This is 4% of the total student support budget. Growth has been particularly concentrated among students studying for Higher National Certificates (HNCs) and the Higher National Diplomas (HNDs)”.

So there does remain what we might consider a core “base” of around 10% of full time undergraduates, and around 25–30% of part time undergraduates studying higher level technical qualifications such as an HND or a Foundation Degree, plus a small number in employer sponsored degrees that we can consider vocational. (There are also large numbers studying what of course are vocational degrees such as law and medicine, but for the purposes of this report focused on predominantly Level 4 and 5 qualifications these are out of scope). However, what is clear is that universities and private higher education providers respond very deftly to incentives. When honours degrees are less able to be offered, either through place capping, price capping or student loan support capping, alternative qualifications grow rapidly. When honours degrees become more viable, these are demonstrably the preference of providers to offer – which includes recruiting from students with a more technical background and from institutions which offer predominantly these courses. The big policy question in 2015, which is discussed more in the recommendations chapter below, is what will be the impact of the abolition of Student Number Controls from this September on both the supply and demand for level 4 and 5 qualifications (either delivered in FE or in HE).
Higher, Further, Faster, More

FE colleges

The FE system, or the skills system, is bewilderingly complex in comparison to other education sectors. This reflects both the wider breadth of responsibilities which fall on it, the political changes which have been made to it with extreme frequency, and the funding environment which has required it to constantly change and adapt.

The Skills Commission recently defined it as:

“An umbrella term encompassing a wide range of vocational education and training in both the private and the public sector. It covers all levels and life stages, and the diverse network of groups that provide, support, and benefit from these opportunities. Vocational education and training ranges from the informal accrual of skills by exposure to work-like environments or tasks, to formally certificated and long term courses. Levels of training also range from the provision of basic English and maths skills at Entry Level or Level 1, through to highly technical degree-based apprenticeships, and everything from employability and offender learning in between. The system is sometimes viewed as two overlapping systems: a private system of skills development led and funded by employers and individuals; and a public system supported and funded by government. The private system meets market needs and the public system has a duty to ensure people are sufficiently skilled for the labour market, supporting productivity and economic growth. The system covers multiple policy areas and government departments. Here, education, further and higher education, adult skills, employer engagement, welfare, and industrial strategy all converge.” 39

BIS defined it as follows: 40

“In 2013/14 there were 2.93 million government-funded adult learners participating in further education. They are studying what can seem to be a bewildering array of courses, varying in all kinds of ways, including:

- By level, from courses in basic literacy and numeracy through to scientific and technical degree-level programmes.
- By subject area, with work-related courses from accountancy to zoology, and courses with general educational and personal development content.
- By level of engagement, ranging from short modules lasting just a few hours to courses involving years of study.
- By financing, with some learners paying the full costs of their course, others paying nothing, and others taking out subsidised government loans or studying with funding provided by their employers.”

For the purposes of this report we are interested in all elements of the skills system by breadth (that is to say institutions and funding), but with a focus on the higher level technical and professional qualifications by depth. These are predominantly, though by no means always, delivered by FE colleges (though often in partnership with employers, particularly so in the case of Higher level Apprenticeships).

There are two important elements of the FE sector to consider when analysing their role in delivering these higher level qualifications. The first is funding. The overall funding picture for FE is much more complex with income coming from a range of sources – from government (both the Skills Funding Agency and the

39 Skills Commission, Guide to the skills system, 2015.
40 BIS, A dual mandate for adult vocational education, a consultation paper. March 2015.
Education Funding Agency), from employers, from individuals out of pocket contributions, and from student loans. Sir Andrew Foster described Further Education as the “neglected middle child” of the British education system, and the funding model and relative (lack of) protection reflects this.

By contrast to the HE sector as set out above, the financial position of the FE sector has been much weaker over recent years. Like other departments, BIS has had to make spending cuts in the last few years which has resulted in a 26% nominal reduction in revenue spending via the core adult skills budget between 2009/10 and 2015/16.42

Figures from the Association of Colleges (AOC) show that this decline in state funding has partly been compensated for by a rise in private expenditure (and by 16–18 expenditure, discussed more below). In total, however, FE college income has declined by 8% over the same time period.43 As a consequence, FE colleges find themselves in a vulnerable position. A number of cost cutting strategies have been implemented by the sector including staff pay freezes, reduction in course numbers and increase in course sizes, use of unqualified staff and instructors for lectures, greater use of subcontracting, and diminishment of capital spend including on supplies and infrastructure.44 The recent NAO report on sustainability in the FE sector set out that:

“In 2013/14, the sector was in deficit for the first time and 110 colleges recorded an operating deficit, up from 52 in 2010/11. In the same period, the number of colleges assessed by the SFA to have “inadequate” financial health rose from 12 colleges (5% of colleges) to 29 colleges (12%). The SFA defines a college with inadequate financial health as being in financial difficulty, with a significant risk of being unable to fulfil its contractual duties. The decline in the financial health of the sector has been quicker than indicated by colleges’ plans, and current forecasts suggest that the number of colleges under strain is set to rise rapidly. In
particular, the SFA anticipates that the number of colleges it rates as financially inadequate will continue to grow. On current trends, it could be around 70 colleges by the end of 2015/16, based on the SFA’s modelling in May 2015 of the sector as a whole rather than forecasts for individual colleges.\(^{45}\)

This decline has come about rapidly since 2010/11:

![Figure 2.16: College financial health assessment ratings, 2010/11 to 2013/14](image)

It is worth here comparing the financial position in FE with HE:

<table>
<thead>
<tr>
<th>Table 2.2</th>
<th>HE</th>
<th>FE</th>
</tr>
</thead>
<tbody>
<tr>
<td>System in surplus or deficit</td>
<td>Surplus (approx. £1 billion)</td>
<td>Deficit (£34m)</td>
</tr>
<tr>
<td>Number of institutions in deficit</td>
<td>13 (11% of sector)</td>
<td>110 (45% of sector)</td>
</tr>
<tr>
<td>Number of institutions with deficit of 5 % or higher</td>
<td>2 (1.8% of sector)</td>
<td>47 (19% of sector)</td>
</tr>
<tr>
<td>Financial forecast</td>
<td>“The sector’s financial results for 2013–14 show a financially sound position overall...no institutions are currently close to the risk of insolvency” (HEFCE)</td>
<td>“The further education college sector is experiencing rapidly declining financial health” (NAO)</td>
</tr>
</tbody>
</table>

45 National Audit Office, Overseeing financial sustainability in the further education sector, July 2015. It is important to stress that some have the inadequate status because of large deficits or large loans, but nevertheless having plenty of cash plus assets. Approximately 5% of colleges have cashflow issues and are in immediate risk. BIS has an exceptional financial support policy to manage this.

Regardless of the balance of approach between FE and HE, an FE sector that is financially unable to deliver its contractual commitments, let alone expand, does not provide a solid base for policymakers to consider how to expand higher level professional and technical education.
The second relevant factor is the little noticed shift in the pattern of provision delivered within FE – which reflects the responsiveness to funding and policy changes – which is the shift away from adult learners (19+) to those of 16–18 year olds.

Professor Alison Wolf’s work shows how the decline in 16–18 labour market opportunities has led to a greater staying on rate in schools, but also movement of some young people into colleges at a younger age (this also provides a greater flow of young people with level 3 qualifications and underpins some of the rise in HE participation noted above).
This rise in numbers, and attached funding, has had the effect of partly protecting colleges from declines in adult skill funding over the same time, with the funding from 16–18 year olds now making up 62% of a college’s (declining) grant income.46

What do these two factors mean for the provision of higher level technical and professional skills? This function is the first half of what BIS call the dual mandate for FE. To quote from their recent consultation:

“The first part of the dual mandate is to provide vocational education for the workplace with a focus on higher level professional and technical skills. Further education colleges were initially developed as civic enterprises by businesses and local authorities, teaching skills that were demanded by employers. This remains the essential core of further education.”

Where it works well, the provision of these higher level skills through FE colleges and sector led training is exceptional.

Box 2.3: Case study – Middlesbrough FE College

The largest provider of post-16 education in the Tees Valley, Middlesbrough College is unique in the North-East in delivering courses in every occupational sector area and at every level, from entry level through to level 7. Last summer, 93% of full-time students that completed courses secured employment, an apprenticeship or further study at College or University. The colleges new Middlehaven campus opened in 2008 and features a central thoroughfare open to the public (“the street”) which includes shops (MC Travel, Beauty Salons), the Waterside Brasserie, GymWorld a theatre and recording studio complex – each providing students with unique work-based learning opportunities. The college campus continues to expand with a purpose-built sixth form centre (MC6, which opened in 2013) and a new £20m STEM training centre due to open in September. This facility is based on a real work environment with students working to a shift pattern and operating to industry standards. The centre has been designed by industry, for industry and aims to help address the skills gaps both locally and nationally.

In partnership with Teesside University, Middlesbrough College delivers Higher Education programmes to over 700 students, 60% of whom are part-time. In its IQER report (2012), the QAA noted that work-based learning is a key feature of the College’s HE provision, highlighting the way personal development planning is linked to work placements with a wide range of local and regional businesses. The report also noted that students’ research projects and skills contribute to employers’ business activities and that employers provide opportunities for students or enable them to use the workplace for placements and work-based learning.

While the majority of the College’s HE provision are Foundation Degrees, local engineering employers prefer HNC/Ds and their trainees are served by a range of programmes including electrical/mechanical engineering, welding and electronic instrumentation. Eleven Foundation Degrees (all of which lead to top-up degrees delivered by the College or the University), are offered and all have strong links with local employers.

Source: Middlesbrough College

46 NAO, op cit.
The McLoughlin Commission identified four key principles of effective provision in this area:

1. A clear line of sight to work on all vocational programmes.
2. “Dual professional” teachers and trainers who combine occupational and pedagogical expertise, and are trusted and given the time to develop partnerships and curricula with employers.
3. Access to industry-standard facilities and resources, reflecting the ways in which technology is transforming work.
4. Clear escalators to higher level vocational learning, developing and combining deep knowledge and skills.

Where colleges and private training providers (and indeed universities) provide excellent provision either singly or in partnership it meets these categories.

However, there is an issue in that, increasingly, such provision is losing prominence within FE colleges. The funding situation detailed above has skewed college incentives significantly. Faced with tight overall budgets, there is an emphasis on putting on qualifications that will be full, are easy to staff, and will deliver high success rates (with accompanying funding and positive impact on Ofsted scores). Therefore, colleges are faced with an alternative between:

Box 2.4: Case Study – CITB’s Tunnelling Underground Construction Academy

Many upcoming government infrastructure projects require underground tunnelling, and this is leading to a renaissance in the sector. One example of this is the development of the Tunnelling Underground Construction Academy (TUCA), which was established in 2011 in order to meet the shortage of skilled tunnellers required for the Crossrail project. At the time Crossrail needed 3,500 tunnellers for their project, but only 500 were available. TUCA was set up to provide apprenticeship training, pre-employment training, and upskilling programmes so this demand could be met. It focuses on delivering specialist training for both current and future underground construction needs including Sprayed Concrete Lining, a simulated pit top and pit bottom, loco driving training facilities and SCL simulators and ring erector simulators.

TUCA’s strong relationships with industry means that their students can go straight into employment upon completing courses with them. There are a range of strategies they deploy to deliver this. Firstly they engage with industry before developing courses, and this means that their training is matched with not only current industry need, but also future projects such as HS2, the Thames Tideway and nuclear projects, and Crossrail 2. The college proactively develops courses which match future demand. Their close relationships with industry also give them access to expert trainers with current underground construction experience. This ensures that their students learn current best practice and can enter the workplace immediately. In turn, industry approaches TUCA directly to develop new programmes to meet their needs, for example a recent Concrete Pipe Whipping Health and Safety course. Another benefit of strong relationships with industry is that the latest equipment is provided free of charge for courses to be delivered. Again this ensures that students are immediately ready for work and do not need to be retrained on up to date equipment when they arrive in the workplace.

Source: CITB

47 Commission on Adult Vocational Teaching and Learning chaired by Frank McLoughlin, Principal of City and Islington College. Formally titled as “It’s about work… Excellent adult vocational teaching and learning” (2013).
48 One example of partnership working is High Peak College merging into the University of Derby which has allowed the college to offer residential level 4 and 5 courses. Another different structure which also works well is The University of Sheffield AMRC Training Centre. Here a university, industry partner (Boeing), a college and a UTC are successfully combined into a single institution and training is provided from level 2 up to doctorate and MBA level.
increasing provision of remedial maths and English for 16–18 year olds in particular, which is a statutory requirement and can be predominantly taught in large lecture style sessions relatively cheaply and in bulk, or

putting on a more specialised level 4 or 5 course which is optional, where it may be difficult to find a lecturer, it is unclear will be filled, and may be more demanding for students and therefore have lower success rates.

It is easy to see why the former option becomes more attractive, even when the latter are highly regarded qualifications with good labour market returns. This in turn affects the willingness of awarding organisations to design qualifications in this space. In England there are currently 5394 Ofqual approved qualifications available to study at level 3, but only 1171 at level 4, and 468 at level 5.

Box 2.5: Case Study – Association of Accounting Technicians (AAT)

AAT is the UK’s leading professional membership body and awarding organisation for accounting technicians. It operates across every level of the finance and accounting world, offering students, self-employed business owners and people already working in accountancy, respected and internationally recognised qualifications.

Since 2009 FE colleges have faced serious funding and financial challenges due to the adult skills budget being cut. These budget cuts have limited the flexibility of providers to meet the needs of the individual and community. Funding mechanisms are also making FE colleges more risk adverse when it comes to offering advanced qualifications as these may have lower volumes of applicants and are therefore not as cost attractive.

AAT has experienced the difficulties that have arisen as a result of these cuts, with some FE colleges being less inclined to offer the higher level accounting qualification (Level 4) because funding now tends to be allocated more to lower level qualifications.

In fact, the vast majority of our students study the higher level qualification through an FE college. AAC’s assessment reports indicate at the end of May 2015, 12,822 unique students had sat an assessment on Level 4 this year compared to 15,566 in 2014. This is a decline of almost 18% which illustrates that fewer students are sitting exams at Level 4 partly due to a lack of Level 4 provision at FE colleges.

Source: AAT

There is also an issue with access to finance from the student’s perspective. On the HE side, loans are available to cover full time fees of up to £9,000 (or £6,000 at a private university), and £6,750 (or £4,500) for part time students. There is then a maintenance loan available for living costs, as well as an income based grant. Repayments for the loans only begin when the graduate earns more than £21,000, regardless of how long after graduation this is, and any remaining debt is wiped out after 30 years.

On the FE side, Apprentices are entitled to the apprenticeship national minimum wage (currently £2.73 for the first year for students older than 19, rising to minimum wage from the second year onwards). Apprentices are paid for a minimum of 30 working hours per week, as well as for their apprenticeship training which is usually one day per week. For classroom based FE, funding is more complex and less is available. There are grants available to cover all fees for basic literacy and numeracy courses, as well as the first level 2 or full level
3 qualifications for 19–24 year olds, but there are no loans available for 19–24 year olds wanting to take vocational qualifications. This means for a 19 year old who has already completed a level 3 qualification and is choosing between a vocational or academic route, an honours degree at university is the only funded option. For older students aged over 24, since 2013 an Advanced Learning Loan has been available for level 3 and 4 courses. These are structured in the same way as university loans, with repayments starting when earning exceeds £21,000. At level 5, however, outside limited options for employer contribution funding models, the only option are Professional and Career Development Loans, which are bank loans. Although these often have reduced interest rates which are paid for by the government during study, repayments start one month after graduation regardless of salary.

There is also an issue with which qualifications that can be offered. FE colleges have three options: buy in qualifications from awarding bodies, such as AAT in the case study above, or HNCs/HNDs; become their own awarding organisation with entitlement to give out qualifications up to Foundation Degree level; or partner with a university to offer HE funded qualifications within FE.

There are now four FE colleges with powers to award Foundation Degrees, however, gaining accrediting powers is difficult for colleges to earn. There has been a push towards expanding accrediting power in order to improve vocational education. Supporters of this reform argue that colleges are best placed to develop relevant workplace qualifications because of their strong relationships with local employers. The Government’s recent Productivity Plan announced that “To enable the best new providers to compete on a level playing field with established universities, the government will introduce a clearer and faster route to degree awarding powers for those assessed to offer the best quality education. As part of the review of validation arrangements, the government will explore options to allow the best providers to offer degrees independently of existing institutions before they obtain degree awarding powers”. One option is to use this approach and extend it to FE colleges and Foundation Degree Awarding Powers. A variant on colleges gaining awarding powers would be for some central awarding organisation to be set up to accredit FE courses and qualifications on a national basis. This is advocated by the Association of Colleges who term it a Technical Education Accreditation Council.

The third option is to continue with HE validation. 8% of Higher Education students are now taught in Further Education colleges, typically studying level 4 and 5 qualifications, and evidence shows that HE courses delivered at FE institutions often have wider participation than traditional university courses do, mainly because they have broader entry requirements. In addition, some FE colleges have incredible satisfaction ratings – in the latest National Student Survey, eight FE colleges had satisfaction ratings of 100% for their HE provision, and a further 21 had ratings of between 90% and 97% against a national average of 86%. The QAA, which regulates quality in HE, noted in 2014 that the FE college environment gives students on HE courses a learning experience that “exceeds expectations.” However, HE validation has a number of issues including:

- A criticism that such an approach relies too much on universities who are in a position of dominance over FE colleges rather than in a partnership (given that HE can simply withdraw from an arrangement at any time with little cost to themselves but leaving FE without the power to then teach such qualifications);
Higher, Further, Faster, More

- That HE participation can, on occasion, amount to little more than offering a badge or wrapper for qualifications which are otherwise entirely delivered and managed by FE;
- There are questions about the need for qualifications to go through the traditional HE approach of design, moderation and approval, all of which is based on an academic qualification model and often not appropriate and too time consuming for work based technical qualifications, which need to respond more swiftly to local labour market and employer demand.

Validation is unlikely, therefore, to be a long term solution, if the policy aim is to have a strong and independent technical and professional education sector run by a variety of strong institutions.

In the current context FE colleges risk further losing their role as providers of higher level professional and technical skills – pushed by a lack of funding, an awkward set of options or how to be able to teach certain qualifications, and with statutory demands and associated funding pushing them into becoming increasingly a remedial provider for 16–18 year olds in maths and English, as well as other second chances type provision. This is a serious system weakness – any high quality system needs institutions which can provide this type of learning, and it is FE colleges’ core purpose, rather than HE institutions, to do this. More successful systems which train large numbers of adults in these skills have stronger institutions which can provide it – such as the community colleges in the US.

Delivering a system of high level professional and technical education will therefore mean addressing some of these issues in the FE system (and the HE system). Such a challenge has been accepted both by this government and indeed other political parties as well.53 The next chapter sets out what the design principles for a good system would look like, and considers government approaches to reform to date and what more needs to be done.

53 As already noted, Liam Byrne as Shadow Universities and Science Minister wrote and planned policy extensively around options for a new cadre of technical degrees and technical universities, as set out in Robbins Rebooted, op cit. Since the election, all of the Labour leadership candidates have also talked of the need to rebalance between academic and technical education.
3
Principles of an Appropriate System and Government Reforms to Date

As noted above, government has made several policy moves in order to strengthen the quality and quantity of technical education for adults:

- **Strengthening Apprenticeships** – which have risen from 279,000 starts in 2009/10 to 440,000 in 2013/14. In total, 2.177m Apprenticeships have been started since May 2010 if the estimated figures for 2014/15 are included, which is in excess of the 2m target. Government has now set a new target of 3m Apprenticeship starts over this Parliament. In addition to volumes increasing, government has sought to improve the quality of Apprenticeships by linking them all to an employer and a period of work, and making them all last at least 12 months. Employer engagement has been secured by sectors of employers working together through what are known as “Trailblazers”. They have developed short and focused statements of the skills and competencies required in that sector, and therefore what an Apprenticeship must contain. More recently, government has begun to focus on higher level Apprenticeships with the introduction of Higher Apprenticeships (in 50 areas) and now Degree Apprenticeships (in 9 areas) from September 2015. Most recently, the Productivity Plan announced a levy on large employers to fund post 16 Apprenticeships.

- **Designing new flagship institutions** – Seven National Colleges have been developed to be flagship expert institutions in specific areas and deliver education at a wide range of levels in this subject. National Colleges will be led by businesses (who will co-fund them), and manage their governance so the colleges are linked to the sector. They will also take the lead in designing the definition of standards for their sector – ensuring that they are industry led, and that they reflect the changing nature of technology and processes. National Colleges have been announced in Digital Skills; Onshore Oil and Gas (Shale); Nuclear; High Speed Rail; Advanced Manufacturing; Wind Energy and Creative and Cultural. In addition, the Productivity Plan announced the creation of Institutes of Technology to “deliver high-standard provision at levels 3, 4 and 5. Building on international best practice, Institutes of Technology will be sponsored by employers, registered with professional bodies and aligned with apprenticeship standards”.


• **Strengthening quality of institutions and staff** – The Education and Training Foundation has been established to lead improvements in leadership and teaching across the FE sector, and specifically to implement the McLoughlin recommendations around greater employer links to colleges via teachers and lecturers. Where quality is not good enough in institutions, or financial weaknesses are apparent, the government is also increasingly acting in a managed way to oversee capacity. It has recently announced the creation of a series of area wide reviews for post 16 provision, which will examine the quality and also quantity of FE provision in a local labour market. Importantly, if the conclusion of the group (which will include FE staff as well as local businesses, Local Authorities and other stakeholders in the region) is that provision is insufficient quality, or that it is unproductive (i.e. there is too much quantity), then there remains a real option of top down restricting of provision in the area.

• **Increasing funding** via a new levy. This was announced in Budget 2015 and is a levy on large employers to help fund 3 million new, high quality apprenticeships this Parliament to support the development of the skills base and help to drive productivity over the longer-term. As employers undertake Apprenticeship training in their business, the levy will be used to pay them for the costs of this training (and indeed, to deliberately over compensate them for these costs as an incentive to train). The precise details of the levy are currently being consulted on.

• **Strengthening employer support for an input into qualification design.** Schemes such as the Trailblazers and Employer Ownership Pilots have been designed to bring in employer support for the content of qualifications (see engineering case study below for an example of the Apprenticeship standard designed by the industry). New Industrial Partnerships have also been created on a sector by sector basis, building on existing sector bodies such as CITB. Over 1200 employers in over 100 sectors have been involved in the development of 130 new approved standards and more than 150 new standards are in development.

---

**Box 3.1: Case study – Railway Engineering Design Technician Apprenticeship Standard**

1. The different techniques and methods used to design infrastructure, systems and equipment for use by rail transport systems. This includes an understanding of how ideas and requirements are converted into engineering specifications and designs; knowing the industry codes, company standards/procedures, contracts and specifications and when to apply them.

2. The appropriate scientific, technical and engineering principles relating to rail transport systems. This includes an understanding of the mathematical, scientific and engineering techniques required to support the design process; an understanding of the fundamental principles in track, traction, signalling, rolling stock, civil engineering structures, mechanical and electrical equipment and plant design; and how these interface with each other.
### 3. How to work effectively and contribute to engineering solutions by the correct use of resources and time. This includes an understanding of project management systems, tools and techniques including change, document and configuration control procedures; the commercial, construction and technical constraints on a design; and the quality management and assurance systems as they are applied to the design process; and time management within overall programme of work.

### 4. How to communicate effectively using a range of techniques. This includes an understanding of different communication methods and when to use them; the structure of technical reports and how to write them; technical drawing conventions and engineering terminology; collaboration platforms and effective team working.

### 5. The code of conduct of relevant professional bodies and institutions including ethics and their application in design. This includes an understanding of the protection of client confidentiality and the need to adhere to corporate policies on ethics and diversity.

### 6. Safe working practices and how to comply with them. This includes hazard identification, mitigation and safe-by-design for rail systems; and an understanding of relevant health and safety legislation procedures and how they interact.

### 7. Sustainable development and their own contribution to economic, environmental and social wellbeing. This includes an understanding of company and client sustainability and environmental policies and their impact on design; and an awareness of Environmental Impact Assessment.

### 8. Sources of and approaches to Continuing Professional Development (CPD). This includes an understanding of appraisal schemes including training and development plans, CPD obligations and competency requirements.

Source: Institute of Civil Engineers

In addition to these reforms, government has also made extensive change in the 14–19 vocational education space, including acting on the wide ranging recommendations of Professor Wolf’s review into provision, and strengthening the curriculum and assessment for vocational qualifications through the introduction of the Technical Baccalaureate and a requirement on all those not achieving a C in English and maths to resit after 16. Clearly there remains more to be done on some areas, including careers advice, which is almost universally acknowledged to be an area of weakness that particularly affects the technical and vocational pathway. However, the extent of 14–19 reforms and wider changes are out of scope for this paper.

This report believes that the need for higher level skills is so acute, and the weaknesses of the current system so severe in some areas, that more needs to be done. In particular, this report identifies the following challenges:

- More needs to be done to focus on a higher level technical and professional route that is not an Apprenticeship, which might be more attractive for some learners.
- It is right to look at poor quality provision and/or over supply of provision in one area, but there is a risk that, absent sufficient reform to improve quality,
such an approach will simply reduce the overall volume of provision which can be offered.  

- The development of Institutes of Technology needs to be carefully designed so that they do not duplicate the work of National Colleges, and so they act as hubs of expertise.

- A focus on higher level skills needs to recognise the importance of lifelong learning and the growing importance of retraining, rather than simply focusing on growth of opportunities for future cohort of 18 year olds.

- As well as supply of higher level skills (via Apprenticeships and strengthened elite colleges), policy needs to focus on growing demand for these qualifications from students and adults in the labour market.

- Above everything, a high quality system of professional and technical education needs to ensure that the funding system is stable, that it supports institutions and individuals in their choices.

Meeting these challenges requires a system which is a step change in quality above what currently exists. To achieve it requires an understanding of what the design principles of such a system needs to be. This report suggests they should be as follows:

Firstly, **government policy should be institution blind, or institution neutral**. There are good examples of such qualifications being offered in a range of settings – whether it is FE colleges or universities, or indeed partnerships between universities, FE colleges, employers and other providers. As a point of principle, any approach that imposes a dominant one size fits all model on this fast moving area will be sub optimal.

Secondly, and relatedly, **institutions wishing to take such qualifications forward should be assessed against a range of criteria.** This particularly applies to any government support or funding for places, which would need to be allocated by an agency, but should also apply in softer form for any private places. These criteria include:

- A focus on practical or applied learning first and foremost – informed by theory, but with the dominant criteria being applicability;

- Close links to industry and businesses in the content and style of the qualification;

- Highly skilled and experienced staff in the institution doing the teaching/lecturing;

- Access to, and use of, cutting edge industry standard equipment where required;

- Flexibility in offering training that is required and can be run at small scale in niche sectors;

- A high quality experience for the student whilst at the institution;

- A track record of strong completion rates of the qualification and positive labour market outcomes;

- Training to be of suitably long duration to be high quality and comprehensive – which for qualification bearing training should be at least 12 months and typically 2 years or more (full time); and

- Qualifications to be terminal and valuable in their own right, rather than to act principally as a flow on to further higher level study.

---

54 These unsurprisingly reflect and build on the four principles set out in the McLaughlin’s Commission on Adult Vocational Teaching and Learning (CAVTL) discussed in the previous chapter.
Third, **employers should be closely involved** – even more for higher level technical and professional training than for lower level training, as the balance between generic competencies and industry specific content tilts to the latter. Solely academic qualifications such as programme led Apprenticeships have been phased out by this government, and as noted earlier, others such as HEPI believe that no qualification at this level should be able to be offered and competed without a compulsory work placement. Whether this is practical in the short term or not, the intention is surely right.

Fourth, **from the user perspective, there should be competitive neutrality as to the routes open to them.** This should be principally as regards funding, but should cover entry routes, progression options, available data, and regulatory oversight.

Fifth, **any and all government funding that is available for supporting training should sit with the individual to control** – as opposed to the employer or the provider. This is a simple matter of efficiency and promoting user choice, as well as ensuring responsiveness on the provider side. The exception to this is Apprenticeship funding, which is specifically linked to an existing job and employer, where funding should flow through that employer…which will include the use of the new levy funds.

Sixth, resource constraints notwithstanding, resources available for supporting such higher level training should not be limited to just future cohorts of 19+ learners, **but should also be available for the existing stock of adults wishing to retrain.** This should include, in some limited instances, adults who wish to retrain at a similar level to a qualification they already hold (known as repeat qualifications in FE or Equivalent Level Qualification status in HE). This is a matter both of pragmatism and of need. Pragmatism because in reality, a hypothetical 40 year old man looking to retrain to take another qualification at the same level as one he acquired 20 odd years ago, is in practice upskilling, rather than simply acquiring an equivalent qualification. And need because the shape of the labour market requires flexibility when it comes to retraining and lifelong learning. As Policy Exchange has written previously, between 2010 and 2020 the proportion of the UK workforce required to be qualified to higher levels will rise from 34% to 44%. But the majority of the 2020 workforce has already completed compulsory education, meaning that most of these skills will need to be developed during an individual’s working life. Another analysis suggests that between now and 2025, there will be 13.5 million job vacancies, but only 7 million young people entering the labour force during that time.\(^5\) When coupled with an increasing stock of workers over 50 – now almost 9 and a half million people, and representing over a third of the workforce in social work, education, and public administration,\(^6\) it is clear that we require a significant approach towards utilising older workers including through supporting retraining. This could, in certain circumstances, include funding for bite size or modular training which is not qualification bearing.

Seventh – and this acts a short term principle rather than necessarily one in steady state – there must be a series of incentives and signals **to promote demand for these qualifications** (amongst learners, and indirectly from employers), and **then for the supply side to respond** (in this instance, providers of qualifications and awarding bodies where relevant). The reason for this is that, as discussed above, the current system is very heavily weighted in favour of a HIE model for

---

most post 19 learning for higher level skills, both in terms of policy, but also
culture and habit. As such, although the data suggests there is latent demand
for such skills, the weak signals sent out do not provide enough compensation
to overcome such inertia on the demand side. Similarly, when faced with weak
demand, and set against very strong demand for other qualifications (notably
English and maths resits and tuition for 16–18 year olds on the FE side, and full
honours undergraduate degrees amongst HEIs), it is implausible to suggest that
providers could generate such demand or indeed put provision on in anticipation
of such demand materialising. In effect, the system is stuck in a large scale version
of the low skills equilibrium visible in certain sectors and certain employers – and
as such, it needs an external stimulus to resolve it.

Lastly, but vitally, **any new system must at best be cost neutral compared to
the existing system, and in practice must deliver cost savings to BIS in both
the near term (this Parliament) and in the longer term.** In the context of BIS
being expected to deliver significant financial savings to the Treasury over the
Parliament through the next Spending Review, and with the current Higher
Education (including science) and Further Education budgets making up 85%
of the departmental spend, unless reform is managed effectively and delivers
savings, then savings will come from short term and less constructive paths.

The final chapter sets out recommendations for what the government can do
to deliver on these principles.

4
Recommendations

Achieving the set of design principles set out at the end of the last chapter will take time – particularly in a context of spending restrictions and a weak institutional architecture on the FE side. Achieving these principles will also not come naturally – both because of the weaknesses in provision identified, and because of the strong imbalances in funding between the FE sector and the HE sector identified above.

This leads to three overall conclusions:

- Firstly, that simply leaving the system as it is – even without the prospect of further funding cuts – will not lead to an increase in the provision of these skills, despite labour market shortages. There does therefore need to be some form of intervention if government decides that, as this report believes, more of such skills are needed;
- Secondly, that some action needs to be taken in the short term to avoid the risk of further deterioration of the FE sector, which would render any long term shift towards greater use of that sector more difficult; and
- Thirdly, in the longer term, to avoid ongoing priming and intervention by the government, action needs to focus on implementing the principles, particularly around a competitively neutral system of post-secondary education with a unified funding system under user control.

These conclusion are in line with the broad direction of government policy. The dual mandate consultation, begun under the Coalition, set out a view that, “there has been an erosion of the first part of the mandate [i.e. higher level professional and technical education]… too many colleges have become detached from this purpose, and as a whole the further education system has not delivered the skills that the modern economy needs”. The Conservative manifesto, and subsequent work by the Skills Minister Nick Boles and announcements by the government around elements of reform also support this approach – whether on the commitment to 3 million more Apprenticeship starts with a focus on growing higher level Apprenticeships, a new training levy, or the creation of Institutes of Technology, it is clear that the focus is on how to improve quality and quantity of provision in this area. The report recommendations below act in support of this high level agenda, and as an intellectual underpinning of the decisions that will need to be taken in this autumn’s Spending Review to make it happen.
To take this agenda forward, this report recommends the following.

1. In the forthcoming Spending Review, BIS must seek to safeguard the FE sector as much as possible by delivering savings from within the HE sector that are cashable and score in the near term – specifically, by requiring universities to meet from within their own revenues some or all of the requirements around widening participation and some other small specific areas. In 2015–2016, HEFCE was allocated £3.971 billion to distribute to universities from within BIS budget (this encompasses revenue funding for both teaching and the science and research budget, as well as capital allocations). All of this funding is cashable in a Spending Review sense (i.e. it would deliver the types of savings required by HM Treasury, as opposed to funds that flow to universities via tuition fees loans).

Specifically, within the teaching element of this (i.e. leaving the science budget untouched), the following items are funded:

- Student opportunity funding (including funding to widen access and improve retention) – £380m
- Students attending courses in London – £64m
- Institution-specific high-cost distinctive provision – £65m
- Very high-cost STEM subjects – £23m

None of these schemes are without merit – indeed they represent important public policy objectives and recognise that universities should be compensated for the additional costs of, for example, working to ensure students from disadvantaged backgrounds come to and stay at university, or that specialist courses and in certain locations can be delivered. Indeed, in the revised grant letter to HEFCE, BIS specifically charged the Council to “protect as far as possible high-cost subjects (including STEM), widening participation (which is funded via the HEFCE Student Opportunity allocation), and small and specialist institutions...to support the sector to achieve the goals set by the Prime Minister to double the proportion of people from disadvantaged backgrounds and to increase the proportion of students from black and ethnic minorities entering higher education by the end of this Parliament”. This paper entirely agrees with this statement from BIS – and proposes not to make particular cuts to high cost subject funding on that basis.

However, in the context of a challenging Spending Review, where BIS will be required to deliver savings of perhaps 25% to 40%, BIS should consider whether universities should not only be required to maintain their responsibilities in these areas, but to now partially fund them themselves – i.e. that some or all of the £532m HEFCE funding set out above to do this should be withdrawn. In effect, this would require universities to deliver efficiencies in their provision and/or use some of their (sometimes very large) reserves to fund such provision. Importantly, any remaining grant should be reallocated on a tapered basis, so that any residual HEFCE funding within this area be used to offset differential reserves. This would mean that universities with smallest reserves are given the largest funding, and would deliberately act an incentive not to hold reserves over a certain limit.

Such a move would undeniably be controversial. But it is analogous to the settlement reached between the government and the BBC recently, where a non

---

58 Note that the amount was then reduced by £150 million as a result of the savings for 2015–2016 required by the Treasury and announced in the Summer Budget 2015.
government institution takes on the costs of a government commitment (in that instance, the provision of free TV licences for pensioners) and delivers a cashable saving to government. In both instances, a case can be made that such institutions have the funding available to take on such a commitment, with some reform to their own business models, and government would expect and monitor their compliance with this commitment with no consequent reduction in core business. With regards to universities, for example, BIS should be perfectly clear that they would not expect to see any reduction in efforts to recruit and retain students from disadvantaged backgrounds. Similarly, it would not expect to see any diminution of subjects taught in London. Rather, it would expect universities to reform themselves and deliver greater efficiency of spend in order to free up resources to make up for the partial or total withdrawal of some elements of HEFCE grant.

Obviously, as discussed elsewhere, no sector wishes to see their funding reduced, and universities have a cogent argument as to why cuts in their sector would be problematic, as well as why holding some level of reserves is sound financial management. But given that any cuts would be claimed to cause difficulties, and given that there is in essence a trade off within BIS between the HE sector and the FE sector as to the overall funding of post-secondary training, the question is not “would this cut cause difficulties” in the abstract, but is instead “where is the least problematic area to cut”. Framed like this, the funding dynamics between the two sectors are clear, as this report has set out. Higher Education is currently in rude financial health overall (albeit there are differences between individual institutions), with revenue rising to record levels and healthy operating surpluses across the sector and the majority of individual institutions. By contrast, the FE sector is in a more precarious financial position, with more than 1 in 4 colleges at risk of failing entirely over the next Parliament. In such a situation, it is clear that BIS must seek to rebalance this by protecting FE sector in relative terms in ways which deliver revenue immediately.

2. **Alongside this, BIS should seek to accelerate the development of National Colleges and Institutes of Technology as flagships for developing higher level technical and professional skills.** As noted elsewhere in the report, some of the National Colleges, like the one in Sheffield for Advanced Manufacturing, represent an outstanding model for bringing together sets of learning, employers, and local geographies and communities to deliver higher level skills. Alongside that, the Productivity Plan announced the creation of the Institutes of Technology. It is not clear from the Productivity Plan how Institutes of Technology will align with National Colleges. This report’s proposal is that the latter ought to develop as “horizontally narrow, but vertically broad” – that is to say they will specialise in one narrow area, but at a range of levels. The new Institutes of Technology, by contrast, ought to be “horizontally broad, but vertically narrow” – focussing on these higher level professional and technical skills at levels 3–5, but across a broader range of specialisms in each institution. The long term ambition should be a series of National Colleges
Higher, Further, Faster, More

for all growth sectors in the economy providing a “hub” for higher level skill development, both physically at that college and potentially on some sort of franchised model rolled around across the country. This would sit alongside the maintenance of a smaller network of localised more generalist FE colleges who would principally be responsible for the provision of what has been termed the second half of the dual mandate – “second chances for those who have not succeeded in the school system”.

In order to promote the development and prestige of these colleges, there are two specific changes that BIS should make. Firstly, BIS should commit to allowing such colleges to award their own higher level technical and vocational qualifications, rather than franchise with a university, and should allow colleges that have created their own qualifications to themselves franchise them out to other colleges to provide wider access to them (with quality safeguards enshrined as part of this process, as franchising universities do currently). As noted in previous chapters, colleges can at present apply for foundation degree awarding powers in an onerous way, or use external awarding bodies, or work in partnership with a university. This approach to let high performing colleges award their own qualifications in a lighter touch way without the full process of Foundation Degree awarding powers, builds on the direction of travel of the Productivity Plan, and on the Wilson review which suggested that colleges with such awarding powers be able to accredit other colleges. Allowing National Colleges and Institutes of Technology to design, accredit and award their own qualifications – contingent upon sustained engagement and approval from relevant employers and industry bodies – would immediately grant these institutions status. Allowing such colleges to then franchise this awarding would also allow the expertise and quality of sector leading training to be spread around the country, so students are not restricted by geography from the chance to access such training.

Secondly, BIS should further loosen the current restrictions around Equivalent Level Qualifications or repeat qualifications for students studying at such institutions. The current rules do not allow government funding (via loans or grants) to support adults studying for a qualification equal to one they already have in another field, with certain limited exceptions at degree level. Subject to resources in the Spending Review, BIS should widen these exemptions to include not just students studying certain specific subjects at universities, but to cover any student accepted onto a qualification at one of the new National Colleges/Institutes of Technical Technology as recognition both of the high quality training they are undergoing, and that such National Colleges and Institutes of Technology will likely be focussing on sectors of the economy where there is real growth.

These changes would, in effect, provide the answer to the Dual Mandate consultation begun under the Coalition government, around the core purpose of FE. There remains a role for both halves of the mandate. But in a time of financial pressures, it is not sustainable to have a large network of colleges all seeking to be all things to all students. Rather, it is important to have a small number of highly specialised institutions that act as hubs and centres of expertise, and offering some of that on a franchised basis. These specialised hubs

---

59 The technical details of what this would mean have been set out by the Association of Colleges, “Breaking the Mould”, July 2014.

60 David Willetts last year reversed an element of the ELQ to allow for fee loans to be made available to part-time students in engineering, technology and computer science who already have degrees in different disciplines. As reported in the Times Higher Education, 3 October 2013.

61 For example, the CBI identifies that “For fast developing sectors such as low carbon and advanced manufacturing, which will require significant re-skilling and up-skilling, the availability of part-time study for employees can be a key enabler of growth” CBI, “Tomorrow’s growth: new routes to higher skills” July 2013.
should be complemented by a wider network of local colleges predominantly focused on second chance provision and localised labour market training. This need not be a stratified system – indeed, with sustained employer engagement and networks of colleges linked into universities and employers, this represents a more coherent ecosystem than the current model.

These two recommendations – a switch in resources from HE to FE alongside the development of a cadre of national centres of vocational excellence – would, we believe, address the first two overall conclusions above – that action needs to be taken to grow higher level professional and technical skills, and that in the short term this requires protecting the financial health of FE. The recommendations ought to ensure that the FE sector can sustain itself, and can focus on growing its highest quality provision through the development of National Colleges and Institutes of Technology.

In the longer term, however, more deep seated structural changes need to be made to address the third conclusion above- that government should look to deliver a competitively neutral system of post-secondary education with a unified funding system under user control.

Therefore, this report further recommends that:

3. **Government should commit to move towards one single student loan system that encompasses all post 19 training (other than specialist provision) whether undertaken in FE or HE. Furthermore, this new single funding system, as opposed to being a “single shot” loan book, should operate as a draw down account with a lifetime balance.**

   At present, above and beyond the vast difference in the per student funding available to institutions in FE against HE, there is also a fundamental inequality in the financial support available for students depending on the route they choose to access post-secondary education (and also the mode of part time vs full time, of which more below).

   A student going to a university is entitled to a reasonably financially generous loan system, both for tuition and maintenance, which can be accessed under a well known system via the Student Loans Company and paid back on an income contingent basis in a straightforward way via PAYE. A student going to FE is entitled to partial government support for a Level 4 qualification if aged 19–23, and a poorly understood loan for Level 4 if aged 24+. For students taking Level 5 courses, unless deemed Higher Education (such as HNDs), there is no funding available at all, whether through grants or loans.

   Increasingly, as government considers a unified system of post-secondary training as this report has repeatedly called for, this makes no sense either in equity terms, policy delivery terms, or administrative terms. Government will in time be operating two increasingly large loan books – one for undergraduate tuition, undergraduate maintenance, and some postgraduate tuition, and one for further education tuition for some or all learners aged 19+. Instead, this report proposes that BIS move to one single, unified loan book and loan offer for all students regardless of the post-secondary qualification undertaken and the institution

---

62 BIS has previously consulted (“Further Education – Future Development Of Loans Expanding and simplifying the programme”, June 2014) on extending loans to some or all qualifications for those aged 19+. Although this took place under the Coalition government, and no formal announcement or response was made, it seems likely that there some sort of expansion of the Further Education loan system is currently under consideration as part of the Spending Review.
attended – alongside a broader merger of the functions of HEFCE and the Skills Funding Agency. This would allow, for the first time, equitable treatment for loan access for tuition and, crucially, maintenance. From a student’s perspective, he or she would be able to consider all their options and prices, knowing that the same system of loans would be available to them regardless of what institution they study at – something that will increasingly blur over time in any case. Such loans should be available for all post 19 tuition and for post Level 2 qualifications – so basic skills training, training linked to receipt of out of work benefits, ESOL training, training for those with learning disabilities, offender learning, and some community learning would continue to be on a grant basis, subject to wider decisions made in the spending review. It would be technically feasible to extend the loan book, this report believes, because all FE colleges are currently working with the Student Loans Company already to process and manage the current FE loans for eligible students, and the regulations setting out who is eligible for a student loan could be changed reasonably straightforwardly. And the merger of the two funding and regulatory bodies would sit alongside this, as part of an effort both to streamline the general regulatory architecture around HE and FE, but also to reduce the risks of two different funding and policy parameters inadvertently telling against a unified loan system.

The other element that should change within the new unified student loan system is a change from what could be termed a “single shot” account to a draw down account where the balance can be accessed multiple times up to the loan limit. This is an essential precondition to introducing some form of price competition and cost control into the loan system. At present, there are almost no incentives on anyone involved in HE to price degrees significantly below £9,000 a year. Doing so from a provider’s perspective risks making the product look inferior, as well as foregoing income. From a student’s perspective, opting for a slightly smaller loan makes almost no financial sense – the monthly repayment is identical, it is just the duration that is slightly shorter, and in any case there is reasonable likelihood that some element of the loan will be wiped off. Any money foregone via a smaller loan, additionally, is not available to the student. Such a combination of incentives explains why, contrary to the beliefs of government when introducing the post Browne reforms, fees did not rise above £6,000 except in exceptional circumstances. However, a draw down account would completely change these calculations. From a student’s perspective, choosing a hypothetical £6,000 course – perhaps at a National College or Institute of Technology – over a £9,000 course would allow them to bank the remaining £3,000 a year for later study, including access to shorter, bite size type training which might be desirable in certain instances to aid upskilling, productivity and career advancement. This would strongly incentivise them to seek out lower cost courses in certain circumstances or at least compare costs more carefully. Similarly from a provider side there would then be a good incentive to price more competitively to respond to this demand. All this would likely mean that a further expansion of post-secondary education envisaged by this government would take place on a lower cost basis than

---

63 Apprenticeships would be an exception to this, on the grounds that it is a slightly different type of qualification both because it involves a third party (the employer) and also because the student/employee is paying for the qualification via wages foregone. In addition, the previous operation of Apprenticeship loans were very unpopular and poorly taken up, even as Apprenticeship numbers soared.
under an unreformed system, where the only option is £9,000 courses. A lifetime cap on loan allocation – for tuition and maintenance – would act as a further overall cost control for government, similar to the model that operates in Australia. Loan repayments could either be made concurrently or consecutively – the latter is the model proposed by the government for postgraduate loans.

This sort of model is in effect turning student loans into a true Lifelong Learning Account, as proposed most fully by Professor Alison Wolf. Importantly, it builds on both the ill-fated but now fully understood last iteration of Individual Learning Accounts, but goes far beyond the pale vanilla Skills Accounts previously proposed by governments of all stripes – which in effect are nothing more than an online record of course entitlement and financial support. Given the rapid advances in technology and information security, it should be much more possible to run a full credit based account then previously, which has always been one objection raised by previous government officials. Depending on the level of ambition, such accounts could in time move beyond accounts for allowing individuals to control student loans, and be offered to young people as a mechanism for saving for university (on the lines of the Child Trust Fund) and/or be offered to adults to incentivise lifelong learning and retraining. Such an expansion is outside the scope of this paper and would certainly incur greater costs. For the purposes of this paper, it is sufficient – but necessary – that all post-secondary post Level 2 training moves to a loan system, and that this be offered on an equivalent basis to all learners regardless of routes, in a manner which encourages them to seek price competition.

4. **Alongside a reworked student loan system, government should extend maintenance support (via loans) for some FE learners.** At present, FE students are not entitled to maintenance support at all, outside of a small Discretionary Learner Support fund for colleges, and training organisations to allocate to those in particular need. This is because the typical FE student is assumed to either be in some form of work (even for those studying on a full time basis) and/or be living at home whilst studying locally, therefore requiring far lower levels of financial support. However, again, this assumption does not apply for HE, where policymakers assume that the default model for HE is a three year full time residential course, often a long way away from previous domicile and requiring extensive maintenance support for living costs. This model is in contrast to many other jurisdictions, which as has been noted have typical study patterns that more closely resemble English FE. Some politicians have made suggestions that the solution is to try and shift at least a proportion of HE growth to this lower cost model, and there may be some merit in that – as examples of HE in FE, such as Coventry University College and private providers such as BPP and Regent’s University have shown. However, any such moves on a large scale would develop relatively slowly, and in the near term the prestigious option will remain the residential model. It is therefore important that in a unified post-secondary system, there exists a similar option for at least some of FE – where student experience also allows them to move away and study intensively at a renowned institution.
Offering maintenance support for some FE learners was mooted by the previous Secretary of State for BIS in his Cambridge lecture:

“…as FE becomes more specialised, we may need to think about provision for students studying for high level qualifications who may need to relocate to be close to national centres of expertise. This…is an area that I think will require further investigation in the future.”

This report suggests expanding maintenance support via loans, initially for full time higher level professional and technical education at a National College or Institute of Technology – accessed, as per above, via the new unified student loan system.

The case for part time students – either in HE or in FE – is different. Part time students under any route are not entitled to maintenance support on the grounds that they will be (presumably) employed and therefore able to cover their costs (though it should be noted that for example unemployed adults, or those with caring responsibilities, might wish to study part time without access to wages to cover costs of living). At the present time, this report does not recommend extending maintenance support to part time students – though the recommended loosening of rules on tuition funding for equivalent level qualifications will lead to an uptake of part time study (both in HE and in FE).

5. **Government should support and widen Industrial Partnerships as ways of securing ongoing employer engagement and qualifications, and free up restrictions on existing qualifications.**

Employer engagement is absolutely essential to ensuring that high level professional and technical qualifications are valued – at this level even more so than with regard to lower level qualifications, because of the increasing specificity and complexity that comes with this higher level training. The CBI/Pearson skills survey is clear that what employers want is a responsive and appropriate qualification and to know how to get it, rather than engage directly or have control over funding.
Various methods and schemes have been tried in the past to ensure high level engagement including matched funding schemes, vouchers, employer ownership, trailblazers, sector skills councils and so on. Above everything else within this space, what is needed is two things: a sense of stability, and a recognition that most employers do not want to, nor have the time to engage in a sustained way in qualification design or delivery or steering of the system.\(^71\)

With that in mind, three things ought to be done:

- **Firstly, engagement on sector designed and industry approved qualifications should principally be via the National Colleges and Institutes of Technology.** As noted above, such institutions should only be approved if they can demonstrate sustained employer engagement including in qualification design and approval. The creation of these institutes and their control over qualifications would remove one of the major barriers to sustained employer engagement, which is the feeling that too often colleges are not responsive enough to their needs. By bringing together the funding, validating and delivery of qualifications in one institution – the college – it will allow that institution to be much more flexible and responsive in qualification design and delivery. This will particularly help when it comes to delivering degree level Apprenticeships. As Scott Kelly has noted, at present the two elements of the Apprenticeship – the competence and the technical qualification – sit in two places due to the validating requirement with a university, and that furthermore a Higher Level Apprenticeship that takes two separate qualifications in competence and the subject area at present requires two loans (an HE/SLC loan and a 24+ Advanced Learning Loan).

- **Secondly, the existing infrastructure of Industrial Partnerships should be maintained and expanded as the route for sector engagement.** Previous work by Policy Exchange on the role of Industrial Partnerships showed a recognition that they had brought together high level engagement from their employers in a range of sectors, including ones dominated by large companies (such as aerospace) and ones working collectively in a sector populated with SMEs (Creative Skillset). IPs have so far resisted the temptation to turn inwards or become overly dependent on grant funding. They were also building relationships with LEPs in many areas and were engaging in discussions around spatial reform such as the new combined authorities.\(^72\) Although such partnerships are still relatively new and there remain areas for improvement, the start they have made, and engagement they have secured, ought to be maintained and built on rather than a new scheme developed with the consequent disruption and need to build up awareness of yet another plan. The government should look to further widen the reach of current Industrial Partnerships and also build on other sector groupings that already exist, such as the Construction Industry Training Board. The IPs should also be the principal route for engaging with the spatial approach which is likely to grow over the next Spending Review period. It is possible, for example, that some Local Economic Partnerships will gain greater control over an element of skills funding. IPs and other sector groupings offer a chance to address the NAO critique that the sector lacks a clear process to inform decisions about local provision.

---

\(^71\) For example, CITB oversee a construction sector in which 98% of the business are SMEs. The reason why the levy and CITBs engagement work in this sector is precisely because SMEs do not have time or expertise to engage and so the co-ordinating function of the CITB plays that role.

Thirdly, qualifications which are offered by Awarding Organisations ought to continue but be freed up for wider use. Alongside qualifications developed and validated by colleges are some professional and technical qualifications that are well known and recognised in this space – including Foundation Degrees, Higher National Certificates and Degrees, AAT qualifications, OCR Nationals, City and Guilds and so on. Approved qualifications from awarding organisations should continue to be offered if there is demand from colleges to offer them and from students in taking them. Yet two changes ought to be made to allow these qualifications to be more flexible.

- The requirement for a Foundation Degree to have a structured progression route through to a full Honours Degree ought to be scrapped. There should continue to be an option to do so, but it should also be possible for a Foundation Degree to stand as a terminal qualification in its own right. The requirement for an academic progression route has led to them being seen as attractive to universities to offer, especially when honours degree places were capped, but all the incentives in course design and delivery tended towards such a qualification being overly academic and a staging post to a full degree – and then, as full honours degree places became more available, numbers taking Foundation Degrees plummeted. The qualification should be reasserted as a terminal qualification in its own right where a college wishes to do so.

- The restriction on the ability of different organisations to offer Higher National Certificates and Diplomas or equivalents – and for such qualifications to be eligible for HEFCE funding – should also be lifted. When first designed and developed, the HNC/HND qualification was owned by the University of London and its charitable exam board and was a monopoly qualification in this area. As such, current legislation on eligible qualifications for state funding from the Higher Education Funding Agency name specifically the HNC/HND as the only qualification relevant in this space at Level 4 and 5. However, the HNC/HND brand is now a copyrighted qualification held by one awarding body (Pearson) and importantly, there are other organisations which now wish to offer qualifications in this space. A legislative anomaly is now having an anti-competitive effect – much as if legislation said that Hoover could be funded to clean government buildings, but Dyson could not be. The solution is a very simple one; either the HNC/HND brand name should be removed from copyright and be used as a generic title for approved qualifications at Level 4 and 5 (effectively becoming a wrapper, like the term GCSE or A-Level), or, preferably, the legislation which specifically refers to HNC/HND be amended, such that courses which are equivalent to those on the list in legislation (i.e. HNCs/HNDs) become eligible for funding, so that universities and FE colleges can offer other HEFCE funded qualifications at Level 4 and 5.

Taken together, there are strong reasons to hope that these recommendations will rebalance the system between HE and FE and lead to a growth in higher level professional and technical qualifications. A unified funding system and combined
student loan book will strengthen demand from a proportion of students and adults to access such training. This in turn will help generate confidence amongst FE colleges to supply them – supported by a more positive funding environment and spearheaded by a cohort of National Colleges and Institutes of Technology. The new qualifications and stability in some form of employer engagement will keep feedback loops strong between employers and providers to ensure qualifications remain relevant and robust.

This model can sit quite easily alongside a vibrant HE sector that is likely to continue to grow. There is no conceptual reason why England cannot have a strong traditional HE sector focussing on higher level qualifications (of which many are vocational), as well as a rejuvenated FE sector delivering professional and technical education alongside continued second chances education. That should be BIS’ aim in the Spending Review and beyond in this Parliament, and the recommendations set out above are designed to support that goal.

However, such an outcome is only one scenario – and is definitely towards the optimistic end. A more pessimistic scenario places greater weight on the possibility that the long term cultural weight and prestige of the HE sector will mean that further growth in this sector does not complement but instead stifles any growth of higher level processional and technical skills. Such an analysis has recently been expounded by Professor Alison Wolf. She concludes that we can say with a high degree of confidence that the uncapping of student places will lead to a large increase in those going to university, when faced with the following scenario:

“19 year olds in England will have a choice between
— university study with income contingent loans which make the choice fairly low risk, and in well resourced institutions with unlimited places on offer
— finding a place within a shrinking and under resourced adult skills system
— entering a job marker which favours those with formal qualifications and/or experience.”

The argument government has made for uncapping student numbers is a classic public service market one, of improvement via choice and competition; that removing student number controls will lead to universities flexing and expanding and contracting to best meet student demand, and for price and quality to respond. In the abstract, Policy Exchange is highly supportive of such an argument. Nevertheless, it is worth following the logic of this through when it comes to the HE market:

- If we consider that the “market” for undergraduate students is essentially fixed (that is to say that all or almost all of the people who want to go to university are going already), then the uncapping of student numbers will not lead to a significant increase in total numbers. Rather, the effect will likely be of strong competition within the market, as institutions compete between themselves to secure a bigger share of that fixed market. This should, all things being equal, lead to greater quality at no increase in cost (because student numbers have not grown).
- If we consider that the “market” for undergraduate students however is not saturated, then we would logically expect an increase in the total number of
students entering HE. The effect of uncapping numbers will then be both competition within the market, and competition for expanding the market (the relative power of these two effects will differ between institutions and will also depend on the extent to which the overall market grows). This may lead to an increase in quality, but could also lead to a diminution of quality (if entry barriers have to be lowered to increase market size), and would also lead to an increase in cost as numbers grow.

To the extent that we can forecast which one of these will happen, the evidence suggests the latter. Wolf cites evidence that a similar expansion happened in Australia when numbers were uncapped, and survey data from students, parents and employers consistently shows that university is felt to be a worthwhile investment. It therefore seems likely that an aggressive recruitment campaign by the HE sector (as is already starting to be seen around the Clearing process) will increase total numbers into university. The 2015 A Level results show an increase of around 3% compared to last year based on early admissions – though largely driven by mature students in Scotland and a growth in EU students rather than full time under 19 undergraduates. The official OBR projections below show a projected increase of a further 21,000 students over this September 2015 number by 2020/21, or a further 10% over the last finalised numbers of those who started last September (and this accounting for a declining 18–24 population growth over this period, so the actual expansion percentage is even greater).

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Assumed growth in student numbers, %</td>
<td>2.7</td>
<td>1.7</td>
<td>0.8</td>
<td>0.3</td>
<td>0.1</td>
<td></td>
</tr>
<tr>
<td>Total student numbers, thousand</td>
<td>355</td>
<td>370</td>
<td>380</td>
<td>386</td>
<td>389</td>
<td>390</td>
</tr>
</tbody>
</table>

But even if we do assume an overall growth in HE as a result of student numbers being uncapped, does this present a problem? Two potential ones arise:

- The first is the likely cost to government as enrolment in university rises, as it did in Australia when a similar uncapping took place. The cost comes from the Resource Accounting and Budgeting (RAB) charge on loans foregone. Although there is a long debate about the right level of the RAB charge, and the cost of borrowing implied within it, what is indisputable is that ever since an amending to the way in which the loan facility operates, 2013–2014, BIS is accounting for it in a way which affects their near term cash flow significantly. A recent paper for HEPI74 shows how BIS could quite conceivably be spending £100m a year on servicing the RAB charge in 2014/15. As student numbers increase, the loan facility will also need to increase, as will the RAB repayment charge. Most pertinently, given BIS’ budgetary pressures,
this will mean spending will need to be accounted for from other elements of their budget, which could well include FE spend.

- The second concern is that an HE expansion will likely cannibalise from young people who would otherwise have taken up the opportunity to study for higher level technical and professional qualifications. As the data in Chapter 2 showed, HEFCE data shows a rapid expansion in the proportion of young people entering university with BTECs as part or whole of their Level 3 qualifications, but the proportion of young people with such qualifications entering HE is still far lower than for A Levels – of those achieving three Distinctions at BTEC, just 66% progressed to HE, compared to 95% of those with 3 As at A Level. In other words, there is a large pool of young people with high marks in vocational qualifications not going to university, whereas the A Level cohort is almost tapped out. It is likely that university expansion will draw almost entirely from those with partial or entire vocational qualifications at Level 3 – those who might have otherwise progressed into Level 4 and 5 professional and technical qualifications.

The Government is absolutely right to move to an uncapped system for post-secondary education. There is no magic number about the proportion currently studying tertiary qualifications in England – and indeed, many of our international competitors have higher level of tertiary participation and graduation rates. But a rise in the numbers studying post-secondary is not the same as a rise in the numbers going to university. Indeed, as Wolf makes clear, universities often are not best suited to meet the principles of high quality professional and technical education set out above. She notes that in particular:

> "Universities are self contained and separate from the workplace…they cannot possibly keep up with all the changes which take place in a fast developing industry. Second, university teachers, however vocational their speciality, are making their careers as academics not researchers, not as practitioners…what this underscores is that universities will always be an imperfect place for acquiring certain vocationally related skills, and the further removed these skills are from the print based interactions and the research values of academics, the worse the problem will be."

So there are reasons to believe that a rise in university students, as opposed to those studying in FE, could in fact hamper the policy goal of expanding professional and technical education.

At this stage, there is no evidence to suggest whether the optimistic scenario or pessimistic scenario will prevail. Government should therefore maintain a watching brief on HE expansion alongside making the changes set out in this report. However, should the pessimistic scenario become the central assumption, then the government must consider one final change: to amend the system of uncapped post-secondary education so that within it, there is

---

75 See OECD, Education at a Glance 2014, Table A3.1.a.
76 Wolf, op cit, page 75.
a limit on the number of places on qualifications which lead to full honours degrees and which can currently cost up to £9,000. This would mean that the growth in post-secondary study from the uncapped system would then take place principally or entirely in qualifications that would be capped at a lower fee (say £6,000) and would not lead to honours undergraduate degrees.

This system can be conceptualised as a “reverse core and margin” policy which operated at the beginning of the last Parliament. This policy allowed universities to recruit as many high performing students as they wanted (those with grades of AAB or above), whilst providing a capped number of lower charged for places that institutions bid for and were allocated by HEFCE. This report suggests that, should changes need to be made, that an alternative model be implemented – whereby it is the “core” honours degree places which are capped, within an overall uncapped system, where the growth comes from lower priced courses which do not lead to honours degrees. The diagram below shows how this would look.

In practical terms, this would require HEFCE to reassume the role of allocating full honours degree places to institutions in the way that they have done previously. A starting position would be to allocate on the basis of historical allocations for the last year of student number control, (with a reasonable degree of latitude for over offering in the first year to recognise the changes in different institutions approaches and size since then,) and simply tweak this allocation on an annual basis, as was previous practice.
Appendix

Write up of the roundtable hosted by Policy Exchange during the course of this report in June 2015, in association with OCR.

Focus of event
There are currently skills gaps reported by industry, particularly at levels 4 and 5. We are interested in how better pathways in vocational education could be created to address these, as well as create routes through to higher level technical qualifications. We are also asking which institutions are best placed to create and deliver these qualifications, and how employers can best be involved so they are meeting industrial needs and standards. Finally we would also like to focus on how policy can begin to address inequities in funding and status between academic and vocational pathways for post 19s.

This summary note provides a summary of the discussion and does not necessarily represent Policy Exchange’s view. The discussion was held under Chatham House rules apart from the opening presentation.

Opening remarks – Paul Steer, OCR
- There is a need to fix Higher Technical education. We have a working population which is ageing and need retraining opportunities. We also have needs for skilled workers in the creative industry.
- There is still cultural bias for an academic route, as has been strengthened by the compulsory EBACC. This has also led to a youth bias against vocational education. Despite this, UCAS data shows a 100% increase in the numbers entering Higher Education with vocational qualifications.
- FE is an important part of HE delivery as it widens participation. 22% of students studying HE qualifications in FE come from areas which historically have low participation compared with 10% studying in HE.
- The trademarking of the HNC and HND qualifications has created a monopoly which needs challenging.
- It is still not easy enough to change pathways from academic to vocational or vice versa.

After these presentations, the floor opened up for broader discussion under Chatham House rules. The discussion covered the following themes:

A. There needs to be an adequate pipeline through to Higher Level vocational qualifications
- Level 3 apprentices typically come from an academic route of A levels. This means they study qualifications which aren’t preparatory or relevant for their post 19 route. This mismatch also creates disjointed funding.
UTCs can create a vocational pipeline.

- Lots of level 2 qualified people are still needed in construction. Qualifications cannot just start at level 3.
- There needs to be a definition of what Higher Technical and Vocational qualifications are. If it is an effort to address the skills gap at technician level then this needs to take level 3 into account too.
- There needs to be a climbing frame approach rather than a ladder so people can move from vocational to academic. This may be better addressed by a baccalaureate option than the current system.
- It is not clear why there is not vocational funding at level 4+ for 19 year olds.
- Students need to also be able to get the intermediate qualifications (including level 3) so they can then access loans for higher level qualifications. National skills colleges are created to focus on level 4 and 5 skills, but a clear level 3 pipeline is needed and this do not always exist.

B. Providers need certain attributes

- Need to have a blind approach to provider in terms of institutional type.
- While teaching vocational skills, practice needs to precede theory. The academic educational approach needs inverting, as cutting edge practice in industry is often not based on theoretical knowledge. This didactic teaching model works only with some institutions, typically those who have teachers with industry experience, close dialogue with industry (both national and local), and industry standard facilities.
- In vocational education there is a right and wrong way to do things, and innovation is then built on this.
- Traditionally FE are the best delivery model for this education, but HE can do it too. Scotland and Wales is where HE has been most successful in FE delivery.
- The institutions who are best placed to deliver this are currently starved of resources, and technical subjects are often more expensive than academic subjects to deliver courses in, so securing funding is the bottom line. There is currently a push for full time residential honours degree provision because this is where funding is concentrated.
- There is a need to explore the potential of online learning in this area, potentially as part of cost saving.
- Alternative Provision has a more balanced and broad intake so might be part of the solution.

C. Employer engagement is vital, but needs more work

- There is still not enough knowledge about what businesses need and it needs to be made easier for employers to engage with vocational education, especially SMEs who lack resources to do so.
- Employers are interested in being more involved in creating qualifications, but many say they feel like they aren’t being listened to by government. Politicians say they want employer engagement but need to be careful not to dictate to them.
- There is a need for government to understand employer needs and they could use LEPs to collate this information.
- Business finds it challenging to hire non graduates, and often do not understand what vocational qualifications are. There is particularly a lack of
understanding around level 4 and 5 terminology, especially in industry. HNC and HND are qualifications which are understood, and as such these brands should belong to all exam boards again.

- There is also a need for businesses to understand how apprenticeships can add value to their business, particularly microbusinesses.
- Studying whilst in work is declining as funding has changed.

D. **Destination data should be improved, in part to address parity of esteem**

- The focus on building parity between vocational and academic routes continues to be important. This parity issue is ongoing, and it is really a quality issue.
- There is a need to recognise what a good quality qualification is and how it should be accredited. This may require the introduction of an accreditation council in order to build qualifications with status.
- The reputation of “vocational” qualifications has been damaged. Perhaps these should be referred to as “technical” to help raise their status.
- Parity of esteem by making the two choices equal doesn’t work. The drift to academic content for parity ruined the GNVQ when they were starting to take off, and the creation of Foundation Degrees removed the destination aspect of sub degree qualifications.
- There should also be a quality focus rather than quantity, particularly with apprenticeships.
- FE destination data is currently used mainly as a punitive measure. There needs to be more qualitative destination data so learners can see the actual value of different courses, in particular wage premiums, for example bricklayers are making £100,000 per year in London at the moment. Transparency around this will help create demand for vocational qualifications.
- Level 3 loans are available but not being taken up. This could be linked with the lack of marketing for FE loans or the funding and policy bias to honours degrees.

**Summary**

- Higher Level Technical and Vocational education needs to have qualifications which are well regarded. This means better links with industry in qualification creation, and potentially a signing off board. It also links to flow through. Qualifications which lead to higher levels are important and should be available to learners.
- It is important to be blind to types of institution and instead find institutions which deliver curriculum in a way which would work well for vocational qualifications. These may be FE or HE, although the attributes are commonly found in FE.
- Parity of esteem is important, but it shouldn’t be created by trying to make academic and vocational the same. Destination data could help with this, as could a system which allows learners to move between academics and vocational more easily.
- There needs to be more work with employers to identify what different qualifications are.