



Department
for Business
Innovation & Skills



Department
for Education

Post-16 Skills Plan

July 2016



Post-16 Skills Plan

**Presented to Parliament
by the Minister of State for Skills
by Command of Her Majesty**

July 2016



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Foreword by the Minister of State for Skills

Reforming the skills system is one of the most important challenges we face as a country. Getting it right is crucial to our future prosperity, and to the life chances of millions of people.

Real progress has been made following changes in the last Parliament, including those resulting from the Wolf Report¹ and growing investment in apprenticeships. The current system has a number of strengths, including a network of dedicated professionals.



Despite progress there are still some serious issues. Technical education remains the poor relation of academic education. The choice of courses and qualifications can be confusing, and links to the world of work are not strong enough. Perhaps most significantly, we have not paid enough attention to the lessons of the past or from abroad. Years ago, our international competitors realised what it takes to ensure there is access to high-quality technical education – and have moved even further ahead of us as a result.

The economic case for further reform of the skills system is compelling. Bringing training for young people and adults in line with the needs of business and industry will drive up productivity, which has lagged behind in this country even as economic growth and employment have improved. But for a One Nation government there is a strong moral case for reform, too. Sustained and skilled employment leads to prosperity for individuals, but for too long it has been those from the most disadvantaged backgrounds who have been denied this opportunity by poor-quality and irrelevant education. Too often they have been taken down paths which have led nowhere.

We are determined to make technical education an option that leads to long-term success and to see through the continued delivery of lasting change in the skills system, which is why I am so delighted with the recommendations by Lord Sainsbury's independent panel. I convened the Sainsbury panel on behalf of the Department for Education; the Department for Business, Innovation and Skills; The Prime Minister's Office; and HM Treasury because we needed a thorough and serious review.

¹ *The Review of Vocational Education – The Wolf Report* is available online at <https://www.gov.uk/government/publications/review-of-vocational-education-the-wolf-report>.

Lord Sainsbury has been committed to the cause of better technical education for decades. The Sainsbury panel's membership included experts from both further and higher education, and from industry. The panel consulted widely, its deliberations were non-political and its conclusions are pragmatic. Lord Sainsbury has himself served in government as a member of a different political party to mine and the panel's criticisms of the existing system apply to previous governments of all colours. The report points out that political consensus has been one of the factors that has allowed other countries to create stable and effective systems of technical education. My hope is that there can now be broad consensus behind the panel's recommendations.

These recommendations give us the opportunity to go beyond the achievements of the last Parliament and secure real and lasting improvements: building a dynamic, high-quality technical option, which is grounded in engagement with employers, fits soundly with the rest of the system and is responsive to the changing needs of the economy.

We accept and will implement all of the Sainsbury panel's proposals, unequivocally where that is possible within current budget constraints. We want to ensure there is a strong and stable network of colleges and other training providers; and want to take this chance to put in place wider changes to the system, including reforms to accountability, funding, and careers education and guidance.

This Skills Plan describes our vision for the system but there will be more detail to set out later in the year as we develop our plans; in particular to employers, colleges and other training providers, so they can rightly shape and lead the agenda.

We need to make sure we see this through. Past reforms, over previous decades, have often failed because they lacked real commitment, with governments changing plans before they could have real impact. We now have an overarching structure, a common set of principles, and a guiding vision which build on the progress we have made since 2010 and can deliver lasting change.

I am grateful for the contributions from the wide range of people who have worked with us to develop this Skills Plan. We will continue working closely with employers, colleges and students of all ages on how we improve the skills system, as we move to implementation of this plan.

A handwritten signature in black ink, appearing to read 'Nick Boles', written in a cursive style.

Nick Boles MP
Minister of State for Skills

Executive summary

i. This Skills Plan is our ambitious framework to support young people and adults to secure a lifetime of sustained skilled employment *and* meet the needs of our growing and rapidly changing economy.

Our vision for a reformed system

ii. We face a major challenge: the pressing need for more highly skilled people, trained effectively, to grow the economy and raise productivity, and ensure prosperity and security for individuals.

iii. This challenge persists because our current system of technical education has some serious flaws. Real progress was made under the last Parliament but now we must build on this and go much further.

A reformed technical education option

iv. We appointed an expert panel chaired by Lord Sainsbury to advise us on reforms to the system and we are delighted with their recommendations, set out in a report published today.² We accept these recommendations, unequivocally where that is possible within existing budgets, and will carefully assess the case for those recommendations with wider financial implications.

v. Our ambition is that every young person, after an excellent grounding in the core academic subjects and a broad and balanced curriculum to age 16, is presented with two choices: the academic or the technical option. The academic option is already well regarded, but the technical option must also be world-class. As with the reforms in higher education, we want to improve both the quality of education and student choice. There should be appropriate bridging courses to make movement between the two options easily accessible.

vi. The technical option will prepare individuals for skilled employment which requires technical knowledge and practical skills valued by industry. It will cover college-based and employment-based (apprenticeship) education, building on our apprenticeship reforms.

vii. Employers will sit at the heart of the system and take the lead in setting the standards. Crucially, standards will be designed by considering what is needed to move to skilled employment and then working backwards.

² *The Report of the Independent Panel on Technical Education* is available online at <https://www.gov.uk>.

Taking forward new technical routes extending to the highest levels of skilled employment

viii. As the Sainsbury panel recommends, we will streamline the system and create a common framework of 15 routes across all technical education. The routes will group occupations together to reflect where there are shared training requirements.

ix. Rather than the current crowded landscape of overlapping qualifications, we will ensure that only high-quality technical qualifications which match employer-set standards are approved. The new, employer-led Institute for Apprenticeships will regulate quality across apprenticeships and its remit will be expanded to cover all technical education. Routes will begin with high-quality, two-year, college-based programmes, aligned to apprenticeships. Within these programmes, we will put in place only one approved tech level qualification for each occupation or cluster of occupations (which could also be used within the relevant apprenticeship). We intend to grant exclusive licences for the development of these tech levels following a competitive process.

x. Routes will extend to the highest skills levels. We will maintain a register of technical qualifications at levels 4 and 5 which meet national standards and are therefore eligible for public subsidy through government-backed student loans.

Ensuring the new system works for everyone

xi. The Sainsbury panel has recognised that the system needs to work for all groups of students. This will include ensuring that individuals who are not ready to access a route at age 16 (or older if their education has been delayed) can access up to a year of tailored and flexible support based on their prior attainment and aspirations.

Strong and dynamic providers

xii. A reformed skills system needs a strong network of colleges and other training providers, and we are clear that they should take ownership of and ultimately deliver the positive vision set out in this Skills Plan. In order to engage fully, colleges and other training providers will need to be resilient and financially sustainable, led and governed effectively, and focused on local needs.

Enabling factors

xiii. We will put in place a set of systemic changes, including making more data available, reforming careers guidance to inform student choice, and ensuring we have the right funding and accountability arrangements.

Meeting short-term skills pressures

xiv. In the long term, clear routes to skilled employment will act as pipelines for recruiting workers at all levels of skill. In the short term, there are particular areas of priority within the economy that are reliant on certain skills being available, and the government is taking action to address the challenges faced in these priority areas.

Road map for reform

xv. We want to be clear about the key milestones and the sequence of reform, so that everyone knows what to expect and how to participate and prepare. The main steps we will take between now and 2020 are set out in the timetable in Chapter 8. We will engage with employers, colleges and other training providers, and others with an interest, and publish a more detailed timetable later in the year.

Chapter 1: Our vision for a reformed skills system

The challenge

1.1. We face a major challenge: the pressing need for more highly skilled people, trained effectively, to grow the economy and raise productivity. This is a problem governments have been trying to solve for decades and, although we made progress in the last Parliament, this problem is only becoming more urgent. Forecasts suggest greater demand for higher-level technical and specialist skills in the future. Greater international competition and faster technological change will put many roles that exist today at risk.³ We need young people and adults to have the skills and knowledge that better equip them for employment in the 21st century, in order to meet the demands of the future.

1.2. Weaknesses in the UK's skills base have contributed to its long-standing productivity gap with France, Germany and the United States. It performs poorly on intermediate professional and technical skills, and is forecast to fall from 22nd to 28th out of 33 Organization for Economic Co-operation and Development (OECD) countries for intermediate skills by 2020.⁴

1.3. There is also a social impact. Skilled employment leads to prosperity and security for individuals, while unskilled employment often means the opposite. Not giving young people the right opportunities to gain the skills, knowledge and behaviours needed for the world of work represents a waste not only of human capital, but of enthusiasm, of potential, of the life chances which their parents and teachers have worked so hard to provide.

1.4. The social impact takes several forms. For example, we know there is an issue with occupational segregation in our economy, with nearly 9,000 level 2 apprenticeships in hairdressing started by women in 2013/14; while 80 starts on the level 2 engineering apprenticeship framework were by women in the same year.⁵ It is vital we make sure that every young person and adult in this country is confident that all paths are open to them, regardless of gender, race, disability, sexual orientation, sexual identity or any other factor beyond their control. Failure to do so means wasting their potential and missing out on what they have to offer.

³ UKCES (2014) *The Labour Market Story: Skills for the Future*, available online at <https://www.gov.uk/government/publications/skills-and-employment-in-the-uk-the-labour-market-story>

⁴ UKCES (2014) *UK Skill Levels and International Competitiveness, 2013*, available online at <https://www.gov.uk/government/publications/uk-skills-levels-international-comparisons-and-competitiveness>

⁵ SFA and BIS (2014) *Apprenticeships by framework, level and gender: starts 2002/03 to 2013/14*, available online at <https://www.gov.uk/government/statistical-data-sets/fe-data-library-apprenticeships>

1.5. The challenge persists because our current system of technical education has some serious flaws. Despite recent progress, and although there are many examples of excellent teaching, as a whole the system does not deliver enough people with the right skills and technical knowledge of high enough quality, and is not seen as an attractive option by employers, young people or their parents. We are clear about what is wrong with the current system:

- standards and qualifications are not always set by actual employers; they are often set by a confusing mixture of awarding organisations and intermediary bodies, which have not provided an effective voice for business
- there are too many overlapping and often low-value qualifications, which do not ensure a clear line of sight to the world of work
- the system is complex and difficult to navigate for both young people and adults looking to retrain
- despite recent growth, there are still not enough apprenticeship opportunities to meet the needs of young people and the demands of the economy
- we have too little dedicated technical education at higher levels to meet our need for technician-level skills and programmes are not always designed to deliver what is needed to move to skilled employment
- the current network of colleges and other training providers is financially unsustainable

Our response – a reformed skills system

1.6. Past attempts at reform have not been effective in considering the system as a whole, both in terms of developing an overarching strategy and in making sure that the strategy works for all young people and adults. We began to put this right in the last Parliament, as set out below in paragraph 1.11, and now, with an urgent commitment to economic growth and social justice, we will go further and deliver lasting, ambitious, systemic reform.

1.7. As well as getting the design of the system right, it is equally important to maintain a relentless focus on implementing the reforms in the right way. We recognise that this is where governments have often failed in the past. We will do this by building a strong coalition of support, and through careful and rigorous planning and delivery.

A clear vision for the future

1.8. Our vision is of a thriving economy made up of businesses able to compete internationally and respond to rapid technological change. There will be many more people with registered technician status, recognised as having the skills, knowledge and behaviours necessary for skilled employment in their chosen field, as well as the transferable skills that are needed in any job such as good literacy and numeracy, and digital skills. Employers, large and small, will sit at the heart of a dynamic skills system to ensure the day-to-day training and education that individuals receive genuinely meet the needs of industry.

1.9. In asking how to make this vision a reality, we looked at the approach taken by other countries which already have world-class systems. It was clear that what they have in common is an easy-to-understand, high-quality, employer-led, stable technical education option extending to the highest levels, alongside the academic option.

1.10. We concluded that four principles must be in place for our system to succeed:

Principles required for our system to succeed

Firstly, and most importantly, employers must play a leading role. Employers, working with expert education professionals, need to set the standards; they must define the skills, knowledge and behaviours required for skilled employment.

Secondly, technical education needs to be fulfilling, aspirational, clearly explained and attractive – to everyone, regardless of their gender, race, disability, sexual orientation, sexual identity or any other factor beyond their control. Successive governments have seen ‘vocational’ education as the solution to the problem of what to do with young people who don’t do A levels. As a result, programmes were designed which did not demand enough of students. Every world-class technical education system takes a different approach: they start with world-class excellence at the higher technical level and work backwards to define the programmes that should be offered at each stage.

Thirdly, we need to ensure that many more people can go on to meet the national standards set by employers. This can be achieved both by making technical education an attractive option and by ensuring there is a supply of high-quality opportunities available from strong and responsive colleges and other providers with the right leadership and workforce.

Fourthly, we need close integration between college-based and employment-based technical education so that employers and individuals can understand how they fit together and how to move from one to the other as seamlessly as possible.

Building on progress so far

1.11. We now have 1.4 million more pupils taught in good or outstanding schools than in 2010.⁶ In further education, the proportion of learners in good or outstanding settings rose to 81% in 2015.⁷ Under the coalition, we made big strides forward by:

- investing heavily in apprenticeships, placing employers in the driving seat; there were 2.4 million apprenticeship starts in the previous Parliament⁸
- removing thousands of poor-quality qualifications from league tables and government funding, following the ground-breaking Wolf Report
- laying the foundations for specialist National Colleges, which will focus on key sectors of the economy, and introducing new state-supported loans for students in higher-level technical education
- introducing a funding requirement for students who do not achieve GCSE A*–C equivalent in English and maths by age 16 to continue to study these subjects until 18
- reducing the proportion of 16–18 year-olds not in education, employment or training to a historic low⁹

Now we must build on this and go much further.

1.12. This is a long-term plan to ensure we can meet the skills needs of our economy. We recognise that, in the short term, particular areas of the economy have specific needs which are causing problems at the moment. Within each of those areas, there will be an intensive focus on addressing these short-term skills pressures. Government has a role to play in supporting employers and Chapter 7 sets out the action we are taking.

⁶ Ofsted (2015) *The Annual Report of Her Majesty's Chief Inspector of Education, Children's Services and Skills 2014/15*, available online at <https://www.gov.uk/government/publications/ofsted-annual-report-201415-education-and-skills>

⁷ Figure does not include school sixth-form colleges; DfE (2016) *Single departmental plan: 2015 to 2020*, available online at <https://www.gov.uk/government/publications/department-for-education-single-departmental-plan-2015-to-2020/single-departmental-plan-2015-to-2020>

⁸ SFA and BIS (2016) *Further education and skills: statistical first release*, available online at <https://www.gov.uk/government/statistics/learner-participation-outcomes-and-level-of-highest-qualification-held>

⁹ The 16–18 NEET rate in England was 6.5% at end 2015, down 1.1 percentage points from end 2014, and the lowest since comparable data began in 1994. DfE (2016) *Participation in education, training and employment: 2015*, available online at <https://www.gov.uk/government/statistics/participation-in-education-training-and-employment-2015>

Chapter 2: A reformed technical education option

2.1. We need a far-reaching package of reforms to technical education, which will enable every student to succeed in modern Britain. That is why we asked the Sainsbury panel to carry out a thorough review of technical education.

2.2. We are delighted with the Sainsbury panel's recommendations. We accept all of them, unequivocally wherever that is possible within existing budgets, and will carefully assess the case for those recommendations with wider financial implications. Rather than repeat their analysis and conclusions here, we urge you to read their report.¹⁰ You can find the executive summary reproduced at Annex A.

2.3. At the heart of the Sainsbury panel's recommendations is putting in place a high-quality technical option which fits coherently with the wider education and training system, as their diagram on the following page explains. The Sainsbury panel devoted a lot of attention to the shape of the overall system, which we explore in this chapter. The diagram does not show every possible way in which an individual might move through the system, but we do believe that it is a useful illustration of the main features.

¹⁰ *The Report of the Independent Panel on Technical Education* is available online at <https://www.gov.uk>.

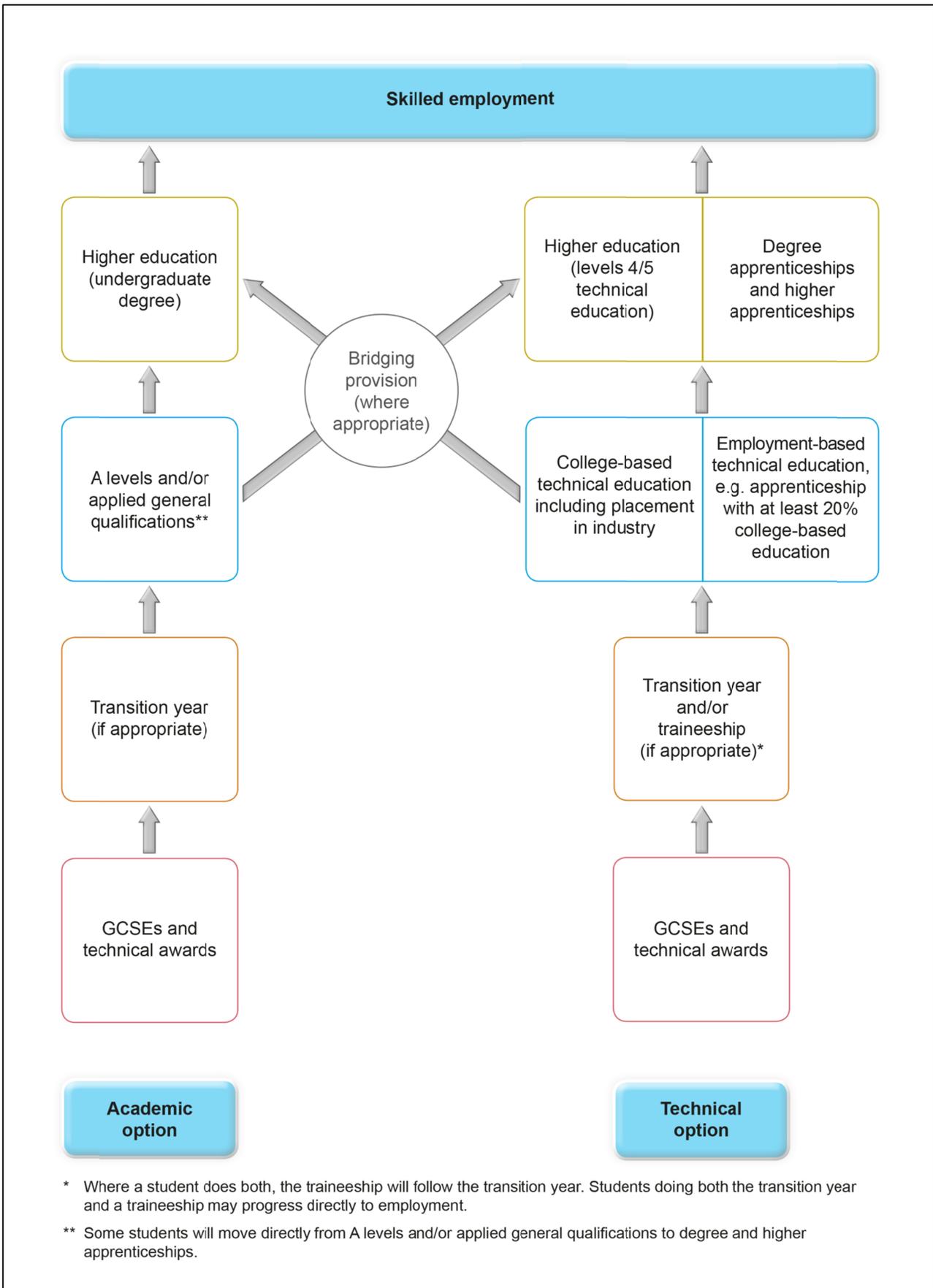


Figure 1: How the academic and technical options would work

An excellent grounding

2.4. Technical education should build upon the core academic subjects and broad and balanced curriculum that all pupils study up to the age of 16. It will never gain the esteem that it requires in this country if it is seen as an ‘easy’ option which can be accessed without the same grounding as the academic option. Some qualifications which were previously badged as ‘vocational’ and set up in competition to GCSEs became some of the worst examples of qualifications with little or no value in the labour market,¹¹ which devalued this whole area of education.

2.5. If they are to succeed in the workplace, young people following technical education must benefit as much from the knowledge and skills that are gained through a core academic curriculum at GCSE as their counterparts who choose A levels. All members of the workforce benefit from being able to write the sort of clear and legible English that GCSEs examine. Though computers and calculators can carry out complex sums, all adults in the workplace benefit from having sufficient mathematical understanding to spot errors, make quick estimations, and employ basic mathematical concepts such as sequences, probability and statistics.¹²

2.6. At pre-16 we will:

- continue to equip schools to embed a knowledge-based curriculum as the cornerstone of an excellent, academically rigorous education
- continue to embed reforms to assessment and qualifications, including more robust and rigorous GCSEs; and the ambition that at least 90% of pupils in mainstream education enter GCSEs in the EBacc subjects of English, maths, science, history or geography, and languages
- ensure a knowledge-based curriculum is complemented by the development of the character traits and fundamental British values that will help prepare children and young people for adult life

¹¹ DfE (2011) *Review of Vocational Education – The Wolf Report*, available online at <https://www.gov.uk/government/publications/review-of-vocational-education-the-wolf-report>.

¹² Hodgen, J., and Marks, R. (2013) *The Employment Equation: Why our young people need more maths for today’s jobs*. A report for the Sutton Trust.

A strong technical option

2.7. As the diagram shows, young people will then be given a choice as they approach the last two years of compulsory education or training. Around 50% choose A levels at age 16, a figure which has stayed remarkably constant in recent years despite substantial reform in the wider educational landscape. Around a third of young people, currently over 200,000 young people a year, enter full-time ‘vocational’ study at age 16.¹³ Alongside the academic option, therefore, there must be a world-class technical option which continues into tertiary education.

2.8. The technical option will prepare individuals for skilled employment in occupations which require both a substantial body of technical knowledge and a set of practical skills valued by industry. It must be a distinctive, prestigious, high-quality offer in its own right; a positive, informed choice. If we don’t provide an excellent technical education option, we will be failing a very significant number of young people. We cannot continue to let so many work their way through a succession of often low-level, low-value qualifications that lead at best to low-skilled, low-paid employment. Securing a step-change in technical education is vital for the productivity of this country; employers have specific training needs which the education system needs to serve.

Building on our apprenticeship reform plans

2.9. The technical option as illustrated in the diagram will offer both college-based and employment-based (apprenticeship) education and training. Both are equally valid preparation for skilled employment, and both must be part of any reformed system. In implementing the Sainsbury panel’s recommendations we will build on the recent apprenticeship reforms, which are already well advanced and are at the heart of our drive to improve the skills of the workforce.

2.10. *The Richard Review of Apprenticeships*, published in 2012, set out a clear vision for a system that is more rigorous and more responsive to employers’ needs.¹⁴ In response, in 2013 the government published plans to develop new apprenticeship standards by launching employer-led trailblazers in a range of sectors and defined core principles of quality for any government-funded apprenticeship, in particular that an apprenticeship must *always* be a job with training in a skilled occupation lasting at least 12 months, leading to full competency in that occupation.¹⁵

¹³ DfE (2016) *Participation in education, training and employment: 2015*, available online at <https://www.gov.uk/government/statistics/participation-in-education-training-and-employment-2015>

¹⁴ *The Richard Review of Apprenticeships* is available online at <https://www.gov.uk/government/publications/the-richard-review-of-apprenticeships>.

¹⁵ The government’s response to *The Richard Review of Apprenticeships* is available online at <https://www.gov.uk/government/consultations/future-of-apprenticeships-in-england-richard-review-next-steps>.

2.11. In December 2015, we published *English Apprenticeships: Our 2020 Vision*,¹⁶ which outlines the government's plan to increase the quality and quantity of apprenticeships to reach three million apprenticeship starts by 2020. These plans include:

- putting employers in the driving seat to create apprenticeships that fully meet their business needs, including degree apprenticeships, through employer-designed standards
- establishing the Institute for Apprenticeships, a new, independent, employer-led body to regulate the quality of apprenticeships in England, by April 2017
- further work to attract and support more women to start apprenticeships of all types, including those traditionally dominated by men, with an ambition for 20% of new entrants to engineering and technical apprenticeships in the transport sector to be women by 2020, and gender parity in the working population by 2030 at the latest¹⁷
- making sure that apprenticeships are open to all, with a 20% increase in black, Asian and minority ethnic (BAME) apprentice starts by 2020
- putting employers in control of apprenticeship funding by introducing a UK-wide levy in April 2017 to help fund the increase in quantity and quality of apprenticeship training in England; all employers with a pay bill of £3 million or more will contribute through the levy

Putting employers in the lead

2.12. What will give the technical option real status and credibility – so that it can lead all the way up to skilled employment – will be strong employer support. One of the fundamental principles of our new technical education option will be that employers, supported by education experts, will set the standards required in technical education.

¹⁶ *English Apprenticeships: Our 2020 Vision* is available online at <https://www.gov.uk/government/publications/apprenticeships-in-england-vision-for-2020>.

¹⁷ This ambition was set out in our *Transport Infrastructure Skills Strategy*, available online at <https://www.gov.uk/government/publications/transport-infrastructure-skills-strategy-building-sustainable-skills>.

2.13. The Sainsbury panel realises that this is not the first time a government has tried to reform the skills system and put employers in the lead. In the past, however, good intentions have led to disappointing results. Responsibilities were given to intermediary bodies, such as sector skills councils (SSCs), which have been too remote from employers. Employer bodies, awarding organisations and regulators have all had a role in the production of qualifications, and when there is a problem it has been unclear who is responsible for solving it. The national occupational standards (NOS), used for decades to underpin qualifications and apprenticeships, do not give a clear indication of what the student needs to know and be able to do at the end of their programme, and have not been well recognised by employers. The panel's recommendations address all of these concerns.

2.14. In the last Parliament we began to make a breakthrough, launching our programme of trailblazers which put employers in the driving seat for developing new apprenticeship standards. We have over 170 trailblazers involving more than 1,300 employers. There are over 240 published apprenticeship standards which have been designed by employers (of which over 60 are higher and degree apprenticeships) and more than 150 new standards are in development.¹⁸ We will build on the experience of the best trailblazers in our wider reform of technical education.

2.15. We hope that enough professionals will recognise the huge benefits – to their businesses and organisations, to individuals, and to the economy – that could result if they seize the opportunity we are offering them to lead and shape the system. But of course, government will continue to play a vital role: defining a national framework for technical education and ensuring there is an effective system of quality assurance.

Aligning with the academic option

2.16. The diagram on page 15 illustrates how we will create parallel academic and technical options from age 16, leading to the highest levels of study. We have already improved the academic option by reforming A levels to ensure they are robust and rigorous, match the best education systems in the world and keep pace with the demands of universities.

¹⁸ Figures accurate as of 23 June 2016; data available online at <https://www.gov.uk/government/collections/apprenticeship-standards>

2.17. It is important that individuals are able to switch between these two options; it would be wrong to expect a 16 year-old to make choices that drastically close down future options. Those who have started on the technical education option may conclude at age 18 that they would be better suited to academic study at a university or other provider; someone who has done A levels may prefer to go on to do a higher apprenticeship. Flexible learning will be important to learners of all ages, given the changing labour market. We accept the Sainsbury panel's recommendation that there should be appropriate bridging courses to make movement between the two options easily accessible.

2.18. Defining the technical option as clearly as the academic option means that we need to look at all existing classes of qualifications. Applied general qualifications in the 16–19 performance tables are not designed to be part of the technical education option. We plan to review the contribution of these qualifications to preparing students for success in higher education; what part they can play in a reformed system; and the impact any reform would have on the government's ambitions on widening participation. We will announce our decisions later in the year.

Chapter 3: Taking forward new technical routes extending to the highest levels of skilled employment

3.1. As the Sainsbury panel recommends, it is vital that young people and adults can see clearly which programmes they should follow in order to target particular careers. We will introduce a common framework of 15 routes across all technical education, encompassing both college-based and employment-based learning. These routes will focus on skilled occupations where there is a substantial requirement for technical knowledge and practical skills; the routes will group occupations together to reflect where there are shared requirements.

3.2. We will expand the Institute for Apprenticeships to be responsible for this framework. It will be the only body responsible for technical education, and will have the remit to develop a coherent strategy and put employers in the lead of designing the standards across all technical education – college-based as well as apprenticeships. We will ensure that the Institute has the resources it needs to do its job at the heart of the system effectively.

3.3. This will enable us to give employers a much stronger role in setting standards and specifying the knowledge, skills and behaviours an individual needs in order to perform well in an occupation. The Institute, once established, will convene panels of professionals for each route to advise on the knowledge, skills and behaviours that individuals will need to meet the standards in each route, and on suitable assessment strategies for college-based learning. It will be for the Institute to decide on the specifics of the process for developing apprenticeship standards and assessment plans, and how best to ensure alignment with college-based learning, but we anticipate that employer groups will continue to lead on the design of standards and assessment plans.

3.4. The 15 technical education routes are set out on the following pages.

The proposed routes (1)¹⁹

Route name: Agriculture, Environmental and Animal Care

Numbers employed: 454,726

Typical job roles: Conservationist, park ranger, farmer, horticulturalist, agricultural manager, agricultural technician

Route name: Business and Administrative

Numbers employed: 2,204,478

Typical job roles: Human resources officer, office manager, administrative officer, housing officer

Route name: Catering and Hospitality

Numbers employed: 568,998

Typical job roles: Chef, butcher, baker, catering manager, events manager

Route name: Childcare and Education

Numbers employed: 1,060,804

Typical job roles: Nursery assistant, early years officer, teaching assistant, youth worker

Route name: Construction

Numbers employed: 1,625,448

Typical job roles: Bricklayer/mason, electrician, building/civil engineering technician, carpenter/joiner, construction supervisor

Route name: Creative and Design

Numbers employed: 529,573

Typical job roles: Arts producer, graphic designer, audio-visual technician, journalist, product/clothing designer, upholsterer, tailor, furniture maker

Route name: Digital

Numbers employed: 351,649

Typical job roles: IT business analyst/systems designer, programmer, software developer, IT technician, web designer, network administrator

Route name: Engineering and Manufacturing

Numbers employed: 1,319,645

Typical job roles: Engineering technician, vehicle mechanic, aircraft fitter, printer, process technician, energy plant operative

Route name: Hair and Beauty

Numbers employed: 293,004

Typical job roles: Hairdresser, barber, beauty therapist

¹⁹ Employment figures taken from *ONS EMP04: Employment by occupation*, available online at <http://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/datasets/employmentbyoccupationemp04>.

The proposed routes (2)

Route name: Health and Science

Numbers employed: 915,979

Typical job roles: Nursing assistant, pharmaceutical technician, sports therapist, laboratory technician, dental nurse, food technician

Route name: Legal, Finance and Accounting

Numbers employed: 1,325,482

Typical job roles: Accounting technician, paralegal, financial account manager, payroll manager, finance officer, legal secretary

Route name: Protective Services

Numbers employed: 398,400

We expect this route will primarily be delivered through apprenticeships.

Typical job roles: Police officer, fire service officer, non-commissioned officer (NCO), maritime operations officer (coastguard)

Route name: Sales, Marketing and Procurement

Numbers employed: 957,185

We expect this route will primarily be delivered through apprenticeships.

Typical job roles: Buyer, procurement officer, sales account manager, market research analyst, estate agent

Route name: Social Care

Numbers employed: 865,941

We expect this route will primarily be delivered through apprenticeships.

Typical job roles: Care worker, residential warden, home carer, probation officer, welfare counsellor

Route name: Transport and Logistics

Numbers employed: 589,509

We expect this route will primarily be delivered through apprenticeships.

Typical job roles: Ship's officer, railway signalling technician, HGV driver

Creating high-quality programmes at the start of each route

3.5. As proposed by the Sainsbury panel, we will create high-quality, two-year, college-based programmes at the start of each route, which are suitable for 16–18 year-olds, but can also be accessed by adults (students aged 19 and over). Each programme will be closely aligned to the apprenticeships at the start of each route and it will be possible to move from one to the other.

3.6. The programmes must have genuine labour market value. On that basis, we will put in place nationally recognised certificates for each technical education route at levels 2 and 3. Each certificate achieved through college-based study is likely to include achievement of a qualification, and we share the Sainsbury panel's strong concerns about existing qualifications. Instead of competition between different awarding organisations leading to better quality and innovation in the design of qualifications, it can lead to a 'race to the bottom' in which awarding organisations compete to offer qualifications which are easier to pass and therefore of lower value.²⁰ Having to choose between a large number of qualifications is also confusing for students and parents. We will put in place only one approved tech level qualification for each occupation or cluster of occupations within a route. These tech levels *could* play a role within the relevant apprenticeships, but only if employers decide that should be the case, and the Institute will need to consider the implications of this single tech level approach. We intend to grant exclusive licences for the development of these tech levels following a competitive bidding process.

3.7. Each programme will include a 'common core', which applies to all individuals studying that route and is aligned to apprenticeships (including English and maths requirements, and digital skills), followed by specialisation towards a skilled occupation or set of occupations. As well as good literacy and numeracy, everyone needs an essential set of digital skills to succeed in the modern workplace,²¹ and these digital skills will be built into the common core. Beyond this, digital skills requirements should be tailored, and employer panels will be in the lead to specify digital skills which are required for entry into particular groups of skilled occupations. We are in parallel developing a digital strategy which sets out our approach to improving digital skills, and we will say more about these skills later in the year.

3.8. We also recognise that, as well as occupation-specific requirements, many employers demand similar workplace skills which enable individuals to thrive in a modern economy, regardless of specific occupation. For example, skills such as communicating, working in a team and solving problems are essential in a 21st-century workplace. We will ask the Institute for Apprenticeships to work with employers to articulate a common set of transferrable workplace skills which could apply across all of the routes.

3.9. Quality work placements within each programme will be critical, and every 16–18 year-old student following a two-year, college-based technical education programme will be entitled to one.

²⁰ OECD (2013) *A Skills beyond School Review of England*

²¹ DCMS and BIS (2016) *Digital Skills for the UK Economy*, available online at <https://www.gov.uk/government/publications/digital-skills-for-the-uk-economy>

Example: Construction

A student opts to study the Construction route at a local college. At the start of the route, the student studies a broad construction curriculum, including core construction standards, engineering principles and sustainability methods, alongside more specific skills including health and safety compliance, project management, and how to design, plan and organise works. The health and safety training allows the student to apply for a CSCS (Construction Skills Certification Scheme) card, essential for gaining access to construction sites. With this, they are able to visit local construction sites and gain insight into the range of construction occupations on offer.

The student decides to specialise by taking a tech level in stonemasonry in their second year, developing specific knowledge and skills including understanding the theories behind brick masonry, trade terminology, applying maths, calculating proportions and understanding blueprints. They also learn how to use tools and masonry equipment to industry standards, the safety aspects of the trade, bonding methods, laying bricks and blocks, establishing foundations and safe bricking.

The student is able to complete a number of practical activities as part of a work placement and is assessed by a professional assessor, receiving feedback from the assessor and the college.

On passing their final assessment, the student receives a certificate summarising their achievements. It includes the grade achieved for the qualification as well as naming the standards they have been assessed against during their practical assessment and interview. The student will also have a log book, completed throughout the activities, which can be shown to future employers.

Ensuring routes extend to the highest skill levels

3.10. Routes must then extend up to the higher skill levels. The Sainsbury panel set out principles which apply at all levels, but noted that *how* they apply at different levels will vary. Tertiary education differs from secondary education because there is greater specialisation. For example, up to age 18 an individual following the Creative and Design route might follow fairly broad content, with some specialisation which might lead directly to skilled employment. Beyond the age of 18, however, their education and training would be even more specialised – focusing, for instance, on becoming a qualified graphic designer.

3.11. In line with the Sainsbury panel's findings, we propose that technical education at higher skill levels must still follow national standards, overseen by the Institute for Apprenticeships. Employers and individuals need to have confidence in the system and understand how qualifications translate into jobs. But there is a clear case for a wider range of qualifications: individuals (who are often funding their own studies supported by loans) may be targeting employment with particular employers who have specific requirements.

3.12. For each of the 15 routes, the Institute for Apprenticeships will maintain a register of technical qualifications at levels 4 and 5 which are eligible for public subsidy through government-backed student loans. To begin with, this register will be drawn from those existing technical qualifications which are considered to do the best job of meeting national standards. The standards used will be set by the panels of professionals based on the relevant technical knowledge, skills and behaviours at the higher levels, and will align with the standards for apprenticeship programmes in the same route. In populating the register, the Institute will normally wish to recognise only a single qualification in a particular area.

3.13. We would not expect technical qualifications to exist for all routes or all parts of each route; sometimes apprenticeships alone might suffice, and in other cases there may not be enough roles to justify the college-based technical route. But where there is a good case for college-based technical learning and no technical qualifications are currently offered, the Institute will be able to stimulate the creation of new qualifications in each route.

3.14. We are creating National Colleges to lead on skills for important areas of the economy, such as high-speed rail and digital. National Colleges have two main roles: teaching students at the highest levels, using teachers with up-to-date understanding of the industry and in environments which accurately simulate the workplace; and awarding qualifications in their specialist area and setting standards which other colleges across the country could use. National Colleges will focus on addressing higher-level skills gaps (predominately levels 4 and 5) but may also look to deliver education and training up to level 6, including degree apprenticeships, and therefore seek to hold specialist-degree-awarding powers where employers have identified a particular skills gap at this level.

3.15. The Institute for Apprenticeships will expect to include on its register qualifications awarded by a National College, and where a National College exists it would look to that college to fill any gaps. Where a National College doesn't exist and there is another college with a strong specialisation, by exception the Institute could consider allowing it to issue awards. Over time we would expect to see a reduction in the number of regulated qualifications that exist at levels 4 and 5. At present there are around 1,800 qualifications at levels 4 and 5 on Ofqual's register of regulated qualifications,²² which makes it hard for students and employers to know their worth, and for regulation to ensure that content and delivery are fit for purpose. Only level 4 and 5 qualifications which meet national standards and are entered onto the Institute's register of approved technical education qualifications will be eligible for public subsidy (via government-backed loans) as technical qualifications.

3.16. The white paper *Success as a Knowledge Economy*²³ sets out a range of reforms to the higher education and research system. In both the academic and the technical options, our reforms share a common set of principles: improving the quality of education and student choice; and greater diversity among universities, colleges and other training providers. Alongside the Institute's role in technical qualifications at levels 4 and 5, the new Office for Students (OfS), which is being introduced through the Higher Education and Research Bill, will determine which academic qualifications at levels 4 and 5 are part of a wider programme of study leading to a full bachelor's degree, and which are hence eligible for student support on that basis. We propose that any qualifications which do not fall within the technical or academic options should not be eligible for funding support. We will engage closely with stakeholders about this proposal and set out more detail later in the year.

3.17. The OfS and the Institute will both have a role in level 6 degree apprenticeships. It will remain the responsibility of higher education institutions, under the regulation of the OfS, to determine the degree content of the apprenticeship (equivalent to an undergraduate degree) under their degree-awarding powers, thus ensuring academic rigour. The Institute will not regulate the degree qualification, but it will need to approve the apprenticeship standard (which sets out the knowledge, skills and behaviour that the apprentice will need to demonstrate) and the associated assessment plan before any apprentice can start on the programme.

²² Figure accurate as of 28 June 2016; data available online at <http://register.ofqual.gov.uk/Download>

²³ *Success as a Knowledge Economy: Teaching Excellence, Social Mobility and Student Choice* is available online at <https://www.gov.uk/government/publications/higher-education-success-as-a-knowledge-economy-white-paper>.

Chapter 4: Ensuring the new system works for everyone

4.1. In designing the new system, the Sainsbury panel has focussed primarily on young people at age 16 and adults who can start at the beginning of a route and move upwards, while recognising that the system needs to work for all groups of students. This includes individuals who are not ready to access a route at age 16 (or older if their education has been delayed).

4.2. As the Sainsbury panel recommends, we will ensure that up to a year of tailored and flexible support is available for these young people based on their prior attainment and aspirations. The Sainsbury panel calls this a ‘transition year’. We will carry out further work and consultation on the ‘transition year’ over the next six months, drawing on approaches that have proven successful to get the design right. For some, it might be right to undertake a ‘traineeship’ during or after the ‘transition year’; we will continue to expand the traineeships programme for 16–24 year-olds to support more young people into apprenticeships and other jobs. For the younger age group (16, 17 and 18 year-olds), we would like to give colleges and other training providers the flexibility to extend traineeships to up to a year.

4.3. There are other groups who may need extra help before they can access the routes, including adults, who might start at different points, and young people with special educational needs and disabilities. Getting the technical education system right is equally important for these groups and doing so will require input from those with relevant, in-depth, specialist knowledge and expertise. We set out below how we will develop plans to ensure the system meets the needs and improves the life chances of all students.

Women and girls

4.4. Although girls generally outperform boys at school,²⁴ we know the highest-paying professions are still dominated by men²⁵ and we have more to do to translate girls' educational achievement into better life chances. We want to make sure that girls are able to choose from a broad range of careers and are not hindered by stereotypes. In particular, we want to encourage more women to go into science, technology, engineering and maths (STEM) occupations, which carry a significant wage premium. The lack of women within STEM occupations is a significant factor contributing to the gender pay gap, which we want to eliminate within a generation. While around half of all apprenticeships are taken up by women, not enough women are accessing apprenticeships in STEM occupations. As set out in paragraph 2.11, we are taking action to address this.

Students who need help with the foundations: maths and English

4.5. Raising literacy and numeracy levels at all stages of education, including post-16, remains an absolute priority. Since we made it a condition of funding, all 16–19 year-olds beginning a study programme who have not achieved A*–C GCSEs in maths and English must continue to study these subjects until they do so (unless specific special educational needs or disabilities prevent them from doing so). This has resulted in thousands more students securing these GCSEs by age 19.²⁶ The OECD has commended our reforms and, working with schools, colleges and employers, we will build on them.

4.6. As well as taking forward the Sainsbury panel's recommendations on maths and English, we have already asked Professor Sir Adrian Smith to review the case for how to improve the study of maths from 16 to 18, including looking at the case and feasibility for more or all students to continue to study maths to 18 in the longer term.

²⁴ DfE (2016) *Revised GCSE and equivalent results in England, 2014 to 2015*, available online at <https://www.gov.uk/government/statistics/revised-gcse-and-equivalent-results-in-england-2014-to-2015>

²⁵ ONS (2013) *Women in the labour market: 2013*, available online at <http://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/articles/womeninthelabourmarket/2013-09-25>

²⁶ As a result of introducing the 16–19 maths and English funding condition, the number of students aged 17 and over securing A*–C grades in maths and English GCSEs rose in 2015. Compared to 2014, there were over 4,000 more passes in English and over 7,500 more in maths. Joint Council for Qualifications (2015) *GCSE Press Notice – UK*.

4.7. At our invitation, the Education and Training Foundation (ETF) is reforming maths and English Functional Skills qualifications to ensure they are stretching and relevant to employers' needs, with teaching of the reformed qualifications beginning in September 2018. Apart from GCSEs, Functional Skills are the highest-volume qualifications that Ofqual regulate; in 2014 over a million Functional Skills qualifications were taken. We are also focussing on raising the quality of teaching and improving student outcomes and will:

- introduce a new 16–19 maths and English progress measure from 2016
- continue to invest in workforce schemes, and work with the sector, Ofsted, the ETF and the Education Endowment Foundation (EEF) to improve teaching
- for adults yet to achieve level 2 in maths and English, continue to make free education in these subjects available and encourage take-up of GCSEs and level 2 Functional Skills qualifications

Students with special educational needs and disabilities (SEND)

4.8. We are implementing reforms which are putting in place a coherent system for identifying and supporting young people with SEND until, if needed, age 25. This includes a duty on the further education sector to use their best endeavours to meet the needs of young people with SEND. These young people have a valuable contribution to make to the economy and have talents which too often aren't harnessed. They have a wide range of needs and abilities. Many could achieve a high level of technical skill with appropriate support. We will ensure that the routes are accessible, inclusive and sufficiently flexible to be adapted for individual needs. The vast majority of young people with SEND are capable of sustained, paid employment with the right preparation and support.²⁷ They should receive the support and reasonable adjustment they need to access a route, or other pathway to employment.

²⁷ NfER (2011) *Young people with special educational needs/learning difficulties and disabilities: research into planning for adult life and services*

4.9. While many young people with SEND have the potential to achieve good results, a significant proportion are unlikely to be able to access the routes because of low prior attainment.²⁸ The ‘transition year’ will be crucial for these students. The minority of students with education, health and care (EHC) plans²⁹ will need particularly flexible and personalised provision to help them meet the outcomes in their plan and prepare for adult life. All young people with EHC plans should undertake a supported internship, which includes an extended work placement, unless there is a good reason not to do so.

Individuals not in education, employment or training (NEET) and young adults needing extra help

4.10. In the first quarter of 2016, there were 218,000 fewer young people aged 16–24 not in education, employment or training in England compared to the same period in 2011 – a fall from 15.3% to 11.7%.³⁰

4.11. We will continue to provide support to those young people still not in education, employment or training, including prioritising free or subsidised training for 19–24 year-olds with low-level skills through our adult funding arrangements. We are introducing a new Youth Obligation from April 2017 to ensure that young people aged 18–21 who make a claim to Universal Credit are given the support, skills and experience they need to move into work and fulfil their potential.

Adults

4.12. For adult education, there will continue to be a focus on supporting those outside the labour market to get a job and do well. We want to support returners to work, particularly women returning after having children. While we have achieved high levels of employment, the challenge now is to support people to stay employed and progress. Under Universal Credit, Jobcentre Plus work coaches help people to get a job and increase their earnings, reducing reliance on benefits. This includes support to improve people’s skills while recognising that it is not a maintenance grant to extend their education.

²⁸ In 2014/15, over 70% of learners with SEN failed to achieve 5+ A*–C grades, and 24% failed to achieve 5 GCSE passes. DfE (2016) *Revised GCSE and equivalent results in England: 2014 to 2015*, available online at <https://www.gov.uk/government/statistics/revised-gcse-and-equivalent-results-in-england-2014-to-2015>

²⁹ EHC plans may continue beyond age 18, up to, in some cases, age 25. The local authority is responsible for maintaining the EHC plan.

³⁰ DfE (2016) *NEET Statistics Quarterly Brief January to March 2016, England*, available online at <https://www.gov.uk/government/statistics/neet-statistics-quarterly-brief-january-to-march-2016>

4.13. Beyond this, we are clear that education and training need to become a more important part of adults' lives. Increases in life expectancy mean longer working lives. At the same time, however, job markets are becoming far more volatile and unpredictable as a result of technological change. There is an important question here of how the government should support adults in this environment and help provide security in a changing world. We will say more about how routes will work for adults and our approach to lifetime learning for adults later in the year.

Other groups

4.14. Many young people leaving care will have experienced trauma before entering care that disrupted their education, preventing them from reaching their potential.³¹ We are in parallel updating our care leaver strategy to set out how we intend to improve the lives and promote the life chances of these young people. Reforms to technical education, particularly the 'transition year', will provide them with much-needed help to progress into training and employment.

4.15. We are committed to reforming alternative provision (AP) as very few young people who have spent time in AP achieve the qualifications they need to succeed. These young people are considerably more likely not to be in education, employment or training from the age of 16. We recently announced that we will launch a £5 million innovation fund to test new approaches for supporting some of these young people to move directly from AP to post-16 education.

³¹ The All-Party Parliamentary Group for Looked After Children and Care Leavers (2012) *Education Matters in Care*

Chapter 5: Strong and dynamic colleges and other training providers

5.1. Our reforms to technical education put colleges and other training providers at the forefront of ensuring young people are prepared for skilled employment. Providers need to be strong and financially sustainable, led and governed effectively, and focused on local economic needs. They should take the lead in driving forward the delivery of these reforms, working in partnership with employers, and not rely on government direction or expect government prescription.

5.2. Through area reviews we are enabling colleges to tackle current financial difficulties and draw up plans for the future. At the heart of this process is the principle of locally led change, based on decisions about what is right for each local area, and developed in collaboration and partnership. Colleges and other training providers will remain autonomous, with scope to shape their own destiny within the framework set by government and to become genuinely self-improving.

5.3. As the 15 routes are introduced, it will be for local areas to decide which routes they should focus on in order to meet the demands of the local economy. Their decisions will be informed by the need to ensure individuals can access lower levels of education and training within reasonable travel-to-learn distances, while ensuring that at higher levels, where more specialist staff and equipment are needed, there is enough specialisation to ensure that they are able to deliver high-quality teaching and good results.

Moving towards a stronger, more viable network of colleges and other training providers

5.4. We already have many excellent colleges and other training providers, and we want to ensure that they are supported to reach their full potential. At a time when overall government spending is being scaled back, the 2015 Spending Review³² protected the 16–19 base rate of £4,000 per student and the Adult Education Budget while creating the conditions for a significant increase in investment through the apprenticeship levy. However, some colleges remain under considerable financial pressure.

³² *The Spending Review and Autumn Statement 2015* is available online at <https://www.gov.uk/government/publications/spending-review-and-autumn-statement-2015-documents>.

5.5. We have already taken a number of steps to support and enable colleges to put themselves on a more sustainable footing for the long term. Locally led area reviews,³³ which began in September 2015 and will take place in every area of England by 2017, will identify scope for greater collaboration and efficiency in each local area, freeing up resources to deliver high-quality education and training which supports economic growth.

5.6. The area reviews represent an opportunity to take a long-term view, build on existing strengths through greater specialisation, and ensure the training provided aligns with local economic priorities. They may lead to mergers or other restructuring, and sixth-form colleges can apply to become 16–19 academies. We are making substantial funding and other assistance available to support this restructuring, but only for a limited period of time.

New colleges and training providers for a new era

5.7. We are also taking action to introduce new specialist training providers where they are needed. The best university technical colleges (UTCs) and technical free schools are already providing young people with the technical knowledge and skills that employers need. We are committed to ensuring all UTCs provide high-quality education and to further expansion of the programme of UTCs and technical free schools, with a clear expectation that in future they should be part of a multi-academy trust (MAT) or other similar partnership so they can rely on the support this provides.

5.8. Improving higher-level technical skills (levels 4 and above) is critical, and we recognise that some industries of national economic or strategic importance are facing particular challenges in recruitment. For example, by 2025 70% of the highly skilled workers in the nuclear industry are due to have retired,³⁴ at a time when the UK is investing in a new generation of nuclear power stations. We are creating new National Colleges to lead the design and delivery of technical skills training at levels 4–6 in five key sectors: nuclear, digital skills, high-speed rail, onshore oil and gas, and the creative and cultural industries. Each National College will be a pioneering centre of expertise, with access to leading-edge facilities and high-quality industry practitioners.

³³ More information on area reviews can be found online at <https://www.gov.uk/government/collections/post-16-education-and-training-area-reviews>.

³⁴ Cogent Skills (2009) *Power People: The Civil Nuclear Workforce 2009–2025*. 70% figure denotes the proportion of highly skilled workers in the nuclear industry in 2009 who are due to retire by 2025.

5.9. We also recognise that there is a particular need to improve higher-level STEM skills, and plan to introduce Institutes of Technology (IoTs) to provide technical education in STEM subjects at levels 3, 4 and 5. Each IoT is likely to build on infrastructure that already exists but will have its own independent identity, governance arrangements which directly involve employers, and national branding. We would expect to see innovative ways of working across higher education, further education, private providers and industry. We expect to set out our next steps for establishing IoTs in autumn 2016.

A workforce fit for the future

5.10. A high-quality teaching workforce is vital to delivering excellent technical education. We will work with the sector to decide where future investment should be targeted ahead of first teaching of the routes from 2019. We are also supporting the further education apprenticeship trailblazer which is in the process of developing several standards, including one for FE learning and skills teacher, which will support the delivery of the routes. We will share more detail in due course as part of our implementation plan. It is also vital that colleges and other training providers continue to build their reputations with employers.

5.11. It remains very important that the sector has a workforce able to teach maths and English effectively. Existing workforce programmes have made a significant impact but there is a lot more to do to ensure consistently high-quality teaching. We are therefore investing over £15 million in the provision of bursaries and in grant funding to the Education and Training Foundation (ETF) in 2016–17, and will continue to run these or similar schemes until spring 2019. Between now and 2019, we expect colleges and other training providers to take on more direct responsibility for workforce development, taking advantage of the standards set and the services provided by the ETF.

Good leadership and governance

5.12. Reform on this scale will inevitably pose leadership and governance challenges for colleges and other training providers. The structures arising from area reviews are likely to be significantly larger and more complex, with a different skill set needed to lead and govern them. The restructuring process opens up the potential to recruit new leaders and governors. The move to an employer-led system means that college governing boards need to attract more business people who can bring the experience and understanding necessary to enable greater responsiveness to employer needs. A range of organisations, including the Education and Training Foundation (ETF), the Association of Colleges (AoC) and the Sixth Form Colleges' Association (SFCA) can support governors, leaders and managers to meet these challenges through the national governance development programme. We are also working on a guidance and support package for area review implementation, recognising the vital role skilled governors and leaders will play in managing change effectively while ensuring their colleges continue to deliver high-quality teaching and learning.

Chapter 6: Enabling factors

6.1. As we take forward the recommendations of the Sainsbury panel, our wider reform of apprenticeships and area reviews of colleges, this is a rare opportunity to also address a wider range of factors which impact on the success of our skills system. We will implement a broader set of changes which, taken together, give power away within a framework of national standards and put in place the means to guide people through the system and make informed choices about what to study.

Information and data

6.2. Part of our role as government will be to empower students, parents and employers by making more information available about what students go on to do and how much they earn after taking particular routes or apprenticeships, and how the performance of colleges and other training providers influences students' performance in working life. This information needs to be easy to access and understand so that people can use it to compare different education and career options and make confident and informed choices.

6.3. For the first time, we are using information held by the Department for Education; the Department for Business, Innovation and Skills; the Department for Work and Pensions; and HM Revenue and Customs to get a better understanding of how young people move through education and into work, and from autumn 2016 we will be making more of this information publicly available. Working with The Careers and Enterprise Company, we are learning more about how and when young people make informed decisions about their future. For example, we know that girls and women often approach career decisions differently to boys and men.³⁵ We will develop a new information tool that can be used by young people and those advising them to make choices about education and career options.

Careers education and guidance

6.4. As well as providing improved and accessible data, we need to reform careers education and guidance. In the 21st century, schools and colleges must look beyond the point at which a young person or adult leaves them. They should offer a variety of activities embedded in the curriculum and delivered in collaboration with employers and other partners to inform and inspire young people about all the options available to them.

³⁵ DfE (2014) *Longitudinal study of young people in England: cohort 2, wave 1*, available online at <https://www.gov.uk/government/publications/longitudinal-study-of-young-people-in-england-cohort-2-wave-1>

6.5. We are in parallel developing an overarching careers strategy, and we have already taken action by:

- placing a duty on schools and colleges to provide independent and impartial careers guidance
- funding the work of The Careers and Enterprise Company, which is strengthening links between employers, schools and colleges, and careers and enterprise organisations
- announcing a major campaign to recruit a new generation of high-flying mentors to support and inspire young people who are most at risk of not fulfilling their potential in the years running up to GCSE
- announcing our intention to bring forward new legislation which will require schools to allow other education and training providers to talk directly to pupils about opportunities such as apprenticeships or other technical education routes

Funding

6.6. The Spending Review³⁶ recognised the importance of skills to future productivity and economic growth and provided a firm basis for funding our ambitions to reform technical education. Across all age groups, this was a good settlement which protected both the 16–19 base rate of £4,000 per student and the Adult Education Budget. Taken in conjunction with the area review process, it provides a platform from which the sector can operate to deliver the skills young people and adults need.

6.7. But the Spending Review settlement goes further than the commitment to make public funding available. It creates the conditions under which we will see a significant increase in investment in technical education, through the apprenticeship levy for employers and through the opportunity to stimulate investment by individuals through Advanced Learner Loans. Between 2010–11 and 2019–20, the annual level of spending on apprenticeships will have doubled in cash terms to £2.5 billion, funded by the new apprenticeship levy. In addition, we forecast that £480 million will be taken out through Advanced Learner Loans for adults by 2019–20.³⁷

³⁶ *The Spending Review and Autumn Statement 2015* is available online at <https://www.gov.uk/government/publications/spending-review-and-autumn-statement-2015-documents>.

³⁷ BIS (2105) *Skills Funding Agency Priorities for the 2016 to 2017 Financial Year*, available online at <https://www.gov.uk/government/publications/skills-funding-letter-april-2016-to-march-2017>

6.8. It is important that the funding system supports individual choice and can be quickly adapted to fit the new routes system. At 16–19, we have already introduced a funding system where funding follows the student, rather than funding per qualification. Funding for this age group will continue to be determined by a national formula given the universal entitlement of young people to access education or training up to age 18. For students aged 19 plus, investment in the apprenticeship levy and the expansion of Advanced Learner Loans for adults will support student and employer choice.

6.9. Finally, government will also continue to invest in learning opportunities for those who need additional support, including through the Adult Education Budget. As part of our continuing engagement with combined authority areas preparing for devolution of the Adult Education Budget from 2018/19, we will discuss with them the implications of technical education reform. This will relate to technical education they might themselves commission using devolved funding, and an understanding of the wider technical education landscape in which they will become players. We will say more about devolution of the Adult Education Budget to those areas with devolution deals later in the year.

Accountability

6.10. We have already announced significant reforms to the 16–19 accountability system, which will begin to be introduced from 2016.³⁸ These reforms aim to secure four key benefits:

- a strong emphasis on progress and progression
- expansion of the performance tables to include apprenticeships and outcomes below level 3
- greater consistency and comparability between schools and colleges
- clear and reliable information for students and parents so that their choices are based on the quality of course and institution, stimulating competition and improvement

6.11. We will review these accountability arrangements in light of the Sainsbury panel's recommendations. At 19 plus, we are reforming accountability arrangements to increase direct accountability to students and employers, and to incentivise colleges and other training providers to drive up standards and focus on the needs and progress of all students. We will say more about this later in the year.

³⁸ Further information on our reforms to 16–19 accountability can be found online at <https://www.gov.uk/government/publications/16-to-19-accountability-headline-measures-technical-guide>.

Chapter 7: Meeting short-term skills pressures

7.1. In the long term, clear routes to skilled employment which are employer-led will help people make choices that get them into jobs – and ensure businesses can recruit the staff they need. These reforms will put in place a new framework with employers in the lead, and the right information available to individuals so that they can make choices based on their aims and aspirations. Employers will have direct line of sight between the skills they need and the education and training system, which will allow them to strengthen the pipelines for recruiting workers at all levels of skill.

7.2. We need to recognise, of course, that the reforms proposed by the Sainsbury panel, and committed to in this Skills Plan, will take time to embed. However, there are particular areas of priority within the economy *right now* that are reliant on certain skills being available in the short term, as well as examples of market failure which mean skills pressures could persist even under a system that is working well. We are clear that the government has a role to play in resolving these challenges.

Addressing skills pressures in specific areas of the economy

7.3. There is a role for government in addressing problems in specific areas of the economy, particularly where we are directly or indirectly investing in services and infrastructure, and there is a need to grow and upskill the workforce to secure the benefits of that investment. In some of these areas, there are particular challenges in ensuring sufficient skilled workers, and these present a more compelling case for government action. For example:

- in housing, the long-term incentives for subcontractors to invest in training and modernise delivery are weak,³⁹ and there are recruitment difficulties in London and the south east
- in nuclear, the workforce will need to grow significantly as a result of the UK's ambitious programme, which includes building five new civil nuclear plants by 2030
- in high-speed rail, the challenge is to train thousands of specialists to work in a new industry, using new skills portfolios
- in digital, there are many degrees on offer, but few are aimed at the technician level where employers report vacancies

³⁹ Farmer, M., and Rawlinson, S. (2015) *People & Money: Fundamental to Unlocking the Housing Crisis*. A report for the Chartered Institute of Building.

- across STEM occupations, many more technicians and professional scientists, engineers and technologists will be needed by 2020, and we need to encourage more girls and other under-represented groups to join the STEM workforce at every level

Action we are taking and plans for further action

7.4. We are already taking action across areas of the economy which face the kinds of issues and challenges set out above. We are committed to:

- introducing new National Colleges in key sectors where employers have told us that a barrier to recruitment they face is a lack of specialised training provision, including nuclear, digital and high-speed rail; for more information on National Colleges, see paragraphs 3.14 and 5.8
- delivering 30,000 apprentices across the transport sector by the end of this Parliament, and expanding targets for women's entry into technical and engineering apprenticeships (see paragraph 2.11), as set out in the Transport Infrastructure Skills Strategy we published earlier this year; we have also established the Strategic Transport Apprenticeship Taskforce to lead on delivery of this strategy
- taking action in response to the review we have commissioned from the Construction Leadership Council and Mark Farmer⁴⁰ (the Farmer Review) of the functioning of the labour market, including skills provision, in the construction sector
- taking action to secure the skilled workforce needed in the nuclear industry by establishing the Nuclear Skills Strategy Group, made up of representatives of major employers, to provide strategic direction on skills infrastructure and training in this area
- taking action to improve basic, general and advanced digital skills in both the existing and future workforce; we are focussing our immediate efforts on areas of critical need, such as cyber skills

⁴⁰ Mark Farmer is Chief Executive Officer of the real estate and construction consultancy Cast.

7.5. Over the next year we will be building on this platform in a number of ways; for example, we will work with Mark Farmer as he completes his review for the Construction Leadership Council. We will review the Construction Industry Training Board (CITB) and the Engineering Construction Industry Training Board (ECITB), and by the spring will come forward with a reformed model for after the current levy period, which is focussed on boosting domestic construction skills and centred on driving up productivity in the construction sector.

7.6. We will work closely with employers over the coming months to develop these ideas further and consider others in more detail so that we can secure the skills our economy needs now, in line with our longer-term strategy.

Chapter 8: Road map for reform and next steps

8.1. We want to be clear about the key milestones and the sequence in which the reforms set out in this Skills Plan will take place, so that everyone can be clear about what to expect, and how to participate and prepare. Above all, this is so that the sector can take the lead wherever possible and can plan based on the lead-in times, the phasing of reforms, and the overall impact and scale of change.

8.2. We will publish the detail of how we will implement these reforms later in the year. This will allow greater clarity and stability. In the meantime, we will seek to build a broad consensus among employers and other parties behind the substantive proposals in this Skills Plan, so that we avoid what has happened far too often before in technical education – changing direction before reforms have had any real chance to succeed.

8.3. The timeline at the end of this chapter sets out the main steps we will take between now and 2020. This timetable works on the basis that, while we are committed to taking forward the reforms quickly, and in particular establishing all 15 technical education routes as soon as possible, we want to recognise that certain lead-in times are required for reform on this scale. We will phase in the reforms progressively and will establish a small number of ‘pathfinder’ routes which can start developing standards this year for first delivery in September 2019, with additional routes becoming available for teaching in phases between 2020 and 2022.

8.4. Where we need to act quickly we will, and there are important steps to be taken soon. Top of the list is setting up the new independent, employer-led body, the Institute for Apprenticeships. The Institute for Apprenticeships will be fully operational by April 2017. As the Sainsbury panel notes, there is real merit in having a single body responsible for technical education with the remit to develop a coherent strategy and bring together employers and education experts to design the standards across all technical education – college-based as well as apprenticeships. We believe that having one autonomous body with the right set of powers, a clear remit and clear accountability is the best way to deliver these reforms and put employers in the driving seat.

8.5. Therefore, we will bring forward legislation in this session of Parliament that will expand the remit of the Institute for Apprenticeships to encompass all technical education. It will become the Institute for Apprenticeships and Technical Education. Until the Institute takes on its broader remit, government will hold the responsibility for setting the standards for the college-based element of the routes.

8.6. It has also been necessary to act swiftly to secure the financial footing of the sector, which is why we started the locally led area review process as soon as we could, in September 2015. The process will be complete in all areas of England by 2017, and we expect all recommendations of the reviews to be implemented from 2019. This will ensure that colleges and other training providers have secured their long-term viability and are well placed to turn their attention to delivering new qualifications from September 2019.

Conclusion and next steps

8.7. We have set out a bold and far-reaching plan for reform, which builds on the progress we have made since 2010. The reforms will reshape our whole system of technical education and we don't underestimate the scale of change involved. But it is right to be ambitious, not only for the sake of national productivity, but for the millions of people whose life chances will improve as a result.

8.8. We are hugely grateful to everyone – of all parties and none – who has worked with us to develop this Skills Plan. We believe it is a coherent framework for reform which gives us the best chance in decades to deliver the kind of high-status, employer-driven technical education system which our global competitors already have, and which has led to their productivity moving so far ahead of ours. We will not let this chance pass us by.

8.9. What is needed now is serious resolve to see this reform plan through: delivering for the long term to secure lasting change. This means learning from the mistakes of the past in this area. Too often, governments have changed their plans before these could take root, disrupting implementation and undermining the commitment of employers, colleges and training providers.

8.10. This time must be different. We want to deliver this plan in partnership with employers and professional bodies, colleges and other training providers, and all those who work as teachers and trainers in the system. We want to engage with them all on the detailed design and implementation of our plans.

8.11. This is an exciting moment. We are determined to be able to look back at 2016 as the point at which we put our system of technical education on the road to becoming truly world-class.

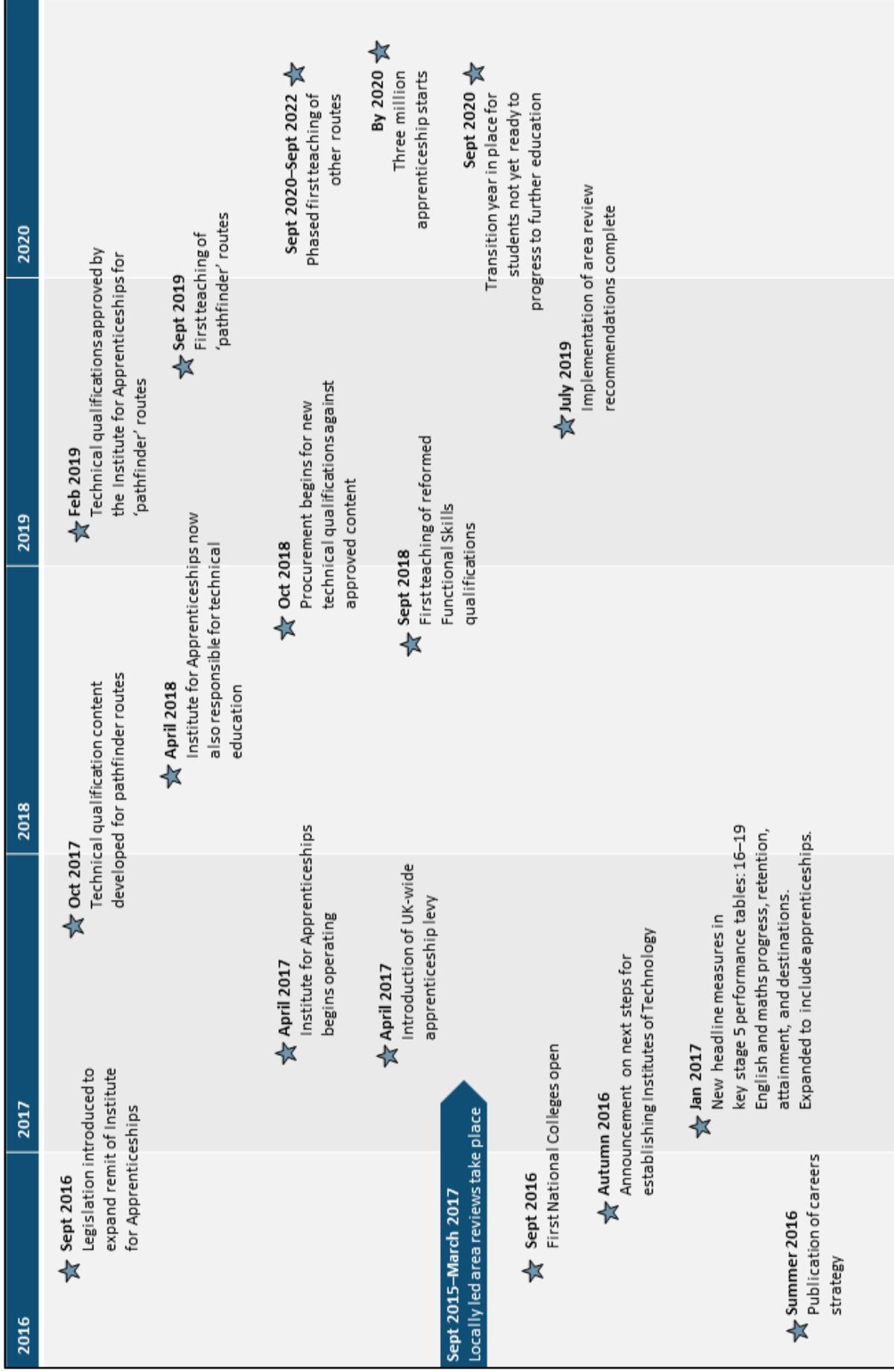


Figure 2: Post-16 skills reform timeline (July 2016–2020)

Annex A: Executive summary of the *Report of the Independent Panel on Technical Education*

Our Panel was established in November 2015 by the Minister for Skills, Nick Boles MP, on behalf of the Secretaries of State for Education and for Business, Innovation and Skills and with strong endorsement from the Prime Minister. We were asked to advise ministers on measures which could improve technical education in England. Since November we have considered best practice in this country and across international systems and consulted hundreds of employers, providers and young people.

Clearly there are serious problems with the existing system. In particular, it is over-complex and fails to provide the skills most needed for the 21st century. By 2020, the UK is set to fall to 28th out of 33 OECD countries in terms of developing intermediate skills, and the size of the post-secondary technical education sector in England is extremely small by international standards. This adversely affects our productivity, where we lag behind competitors like Germany and France by as much as 36 percentage points.

Unless we take urgent action we will be left even further behind. This is not just an economic imperative, but a social one: we need to offer everyone the chance of a lifetime of sustained employment and the opportunity to progress to the highest skills levels. The current system fails on this count as well. Currently over 13,000 qualifications are available for 16–18 year olds, yet these often hold little value for either individuals or employers, although that may not be obvious until too late. At higher levels, too, technical education qualifications have too often become divorced from the occupations they should be preparing individuals for because there have been no, or only weak, requirements that they meet such needs.

Our recommendations call for a fundamental shift. This is a chance to systematically reform technical education for the long term: ensuring individuals can develop the technical knowledge and skills that industry needs through their education and training.

Technical education within the education and training system

The first step is framing and setting up technical education in the right way within the wider education and training system. It needs to work for individuals and employers and it needs to fit coherently with other forms of provision.

The majority of individuals starting on a college-based technical education route will be young people aged 16–18. **We recommend the Government develops a coherent technical education option which develops the technical knowledge and skills required to enter skilled employment, which leads from levels 2/3 to levels 4/5 and beyond, and which is highly valued because it works in the marketplace.**

The technical option should be recognised as having two modes of learning: employment-based (typically an apprenticeship) and college-based:

- (i) Employment-based – this is most commonly delivered via an apprenticeship, usually at level 2 or level 3, and includes a combination of on-the-job learning of skills (in the workplace) and at least 20% off-the-job learning of knowledge (in a college or private training provider).
- (ii) College-based – this is typically a two-year, full-time study programme which should include work placements appropriate to the technical education route and individual student.

While it is necessary for Government to design the overall national system of technical education, employer-designed standards must be put at its heart to ensure it works in the marketplace. A single, common framework of standards should cover both apprenticeships and college-based provision. These standards must be designed to deliver the knowledge, skills and behaviours required to perform successfully in specific occupations, not the narrower job role-focused needs of individual employers.

This technical option – pursued through either mode of learning – needs to be clearly delineated from the academic option, as they are designed for different purposes. But, at the same time, movement between the two must be possible: routes should not cut off movement to undergraduate study at university, and young people who follow A levels may choose to move directly into skilled employment. **We recommend the Government incentivises the development of short, flexible bridging provision to enable individuals to move, in either direction, between the academic and technical education options and to support adults returning to study.**

The system must work for adults as well as young people. Many of the principles that make the system work well for young people will apply, and adults with the necessary prerequisite knowledge and skills should be presented with the same choices as young people. Adults already in skilled employment who want to pursue a new career or progress higher in their chosen career will want to ensure they can join a technical education route at the highest possible point. Adults who have achieved at level 2 (GCSEs or equivalent), but not significantly higher, will be looking to enter technical education at effectively the same point as a typical 16 year old. In all these cases, standards need to be the same, but support and provision should be appropriately tailored and differentiated.

A system of technical education routes

Both employment- and college-based learning need to be closely integrated. Across both options, it is vital that young people and adults have clarity about which programmes to follow in order to target particular careers. **We recommend that a common framework of 15 routes is established which encompasses all employment-based and college-based technical education at levels 2 to 5.** We are proposing routes defined through analysis of labour market information regarding the size and nature of occupations grouped together to reflect shared requirements for occupationally-related skills and knowledge. The proposed routes are set out in Chapter 3.

We recommend that the 15 technical education routes provide training for skilled occupations where there is a substantial requirement for technical knowledge and practical skills. We are clear that occupations which require little or no technical knowledge and skill fall outside the scope of technical education.

Governance and standards

A key aim is that, as far as possible, an individual following a college-based technical education route will be able to develop the same or equivalent technical knowledge, skills and behaviours as someone on a comparable apprenticeship. In achieving that aim, it will be important for a common framework of standards to rest with a single organisation to ensure close integration across college-based and employment-based technical education.

We recommend that the remit of the Institute for Apprenticeships is developed and expanded to encompass all of technical education at levels 2 to 5. The Institute should be responsible for assuring standards and bringing relevant experts together to agree the technical knowledge, practical skills and behaviours to be acquired in each route for both apprenticeships and college-based provision. This will allow the Institute to maintain a single, common framework of technical education standards, qualifications and quality assurance.

We welcome the Government's intention to establish the Institute for Apprenticeships as a body with a large degree of autonomy. However, it is important that government should remain responsible for managing the design of the overall national system. **We recommend that, while it is right for the Institute for Apprenticeships to be delegated wide-ranging autonomy across its operational brief, responsibility for key strategic decisions must be reserved for the Secretary of State. Crucially these decisions must include those relating to the shape of the overall national system of technical education (such as adding new or removing existing routes, or changing the title of a route) if we are to ensure the new system remains coherent and stable over time.**

We want to give employers a much stronger role in setting standards and specifying the knowledge, skills and behaviours an individual needs in order to perform well in an occupation. Specifying the standards for college-based provision within each technical education route is not a role for officials in central government but for professionals working in, or with expert knowledge of, the relevant occupations, supported by experienced education professionals.

We recommend the Institute for Apprenticeships convenes panels of professionals to advise on the knowledge, skills and behaviours to be acquired for the standards in each route and on suitable assessment strategies. These professionals should be appointed in an individual capacity, not as representatives of their employers.

We recommend that Institute for Apprenticeships panel members are remunerated from the public purse. Such remuneration is appropriate because panel members would have to commit a significant amount of effort to their panel duties.

Standards need to stay high quality and current: **we recommend that, at the earliest opportunity, the Institute for Apprenticeships reviews all existing apprenticeship standards to satisfy itself that there is no substantial overlap between standards, and that every standard is occupation- rather than firm-specific and contains sufficient technical content to warrant at least 20% off-the-job training. Standards found to be overlapping or wanting in terms of breadth or technical content should be revised, consolidated or withdrawn.**

The qualifications market

As well as standards which reflect the needs of industry, we need an efficient and effective mechanism for developing qualifications for college-based technical education which meet these standards.

Currently, we have a market-based approach to qualifications, which has led to huge numbers of competing qualifications. In September 2015, there were over 21,000 qualifications on Ofqual's Register of Regulated Qualifications, offered by 158 different awarding organisations. Individuals aiming for a future in plumbing, for example, have to choose between 33 qualifications. This kind of proliferation is a serious issue because it makes the system very confusing for individuals and employers.

Levels 2 and 3

We recommend the Government moves away from the current awarding organisation market model, where qualifications which deliver similar but different outcomes compete with one another, and instead adopts a licensing approach. Any technical education qualification at levels 2 and 3 should be offered and awarded by a single body or consortium, under a licence covering a fixed period of time following an open competition.

Levels 4 and 5

At levels 4 and 5, many of the same issues exist, and onward progression in technical education at age 18 has traditionally been under-provided and poorly articulated. But provision is different at these levels for a number of reasons – for example, the balance of funding sources is very different. Reform of technical education provision at these levels is still needed, and we believe there is real value in simplifying the current landscape. The starting point needs to be designing qualifications against requirements defined by panels of industry professionals – convened by the Institute for Apprenticeships – and directing public subsidy only at qualifications which meet these independently-set standards reflecting industry need.

We recommend the Institute for Apprenticeships maintains a register of approved technical education qualifications at levels 4 and 5 that meet the standards set by its panels of professionals. Only those qualifications appearing on this register should be eligible for public subsidy.

There is also a compelling need to ensure clear progression routes exist from levels 4 and 5 to higher levels of training. **We recommend the Government undertakes further work to examine how to ensure clear progression routes develop from levels 4 and 5 to degree apprenticeships and other higher education at levels 6 and 7. This work should be carried out in the context of existing and proposed structures and funding rules for higher education provision in England.**

Route content

Routes through the best international technical education systems begin with a broad curriculum, then increasingly specialise as an individual progresses to higher levels of knowledge and skills. Building on that approach, **we recommend that every college-based route should begin with a two-year programme suitable for 16–18 year olds (although some individuals may take more or less time to complete it). Each of these two-year programmes should begin with a ‘common core’ which applies to all individuals studying that route and is aligned to apprenticeships.**

We are recommending that after the common core, individuals should specialise to prepare for entry into an occupation or set of occupations. Beyond the age of 18 we also anticipate that many individuals will continue to study technical education at a higher level – full-time, part-time alongside work, or through a higher or degree apprenticeship.

English and maths

English and maths will remain vital skills, and **we recommend that, in addition to any separate requirements as a result of the English and maths funding condition, there is a single set of maths and English ‘exit’ requirements governing college-based technical education and apprenticeships. These should be seen as the minimum level of maths or English which all individuals must achieve ahead of securing technical education certification, as is already the case for apprentices.**

We recognise that current requirements are still low by international standards, and we believe individuals should have higher aspirations. **In the longer term, as the quality of pre- and post-16 maths and English teaching and associated learner outcomes improve, government should raise maths and English requirements to reflect those of higher-performing international technical education systems.**

We would want the Institute for Apprenticeships’ panels of professionals to include relevant maths and English standards where these directly relate to occupational requirements; indeed many occupations will require higher standards. **We recommend the Institute for Apprenticeships encourages its panels of professionals to incorporate additional, occupation-specific maths and English requirements into the standards for each route.**

Work placements

For students on college-based technical education routes, work placements can offer the opportunity to gain practical skills and behaviours which would be more difficult to learn in an educational setting. We believe these students need a radical shift in emphasis from short-duration work experience to structured work placements lasting much longer and with an employer in an industry relevant to the student’s study programme.

In addition to work taster or short-duration work experience opportunities in their first year, every 16–18 year old student following a two-year college-based technical education programme should be entitled to a high-quality, structured work placement. Successful completion of this work placement should be a requirement for full certification at the end of the study programme. As part of the work placement, the student, college and employer should complete a log book – ideally online – that evidences the key tasks that the student has undertaken and what they have learnt.

We recognise that delivering this recommendation in practice is far from trivial. We are suggesting that up to 250,000 17 year olds could require work placements. **We recommend the Government makes additional funding available to colleges to support work placements for technical education students on college-based study programmes. We suggest the most straightforward way of doing this is to increase the base rate per student for each 16–18 year old technical education student who successfully completes a work placement. Initial evidence suggests that such an uplift might need to be around £500 per placement, but further work will be required to set the precise figure.**

Qualifications and certification

It is vital that technical education qualifications and our certification system signal to employers what an individual is able to do. To be effective, certification must have genuine labour market currency – evidenced by employers choosing to employ someone who has the technical education certificate over someone who has not. Equally, individuals must be confident that the certificate they work hard to achieve, and which either they or the public purse pays for, will be recognised wherever they seek work in the future.

We recommend that, for both employment-based and college-based technical education at levels 2 and 3, there should be a single, nationally recognised certificate for each technical education route.

Each certificate is likely to include achievement of a qualification, and we want to reform the qualifications market. **For college-based technical education at levels 2 and 3, we recommend that the system of qualifications is simplified dramatically, with only one tech level qualification approved for each occupation or cluster of occupations.** As discussed earlier, we are recommending that only one awarding organisation (or consortium) should be licensed to offer each of these tech levels.

Government should ensure that employers and individuals are clear about which qualifications have been developed to meet the national technical education standards. A key lever is funding. **We recommend the Government restricts public subsidy for college-based technical education to that leading to qualifications approved by the Institute for Apprenticeships. This includes funding for 16–18 year olds and advanced learner loans available for adults aged 19 and over.**

Qualifications approved under the new system are likely to include multiple forms of assessment, with each tech level looking different depending on the content to be assessed. The Institute for Apprenticeships should work with its panels of professionals to agree how the knowledge, skills and behaviours described in the standards should be assessed. **For college-based technical education we recommend the Institute for Apprenticeships publishes guidance on the use of a range of common assessment strategies, makes assessment expertise available to the panels of professionals, and sets overarching quality criteria to apply to all tech levels.**

Regardless of the forms of assessment used, all qualifications used in college-based technical education should assess both the common core for the relevant route and the specialist / occupation-specific knowledge and skills. The assessment of every technical education qualification should include realistic tasks as well as synoptic assessment which, together, should be designed to test a student's ability to integrate and apply their knowledge and skills. All qualifications should include external assessment to ensure comparability and reliability.

Transition year

All young people should have the opportunity to benefit from technical education – including those with special educational needs and disabilities (SEND) – but in practice we know that there will be some who will not be ready to access technical education when they complete compulsory schooling at age 16.

Individuals who are not ready to access a technical education route at age 16 (or older if their education has been delayed) should be offered a 'transition year' to help them to prepare for further study or employment. The transition year should be flexible and tailored to the student's prior attainment and aspirations.

We recommend the Government commissions additional work into the design and content of a transition year, while ensuring that the key objective for the year remains to provide tailored provision that has a sharp focus on basic skills and on progression. Such work should be undertaken in good time to ensure the new transition year is available to students alongside first teaching of the technical education routes.

Wider systemic requirements

While not strictly in the Panel's remit, there are other criteria which are equally essential if England's technical education system is to be put on a par with the best in the world.

Careers education and guidance will play a vital role in the success of the reformed technical education system. In 2014, the Gatsby Foundation published its report 'Good Career Guidance' which distilled academic literature and good practice overseas into a set of eight benchmarks which identify different dimensions of good careers guidance. **We recommend the Government adopts the Gatsby benchmarks as the basis of a common national approach for careers education and guidance, and sets an expectation for schools and colleges to use the benchmarks when developing their careers provision.**

Government should also support schools and colleges to embed into careers education and guidance, from an early age, details of the new 15 technical education routes, so that young people and their parents understand the range of different occupations available and how to reach them.

We also recommend the National Careers Service reviews how it presents its career information and guidance in the light of our recommendations for reform of the technical education system.

It is important the labour market data used to form the routes provides information relevant to the current and likely future labour market. Currently, in the UK, information about the workforce is managed by the Office for National Statistics (ONS), which uses the Standard Occupation Classification (SOC) for information about what jobs people do. **We recommend that the ONS examines how to make the Standard Occupation Classification (SOC) more relevant for stakeholders – including expanding it to 5-digits. We further recommend that the Government explores how to make more occupational information available to the Institute for Apprenticeships, colleges and individuals by supplementing the nationally collected datasets with information from the American O*NET system and other sources.**

Good technical education requires expert teachers and lecturers. It also requires industry-standard facilities which are costly to develop and maintain. A rationalisation of specialist technical education facilities is required, concentrating them in a smaller number of high-quality, financially-stable institutions which are easily recognisable to both employers and prospective students. **We recommend that, when national and local decisions about the provision and funding of technical education are being taken, consideration is given to restricting funding to colleges and training providers which meet clear criteria of quality, stability and an ability to maintain up-to-date equipment and infrastructure.**

It is vital that reforms are supported by adequate funding. **We recommend the Government reviews what constitutes sufficient funding for technical education to deliver on its aims of meeting employer needs. This work should benchmark expenditure in England against that of other countries and be used to set appropriate funding levels for technical education when the new routes system is introduced.**

Next steps – implementation

Finally, effective implementation is essential to securing successful delivery of our proposals. We outline in Chapter 9 a series of factors which are essential prerequisites for successful implementation of our proposals: securing investment; adopting appropriate timescales which ensure extensive stakeholder engagement but put firm and coherent governance in place quickly; aligning systemic reforms; communicating the changes effectively; and establishing a stable policy environment to allow the reforms to take root. There exists now an opportunity to reform technical education for the long-term. If the key stakeholders – employers, the Government, and colleges and training providers – all commit to these reforms and are willing to play a full role in implementing them, England will finally benefit from a technical education system which can justifiably be called world-class.

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