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Introduction and overview

The new skills required for a post-industrial age

In my recent report, 'The Digital Revolution', I examined the likely impact of the Fourth Industrial Revolution on employment and education. All the evidence points to a fundamental and very rapid change in the labour market as we know it.

New technology is changing our lives faster than ever before. From working remotely across the world to keyhole surgery, this brings innumerable benefits. It also presents the biggest challenge our economy and labour market has ever faced.

 15 million jobs are at risk from automation. Cars and lorries are becoming driverless, algorithms are writing company accounts and 3D printers are building bridges.

• The labour market will look very different after the shock of automation. The skills required in the service sector will increasingly be digital. Human input will focus on non-routine tasks that require imagination and judgement – from performing or culinary arts to installing complex heat pumps. People will increasingly be self-employed and earning from a number of sources through the 'gig economy'.

 Our workforce needs a new set of skills to succeed. This will include expertise in emerging technology from artificial intelligence to virtual reality. It also means a renewed focus on the skills that only humans can bring – empathy, creativity and enterprise.

Changes on this scale have huge implications for the way we educate young people and prepare them for adult life. University Technical Colleges are spearheading the change we need. Each project undertaken by students – from investigating retroviruses to redesigning rail stations – builds their connection to the world of work. Pupils leave not only with core academic subjects but problem solving, practical, digital, business and social skills that give them a head start in employment.

The wider education system must follow this lead. Technical and professional education must not be squeezed out by academic subjects. We must not neglect students' social skills. Employer links are essential at all stages.

In 'The Digital Revolution', I called for action at every level of education from early years and primary to secondary, further and higher education and apprenticeships.

- Primary schools should teach coding using educational apps and have 3D printers.
- Secondary schools should teach Computer Science to half of 16 year olds.
- We should reintroduce Young Apprenticeships from 14.
- We need a strong technical stream for 14-19 year olds.
- Universities should provide part-time funded courses for apprentices to earn a degree.

This paper explores the 14-19 phase of education in more detail and sets out recommendations for short and long term reforms.

I am deeply worried about the government's target for 90% of young people to take the English Baccalaureate – or EBacc for short – consisting of English language, English literature, maths, at least two science GCSEs, a foreign language and either history or geography. This narrow academic curriculum will severely limit access to technical and creative subjects of the very kind needed in our new digital age. We must recognise that young people's interests and ambitions vary widely. By the age of 14, they have decided some subjects are not for them. Foreign languages are a prime example. Prior to 2004, they were a mandatory part of the Key Stage 4 curriculum. At the time, academics estimated that as many as a third of young people were 'disengaged' – they lost interest and motivation; truancy rates were high. That was the reason for introducing flexibility into the KS4 curriculum.

The government's Social Mobility Commission, chaired by former cabinet minister Alan Milburn, spoke of the risk of disengagement from the introduction of the EBacc in their recent 'State of the Nation'¹ report. In short, if we turn back the clock, we will repeat the mistakes of the past.

Looking beyond KS4, I support Lord Sainsbury's ideas for simplifying technical education for young people aged 16-19. They are a big step forward, provided we protect hybrid courses allowing young people to take a mix of technical and academic qualifications matched to their personal interests, talents and ambitions.

That said, all young people have to stay in education or training until they are 18. Why must young people take all of their GCSEs in one go, at the age of 16? Wouldn't it be better to develop a single, coherent 14-19 framework, giving young people the chance to take their exams over a longer period?

Taking all this together, I believe we should broaden the scope of the English Baccalaureate, initially at the age of 16.

In time, however, it should become a leaving diploma which recognises the full range of academic and technical achievement between the ages of 14 and 19 including GCSEs, A-levels and technical qualifications up to level 4 – equivalent to a Higher National Certificate.

These programmes should be delivered in cities and large towns by clusters of mainstream schools and colleges and specialist institutions modelled on University Technical Colleges, Career Colleges and Studio Schools.

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In more rural and coastal parts of the country, we should actively encourage dual enrolment. Students would spend the bulk of their time in their local school, and travel one or two days a week to a college or specialist institution to learn from people with first-hand industrial, creative and commercial experience, using state of the art equipment and facilities not available to mainstream schools.

Finally, we should reintroduce Young Apprenticeships at 14+. Alongside a core academic curriculum, Young

Apprentices would spend time in the work place and on off-job training programmes, starting with one day a week away from school.

After setting out these ideas in more detail, I will explore some of the challenges that they will resolve. I will look back at the history of education in England, explore what we can learn from other countries around the world and examine the government's reform programme – particularly the flawed target for 90% of all young people to take a narrowly academic EBacc.





2 x English Maths Foreign Language A Science History or Geography

1904

2016

The English Baccalaureate

THE WRONG ANSWER FOR THE 21ST CENTURY

Ministers want 90% of young people to take the EBacc, which currently consists of a minimum of seven GCSEs in defined academic subjects. It is nearly the reincarnation of a curriculum first enshrined in legislation over a century ago: the Secondary Regulations 1904 required the teaching of English, maths, science, history, geography, a foreign language, the very same subjects included in the EBacc. The main difference was that back in 1904, 'drawing' was also included in the secondary curriculum.

When launched in 2010, the EBacc allowed parents to find out how many students at local secondary schools took a particular combination of subjects. This, in itself, encouraged an increase in entries for EBacc subjects: the proportion of young people entered for the full EBacc rose from 22% in 2011 to 39% in 2015. I wholeheartedly support rigour. All subjects should be taught well. All students should be stretched. When young people leave education, they should be able to read, write and speak well; to understand and use mathematics; and to understand the range of career options open to them.

However, ministers have decided to go much further: announcing a target for 90% of young people to take a minimum of seven EBacc GCSEs: English language, English literature, mathematics, two science GCSEs, a foreign language and either history or geography.

As more young people are directed towards this narrowly academic curriculum, the risk of disengagement will increase. The symptoms of disengagement start with boredom, but can develop into disruption, disobedience and truancy. The point has already been made by the Social Mobility Commission:

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[T]here is a risk that an inflexible EBacc will disengage some children. There is some evidence from Germany that a more academic curriculum resulted in an increase in disengagement with school and an attendance drop-off. Avoiding this kind of outcome requires a careful balancing act and the Government should be aware of the implications of its recently announced requirement for 90 per cent of children in each school to undertake the EBacc from 2018.²

The risk is very real. As I explain later on, disengagement was the reason why some subjects were dropped from the compulsory Key Stage 4 curriculum in 2004. It is obvious that if entries in EBacc subjects rise, entries in other subjects will fall. **Based on 2015 data, 225,000** young people will have to drop a subject and take a foreign language instead, while 136,000 will have to take either history or geography instead of a subject they prefer. It is far from obvious that this wholesale change in curriculum will benefit future generations: instead, it will take us back to a school curriculum enshrined in legislation over a century ago.

Because the EBacc currently favours selected academic subjects, the impact will be felt most severely by technical and creative subjects such as design and technology (D&T). Table 1 shows the change in D&T entries over the last five years.

Table 1: Change in Design and Technology entries, 2009/10 to 2014/15

D&T subject	2009/10	2014/15	% change
Electronic products	10,957	7,895	-27.9
Food technology	62,104	38,416	-38.1
Graphic products	51,355	31,859	-38.0
Resistant materials	67,402	51,096	-24.2
Systems and control	5,637	2,979	-47.2
Textiles technology	35,835	24,198	-32.5
Other D&T*	33,978	38,207	12.4
Total	267,268	194,650	-27.2

Source: SFR01/2016: GCSE and equivalent results in England 2014/15 (Revised). Department for Education January 2016. * 'Other D&T' includes Graphics, Motor Vehicle Studies, D&T Engineering, D&T Product Design and D&T (not specified)

The Chief Executive of the Design and Technology Association, Richard Green, sums up the importance of his subject in these terms:

Design and technology is the only National Curriculum subject in primary and secondary schools where pupils design and make products that have to <u>work</u> in order to be successful. It is also the only subject in the National Curriculum where practical electronics is taught and where pupils learn to code in order to control the products they have designed and made. It makes use of industry standard 3D solid modelling software and CNC manufacturing, including 3D printing in a growing number of schools. It is a rigorous and challenging subject which teaches design and technical skills and knowledge that are important for all pupils and, in addition, it opens pupils' eyes to careers in the creative industries, engineering and

Table 2: Change in GCSE entries, 2014/15 to 2015/16

manufacturing – the vital, wealth creating sectors of the economy.³

In short, design and technology is every bit as important as modern foreign languages, if not more so.

Yet provisional figures show that D&T is one of a number of non-EBacc subjects falling out of favour as schools switch to a more limited EBacc diet. Table 2 shows that in just one year, entries for EBacc subjects other than languages have risen, while many other subjects have seen a fall.

Concern about the current EBacc is widespread. Nearly 200 organisations, including the Edge Foundation, have campaigned against the 90% target under the umbrella title, 'Bacc for the Future'⁴. An online petition secured over 100,000 signatures and was debated in the House of Commons.

	GCSE entries summer 2016	% change since 2015
EBacc subjects		
Computing*	63,670	84
Additional science	353,490	11
Geography	227,730	8
Science	384,610	8
History	243,520	7
Chemistry	131,660	6
Physics	130,620	5
Biology	133,680	4
Modern foreign languages and classical subjects	320,600	-3
Non-EBacc subjects		
Physical education	119,680	3
Business studies	89,670	-2
Religious studies	327,990	-3
Drama	68,250	-4
Arts and Design subjects	172,550	-5
Design & technology	175,130	-10
Media/film/TV studies	51,410	-15
ICT*	74,770	-27

Source: JCQ, GCSE and Entry Level Certificate Results Summer 2016 (England only). Figures represent provisional Year 10 and Year 11 entries. *Computing is a new GCSE, intended to take the place of ICT: this explains the high rates of change for these two GCSEs.

The English Baccalaureate

STEP 1: REVISE THE EBACC AT 16

We need an EBacc which provides a broad and deep curriculum, prepares young people for progression at 16, and sets them up for adult life.

I recommend broadening the scope of the EBacc as follows:

- English
- Maths
- Two science GCSEs one of which could be computer science
- A humanities GCSE from a list which would include history, geography, religious education and foreign languages
- A creative GCSE from a list which would include art and design, music, dance and drama
- A design and technology GCSE <u>or</u> an approved technical award: examples include the Cambridge National Certificate in Engineering and the Pearson BTEC First Award in Construction and the Built Environment.

This is a stretching curriculum, which provides a solid academic core alongside creative and technical subjects.

It will be within the reach of most young people; and many will have the opportunity to take at least one more option. They might, for example, take triple science, two humanities subjects or additional creative and technical subjects.

As I said in 'The Digital Revolution', computer science is vital to our future economic success. In my view, it should be taken by at least 50% of all young people, either as one of the two science GCSEs in the new EBacc or as an optional eighth subject.

The revised EBacc is wholly consistent with the main measure of school performance at 16, Progress 8. It will provide school-level results for seven of the subjects included in this performance measure. The eighth subject will be selected from any academic, technical or creative subject according to the needs of the young person.

The revised EBacc is broader in conception. It paves the way to higher level learning in academic, creative and technical subjects. It closes no doors. It links to the needs of the economy. Above all, it enables young people to study subjects which support their personal talents and ambitions.

A NEW BACCALAUREATE

Maths

Creative (e.g. Art, <u>Music</u>, Drama)

Two Sciences

(e.g. Chemistry, Computer Science)

English

Humanity (e.g. History, language)

Technical (e.g. DT, BTEC)

STEP 2: CREATE A COHERENT 14-19 PHASE OF EDUCATION

At present, our school system is set up for young people to take all their GCSEs at the end of Year 11. This is a legacy of earlier times, when almost all young people left school at 16 and took jobs, with or without training. Those who stayed at school took A-levels in two or three subjects in preparation for university or white collar work.

Further on, I look more closely at lessons that can be learned from around the world. An essential point is that England is very much an outlier in creating such a high hurdle at 16. Age 16 is the dividing line in only nine European countries. In 17 countries, choices are made at 15; and in 11 countries, they are made around the age of 14⁵.

An independent panel chaired by Lord Sainsbury has recently come forward with an excellent plan for simplifying post-16 technical routes⁶. Instead of a plethora of competing qualifications, students would embark on either an apprenticeship or a full-time programme leading to an advanced technical qualification in one of just 15 broad fields ranging from Agriculture, Environmental and Animal Care to Transport and Logistics. I welcomed David Sainsbury's proposals when they were published, and I am delighted that the government has promised to implement them – resources permitting. However, while simplicity is more than welcome, I have concerns about reinforcing an artificial divide at 16 between the academic and technical routes. England is in a minority of European countries in making young people make such far-reaching choices at 16, and in expecting young people to narrow their curriculum quite so dramatically. I am convinced that many young people would benefit from taking a mixture of technical and academic programmes, in varying proportions according to their talents and ambitions, throughout the period from 14 to 18/19.

In 2004, Sir Mike Tomlinson was asked to chair a working group on 14-19 reform. The group came up with farsighted ideas for an over-arching Diploma at 19.

The Tomlinson Report was comprehensive, coherent and widely supported. However, it suggested subsuming A-levels into the over-arching Diploma and for the then Prime Minister, Tony Blair, this was a step too far. He vetoed the Tomlinson Report and instead, the government started work on a set of occupationallyrelated qualifications – confusingly, also called Diplomas – at Levels 1, 2 and 3 to sit alongside existing qualifications. These proved far too complex and were killed off by the incoming coalition government in 2010.



"In a speech at the start of this year, I said it was a moral imperative as well as an economic one that we embark on a radical change of direction. If that were true 6 months ago, it is even more so now given the events of the past few weeks.

It is fair to say I have ruffled a few ministerial feathers in the last couple of years by saying there should be more opportunity at 14 for pupils to follow a strong technical pathway without abandoning the essential core curriculum.

But it's a view I hold on to firmly."

Sir Michael Wilshaw, Her Majesty's Chief Inspector, Ofsted Speech at the Baker Dearing UTC conference (21 July 2016)

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I am convinced we should revive Mike Tomlinson's ideas for an over-arching diploma which would recognise achievements across the <u>whole</u> 14-19 phase of education. This would make it possible for young people to accumulate passes in EBacc subjects over a longer period. In other words, they could take some GCSEs and technical awards <u>after</u> the age of 16. Equally, they could start an A-level or one of Lord Sainsbury's technical routes at 15. For the most able, it should even be possible to complete a level 4 qualification – equivalent to a Higher National Certificate – before they leave school or college.

A further option would be to start a Young Apprenticeship at 14 or 15. Initially, apprentices would spend one day a week in a workplace and four in school or college, rising to four days at work and one off-job by year 13. A Young Apprenticeship programme was piloted a decade ago: it worked remarkably well, enabling young people to gain valuable workplace experience and complete their academic studies at the same time.

This does not mean throwing everything away and starting again. We would retain GCSEs and A-levels alongside approved technical awards at level 2, and the new advanced technical qualifications recommended by Lord Sainsbury. **The difference would be one of timing.** The summer term of year 11 would no longer be the make-or-break hurdle it has become. Young people would progress at their own speed, giving time for some to race further ahead and others to catch up. And while many students would increasingly focus their energies on either academic or technical studies in years 12 and 13, a growing number would combine them to meet their particular needs and ambitions.

Just as importantly, treating 14-19 as a single, coherent phase of education would leave time for teachers and students to breathe; to develop wider skills and abilities; to experience the world of work; to undertake community and outdoor projects; to become confident in themselves and in their relationships with adults. These, as much as qualifications, are experiences that will fit them for the digital age and for future changes of career.

Turning the EBacc into an over-arching diploma at the end of the 14-19 phase will of course mean changing the way institutional performance is measured and reported. Future league tables should be based on the full EBacc – that is, a combination of GCSEs, A-levels and technical qualifications – and successful progression to further or higher education, work or an apprenticeship.

"It is our view that the status quo is not an option. Nor do we believe that further piecemeal change is desirable. Too many young people leave education lacking basic and personal skills; our vocational provision is too fragmented...

...Our report sets out a clear vision for a unified framework of 14-19 curriculum and qualifications. We want scholarship in subjects to be given room to flourish and we want high quality vocational provision to be available from age 14."

14-19 Curriculum and Qualifications Reform: Final Report of the Working Group on 14-19 Reform (2004)



14-19 Curriculum and Qualifications Reform Final Report of the Working Group on 14-19 Reform

EDGE : 14-19 Education: a new Baccalaureate : 11



How do we deliver this vision?

PRE-14

The starting point for a new 14-19 phase is, of course, everything that has been learned and experienced up to the age of 14. I remain in favour of a broad and balanced National Curriculum, with a special emphasis on literacy and numeracy.

Our goals should be that by age 14 the vast majority of pupils have:

- Reached acceptable standards in the basics of English, mathematics and science;
- Benefited from a broad curriculum, including all of the National Curriculum subjects;
- Learned how to reason, think logically and creatively and to take increasing responsibility for their own learning;
- Started to explore future options through visits to workplaces, colleges and universities, talks from employers and other high-quality careers activities.⁷

This could be delivered by the existing system of primary and secondary schools or by all-through 4-14 schools.

We should also reintroduce standardised tests at 14.

External assessment of English and maths should be based on PISA tests devised and overseen by the Organisation for Economic Co-operation and Development (OECD). Once every three years, over 60 countries take part in the Programme for International Student Assessment. About half a million young people sit tests in reading, mathematics and science. It is acknowledged as the most important worldwide benchmark of school performance. By using PISA tests as a starting point, the government would be able to monitor progress over time and draw valid comparisons with the best education systems in the world.

In addition, schools should report on progress made in other National Curriculum subjects and in the wider skills needed for the next phase of education, such as logic and creativity. These reports would be prepared by

How do we deliver this vision?

schools for parents and carers of each child in Year 9. Some judgements will of course be subjective: for that reason, they should not be published in the form of performance tables but should instead be used to inform choices at 14+.

2016-25: THE PERFECT TIME FOR NEW 14-19 INSTITUTIONS

Over the next decade, demographic change will give us an unusual opportunity to develop new models of specialist schools throughout the country. According to official statistics, the secondary school population rose to 2.76 million in 2016 (the first rise since 2005) and is projected to rise steadily to 3.33 million in 2025⁸. That means we will need 20% more secondary school places in ten years' time.

Instead of building hundreds of 11-19 or 11-19 secondary schools, every part of the country should invest in specialist 14-19 colleges modelled on University Technical Colleges.

UTCs offer a curriculum which blends traditional academic subjects with technical specialisms in science, technology and engineering. Close ties to universities and employers support project-based learning, ensuring that students see the relevance of what they are learning: thanks to employers, learning becomes authentic.

UTC students leave with qualifications and go on to apprenticeships, further and higher education and careers.

Our ambition is that no UTC student joins the NEET group when they leave - not in education, employment or training. Our target is 100%. In July 2015 we had 2,000 leavers: at 16, 99.5% stayed in education, started an apprenticeship or got a job, and at 18, 97% went into further learning or work.

However, success means more than a set of exams in a league table. In addition to a good grounding in core academic subjects - English, maths, science and so on work-ready students at UTCs have:

- Reasoning skills
- The ability to examine and solve problems
- Experience of working in teams
- An ability to make informed decisions
- Social skills particularly the confidence to talk to and work with adults from outside school
- The skills of critical thinking, active listening, presentation and persuasion
- Practical skills: the ability to make and do things for real
- Basic business knowledge

UTCs are not the only specialist 14-19 institutions. One of the longest-established is the BRIT School in Croydon, which I helped set up when I was Secretary of State. It is a state-funded City College for the Technology of the Arts, dedicated to education and technical training for the performing arts, media, art and design and the technologies that make performance possible.





Source: Department for Education SFR25/2016, National pupil projections - future trends in pupil numbers: July 2016

Above left: Pupil

Futures UTC

The BRIT School is not only a stage or fame school. Although most students intend to make a career in the arts, entertainment and communications industries, the school expects all of them to follow full time courses to completion. If students want a life devoted to art, dance, music, musical theatre, radio, television, film or theatre, the BRIT School will nurture their talents and ambitions as part of a combined academic/creative curriculum.

More recently, I have supported a new generation of 14-19 institutions rooted in further education. Each Career College is defined by an employer-led curriculum, with clear pathways to careers in the industry it serves. Young people have access to a core academic curriculum and to industry-led education and training which provides a clear line of sight to work.

Other key features of Career Colleges include:

- The specialist technical subjects are linked to regional and national labour market needs;
- Employers are partners in designing and delivering the curriculum;
- Career College Boards are accountable to the governing body of the parent further education college;
- A minimum of 40% of board members of the Career College are employers in the relevant sector.

The Edge Foundation was also a founder supporter of Studio Schools. Designed for 14-19 year olds of all abilities, each Studio School has around 300 students. They are designed to feel more like a workplace than a school. Working closely with local employers through project-based learning, Studio Schools offer a blend of academic and technical qualifications as well as work placements linked directly to employment opportunities in the local area.

In my vision for 2025, every city and sub-region will have specialist 14-19 colleges working in local clusters alongside mainstream schools and colleges. This will provide direct access to programmes and subjects rooted in the needs of the economy. Based on the recommendations of the Sainsbury panel, there will be fifteen broad technical routes:

- Agriculture, environmental and animal care
- Business and administration
- Catering and hospitality
- Childcare and education
 - Construction
 - Creative and design
 - Digital
 - Engineering and manufacturing
 - Hair and beauty



Left: Pupils produce a radio show at the BRIT School, Croydon

Right: UTC pupils use cutting edge science and engineering equipment

How do we deliver this vision?

- Health and science
- Legal, finance and accounting
- Protective services
- Sales, marketing and procurement
- Social care
- Transport and logistics

This does not mean the end for comprehensive schools. Many 14 year olds do not know what they hope to be when they grow up. Their needs will be met by mainstream schools initially offering the revised EBacc at 16 and, in time, the expanded EBacc by 19.

But one thing is certain: the needs of all young people will only be met through greater collaboration and cooperation at a local level, not through the atomisation of education and competition between institutions. School and college leaders must place the needs of their students ahead of their own institutional self-interest.

For this to happen, there needs to be permeability across institutional boundaries. I mentioned earlier that I wish to see Young Apprenticeships reintroduced at 14 so that young people can spend some days each week at their 'home' school and one or more days in the workplace. More widely, there should be opportunities for dual enrolment, particularly in rural and coastal areas, enabling students to spend some of their week in specialist colleges equipped with state of the art facilities and staffed by people with first-hand industrial, creative and commercial experience. Authenticity is vital to successful technical learning.

Dual enrolment is also important if students are to have the chance to complete level 4 qualifications – Higher National Certificates, for example – by the age of 19.

Finally, the success of our education system needs to be measured on more than just qualifications. As mentioned earlier, league tables will be based on EBacc outcomes at the end of the 14-19 phase, *plus* destination data. A vital measure of success will be 'no NEETs' – not in education, employment or training. **At the end of the 14-19 phase**, every young person should go on to further or higher education, apprenticeship or work. In that way, we will bring youth unemployment rates down to the levels achieved in Switzerland, Austria and the Netherlands – a point I return to later.

These are the things we need to do. But to succeed, we have to understand why they have not been done before in England, and how they have succeeded elsewhere in the world.







How we got it wrong for so long: a historical perspective

FROM THE 19TH CENTURY TO THE SECOND WORLD WAR

In the 19th century, Prince Albert was one of many who called for more and better technical and commercial education of the kind that might prepare boys – and occasionally girls – for employment in manufacturing, the trades and commerce. Higher grade schools were an early example of schools which provided this form of education.

However, they faced great resistance, mainly from men whose own direct experience of education was based on the classical curriculum provided by English public schools. One such individual was Robert Morant, who was educated at Winchester and Oxford before serving as advisor to the King of Siam. In 1902, Morant was appointed Secretary to the Board of Education. He introduced the Secondary Regulations 1904, which required pupils in secondary schools to study English, maths, science, geography, history, a foreign language and drawing. Girls could also study 'practical housewifery' and both boys and girls were expected to undertake some physical exercise and manual work. The effect of the Regulations was to limit full-time secondary education to the kind of academic subjects found in grammar schools.



Above: Robert Morant, Secretary to the Board of Education, 1903-1911

How we got it wrong for so long

Morant did accept the value of *part-time* technical education for children who left school at the age of 12, and from 1905, the Board of Education awarded grants to Technical Institutes so they could provide day classes for children aged 13 to 16. This led – in time, and very slowly – to the re-emergence of full-time technical programmes for young people aged 13 and over. In 1913, there were 37 Junior Technical Schools across England and Wales, situated within existing Technical Colleges and Institutes established to train and educate adult workers. By 1937, the number of Junior Technical Schools had risen to 248, some of which occupied their own premises.⁹

By then, of course, Morant had long gone and there was a growing appetite for technical and vocational education. The Spens Report¹⁰, published by HMSO in 1938, made recommendations for "Secondary Education with Special Reference to Grammar Schools and Technical High Schools". Spens deplored the "marked disinclination to deviate to any considerable extent from the main lines of the traditional grammar school curriculum", and recommended that a new generation of technical schools should be developed alongside the country's grammar schools.

This was the backdrop to war-time plans for the general reform of education which culminated in the great Education Act of 1944. One point was settled as early as 1941: the age of transfer from primary to secondary education. The head of the Board of Education's Technical Branch, H B Wallis, strongly supported the Spens Report's recommendation to expand technical education. Based on his knowledge of Junior Technical Schools, Wallis argued that young people should have a common education up to the age of 13. Before that age, pupils' aptitudes and interests were unclear; by that age, they had a clearer idea of where their strengths and ambitions lay.

However, Wallis faced opposition from his opposite number in the Secondary Branch on the grounds that grammar schools selected their pupils at 11. In March 1941, the Permanent Secretary, Maurice Holmes, came down in favour of transfer at 11, stating that "transfer at 13+ would take many years to achieve, whereas transfer at 11+ could be secured within five"¹¹.

The 1944 Act led to the raising of the school leaving age, first to 15 and later to 16. The result has been an assumption that secondary education ends with a battery of exams at 16. After that, young people must remain in education or training until they are 18, but their curriculum becomes narrower and more specialised. And sadly, 'technical' and 'vocational' forms of education are almost invariably regarded as the last resort for young people who cannot do well through 'academic' study.



Above left and right: Typical classroom scenes in the early part of the twentieth century

A BRIEF HISTORY OF THE KEY STAGE 4 CURRICULUM

This was my inheritance when – to my great joy – Margaret Thatcher appointed me Secretary of State for Education. I saw a clear need to introduce England's first National Curriculum and tests at the end of each Key Stage. It was essential if we were to improve consistency and drive up standards.

With that aim very much in mind, all Key Stage 4 students (age 14-16) were required to study the core subjects of English, mathematics and science, and the foundation subjects of art, geography, history, modern foreign languages, music, physical education and technology. Religious education was also a legal requirement.

With hindsight, I now wish I had ended the National Curriculum at 14. We had assumed that our curriculum would meet the needs of all 14-16 year olds. Experience proved that we had been too prescriptive.

Sir Ron Dearing was asked to review the National Curriculum in 1993. His report was published the following year¹². In relation to Key Stage 4, he set out the case for change clearly and succinctly:

By age 14, students are developing particular interests and preferences and the curriculum needs to reflect this diversity. Those who are least well served by the current arrangements may, to varying degrees and *in different ways, give limited commitment and make poor progress. As a nation, we cannot afford this loss.*

Our aim, therefore, must be to develop an approach to the curriculum in Key Stage 4 which seeks to develop the talents of all students; which recognises the multifaceted nature of talent; and which accepts that, as a nation, we have for too long had too limited a concept of what constitutes worthwhile achievement.

Let me repeat: "By age 14, students are developing particular interests and preferences and the curriculum needs to reflect this diversity." I could not agree more.

Dearing went on to recommend that:

The mandatory [KS4] requirements should be limited to English, mathematics and single science, physical education and short courses in a modern foreign language and technology.

A General National Vocational Qualification (GNVQ) option should be developed for use at Key Stage 4 as part of a wider curriculum.

These changes went in entirely the right direction, but did not quell criticisms of an over-crowded KS4 curriculum. In addition, there was a growing consensus that young people should remain in education or training until 18 or 19; people started to talk about a 14-19 phase of education.

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How we got it wrong for so long

In 2001, the Labour government set out fresh ideas in 'Schools: Achieving Success', in full support of a 14-19 phase of education:¹³

The secondary curriculum, particularly post-14, can seem crowded and to some pupils lacking in interest and relevance. It is arguable that there is too little flexibility in the curriculum to meet and bring out individual aptitudes, abilities and preferences.

A well-balanced 14-19 phase is crucial if we are to achieve our objective of well-motivated young people playing their full part in society and in the economy.

We will make sure that there is sufficient flexibility to allow students to pursue their talents and aspirations while maintaining a strong focus on the basics. A core of subjects will remain compulsory, but there will be greater scope for variation in the rest of the curriculum.

A consultation paper¹⁴ developed these ideas further:

The 14–19 phase of learning should be marked by a clear beginning, middle and end. The phase should start with a review of achievement towards the end of Key Stage 3. This will provisionally identify longer-term career and learning goals, including the achievement of the Matriculation Diploma by age 19. It will inform the choice of options for 14–16 while not ruling out a subsequent

"We have estimated the whole 'disengaged' group to be at a maximum around one third of a cohort."

Alison Steedman and Sheila Stoney, 2003

change of goals. The outcome of the review might be recorded in an individual learning plan to form the basis for monitoring and review throughout the 14–19 phase. GCSEs and equivalent qualifications should become a progress check around the midpoint of the phase.

Next, Mike Tomlinson was asked to chair a working group and to develop plans for 14-19 reform, including the Matriculation Diploma. The working group heard that a large proportion of young people were 'disengaged' – that is, either actively or passively, they were switched off by the standard curriculum. The point was explored in a seminar co-ordinated and reported by Hilary Steedman and Sheila Stoney¹⁵:

At one end of the spectrum we are concerned with students of good but underused potential whose interests are increasingly focused on the world outside school. These students can respond well when offered the chance to study to a demanding level (Level 2) in a vocational subject area – for example, engineering, health, hospitality studies. At the other end of the spectrum we are concerned with students who attend school infrequently if at all and whose basic skills are inadequate for the practical tasks of day to day living and employment. In between, we may identify a group that attends school fairly regularly but makes little effort to achieve and views the curriculum and school culture negatively.

We have estimated the whole 'disengaged' group to be at a maximum around one third of a cohort, at a minimum one fifth.

There was a clear sense that we could not go on with a system which failed to meet the needs and interests of such a large number of young people.

Mike Tomlinson's working group set out clear and coherent ideas for an over-arching Diploma. Sadly, and despite widespread support from the teaching profession and employers, Tony Blair vetoed their plans because he was unwilling to risk middle class wrath over the apparent risk to A-levels. **The Tomlinson Report became one of** education's great missed opportunities.

Meanwhile, the government had already been testing plans to increase flexibility in the KS4 curriculum. A key aim was to enable students to start vocationally-related courses at 14. Ofsted reported that pilot programmes were very effective:

More appropriate curricula, particularly the provision of vocational courses, re-engaged many students. Behaviour and attendance improved and the courses raised the achievement of particular groups of students, particularly those at risk of disaffection or disengagement.

Teachers reported increased motivation and attendance where students studied new courses. The students were very positive about changes to the curriculum. Those in schools which had adapted their curriculum generally made better progress than similar cohorts in previous years, and in many cases than they had initially been expected to.

Over half of the schools visited attributed improved attendance to the availability of more appropriate courses for students ... Most schools had evidence that students who were at risk of becoming disaffected in Year 9 were enjoying learning more in Key Stage 4 because they could study subjects they felt were relevant and had more varied ways of learning. When inspectors spoke with students, they were able to confirm schools' views that, for many, being able to study things that interested them, and in a way that helped them learn and improved their self-confidence, motivated them to attend more regularly. Some parents spoke movingly of how schools had helped change their children's approach to learning and taking control of their lives.¹⁶

By vetoing the Tomlinson Report, Tony Blair left the door wide open for a free-for-all in vocational courses. There was a rapid proliferation of qualifications which were given an inflated value in school performance tables. Schools used them to improve their league table rankings, rather than for the clear benefit of their students. This discredited and devalued almost all school-based vocational programmes, leading to the Wolf Report of 2011¹⁷ and the purging of hundreds of low-quality qualifications from school performance tables.

Alison Wolf's analysis clearly indicated that schools, aided and abetted by awarding organisations, misused the freedoms granted them after 2004. The system cried out for reform, and the government took decisive action.

However, the Wolf Report did not explain why flexibilities were introduced in the first place, and overlooked the benefits reported when Ofsted reviewed the early pilot programmes.

This has played into the hands of those who wish to see a return to a solidly academic Key Stage 4 curriculum, making it easier for them to claim the moral high ground – particularly in debates about the English Baccalaureate.

THE ENGLISH BACCALAUREATE

The EBacc was launched by the former Secretary of State, Michael Gove, as a way of monitoring and reporting the number of students who take a particular set of GCSEs: English, maths, two science GCSEs, a foreign language and either history or geography. These 'facilitating subjects' are particularly favoured by Russell Group universities. However, many young people do not take this combination. This is especially true of young people from deprived backgrounds and neighbourhoods, whose failure to take the full set of EBacc subjects – it is claimed – prevents them from progressing to the most prestigious universities.

Michael Gove did not make the EBacc mandatory for all young people. Instead, he hoped it would influence school and subject choices in other, more subtle ways.

First, performance tables were revised to report the percentage of students taking the EBacc. Parents were able to take this into account when choosing secondary schools for their children.

Second, the government introduced a new performance measure for schools. Previously, schools were judged on the proportion of students achieving A* to C grades in any five GCSEs, including in English and maths. From 2016, this has been replaced by 'Progress 8', which – as

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explained earlier – assesses the progress made by each school's students between the end of Key Stage 2 and the end of Key Stage 4. Progress 8 is based on achievement in five EBacc GCSEs including English and maths, plus any three GCSEs or approved technical qualifications. In other words, it recognises the value of both the EBacc *and* a broad, flexible curriculum for 14-16 year olds.

The new government came to office in 2015 committed to making the full EBacc mandatory for all students. Further, the EBacc was revised to include a minimum of seven GCSEs: English language, English literature, maths, two science GCSEs, a foreign language and either history or geography.

Ministers rapidly accepted that this would be out of reach for some students, particularly young people with significant learning disabilities. They reduced the target to 90% and issued a consultation paper on the ways and means of implementing it.

Speaking in a Westminster Hall debate in July 2016¹⁸, the Schools Minister, Nick Gibb, said:

The purpose of the EBacc is to ensure that all young people take the combination of GCSEs that are taken

by young people in the most privileged schools in our country and in the best and most high-achieving schools in the state sector.

The proportion of pupils entering the EBacc combination has risen from just 22% in 2011 to 39% in 2015 ... [However] pupils who are eligible for free school meals are almost half as likely to be entered for the EBacc as those who are not. It cannot be right that where a child goes to school or the wealth of their parents determines whether they study the core subjects that will help them succeed in higher education and the job market.

On average, pupils in state-funded schools enter nine GCSEs and equivalent qualifications, rising to 10 for more able pupils. For many pupils, the EBacc will mean taking seven GCSEs and, for those taking triple science, it will mean taking eight. That means there will continue to be room to study other subjects.

The argument appears to be that if it works for 'the most privileged schools in our country', it will work for everyone.

In fact, it doesn't now; and it won't in the future.



Let's start with the high flyers. The government's policy rests on the argument that Russell Group universities prefer candidates with passes in facilitating subjects. Actually, Russell Group universities accept passes in many subjects, not just those included in the EBacc. Yet by focusing on a narrow set of subjects, we automatically devalue all others. We also give a clear signal that bright, capable young people should actively avoid technical subjects and pathways, including apprenticeships. Many young people are now paying the price, having taken on enormous student loans only to find they cannot get well-paid, graduate-level employment. I wrote about this in 'The Skills Mismatch'.¹⁹

At the other end of the spectrum, some young people lag behind their peers throughout their time at school. I wish it were not so. But it is an uncomfortable if unpalatable truth; and we do no-one any favours by pretending otherwise.

For the purposes of tracking student progress, young people are placed in one of three groups – low, middle and high attainment – based on tests taken at the end of Key Stage 2.

The first point to note about the data in Table 3 is the correlation between test results at the end of KS2 and results at the end of KS4. In the low attainment group, one student in fifteen went on to achieve at least five GCSEs at grades A* to C, including English and maths. In the high attainment group, more than 90% achieved that level.

Second, less than 5 per cent of students in the low attainment group entered the full EBacc, and their pass rate was very low indeed. **This is what I mean by the 'unpalatable truth'. Young people of low attainment at age 11 achieve below average results at 16, despite the best endeavours of their teachers. No magic wand, no silver bullet, will radically change this, and a narrowly academic EBacc will almost certainly make it worse.**

One reason is that students in the low attainment group take exams in 6.9 subjects, including one non-GCSE – in most cases, a technical qualification. In order to hit the government's 90% EBacc target, around 40,000 students in this group would have to take seven academic GCSEs in future²⁰, which will take up all their available time. They will be denied the opportunity to take <u>any</u> other subjects, and their performance will probably get worse, not better.

Both the middle and high attainment groups will have some flexibility to take non-EBacc subjects. However, some will take three science GCSEs rather than two, limiting their options to just one or two non-EBacc subjects.

Either way, around one third of high attaining students will have to change some subject options in order to take the full EBacc, along with two thirds of middle attainment students.

It is true that students on free school meals are on average less likely to take the EBacc than students who aren't. However, this reflects a wider issue: students on

Results for 553,469 pupils, split by attainment group	Low attainment	Middle attainment	High attainment	Cohort average
% of cohort	17.2%	48.4%	34.5%	
Average no of exam entries (all types)	6.9	9.2	10.4	9.2
Average no of entries (GCSE only)	5.8	8.4	9.8	8.1
% achieving A* to C inc E&M	6.7%	51.9%	91.1%	66.2%
% entering the full EBacc	4.8%	31.9%	66.1%	38.7%
% achieving A* to C in the full EBacc	0.6%	13.1%	52.3%	24.2%

Table 3: exam entries and achievement at the end of Key Stage 4, based on attainment at the end of KeyStage 2, 2015

Source: Department for Education KS4 performance tables 2015.



Figure 2: change in Design and Technology entries, 2009/10 to 2014/15

free school meals are under-represented in the high attainment group, and over-represented in the low attainment group. In other words, there is a correlation between affluence and academic success.

Again, I wish it were not so. But wishful thinking will not solve the problems of deprivation, and nor will the EBacc.

Earlier, I looked at the implications of the EBacc for creative and technical subjects.

Between 2010 and 2015, entries for GCSE history rose by 15.5%, and for geography by 25%. This is to be expected, given the overall rise in the number of students entered for the full EBacc. To make room for this increase, schools limited access to other subjects, including Design and Technology.

Looking ahead, we know that in 2015, 38.7% of the cohort entered the EBacc. We also know that only around half of all students took a foreign language GCSE. Had the 90% EBacc target been achieved last year, an extra 225,000 students would have taken a foreign language GCSE instead of something else. In addition, 136,000 students would have had to drop a subject to take either history or geography. In other words, there would have been at least 361,000 fewer entries in non-EBacc subjects. This would have affected not just non-EBacc GCSEs but also high-quality technical gualifications such as BTECs and OCR Nationals.

Yet there is no evidence that the benefits will outweigh the harm that this will cause, particularly – but not exclusively – for students in the low and middle attainment groups. As presently framed, the EBacc is not based on evidence; still less, consensus.

Foreign languages

As a nation, we have a poor attitude towards foreign languages. We assume that if the rest of the world speaks our language, we do not have to bother with theirs.

In some contexts, that puts us at a real disadvantage. Whether doing business abroad, taking part in international research projects or providing humanitarian relief for refugees, we need people who can speak other languages.

The government's answer is to require 90% of young people to take a foreign language GCSE. Sadly, this won't work.

Earlier, I rehearsed some of the reasons for introducing flexibility into Key Stage 4. Researchers found that



anywhere between one fifth and one third of young people were 'disengaged' from the curriculum.

Results in foreign language GCSEs provide clear evidence of this. In 1999, 83% of all 16 year olds took a foreign language GCSE; that means 17% didn't, even though the subject was a compulsory part of the Key Stage 4 curriculum. Among girls who took a foreign language GCSE, less than half (47%) achieved a grade A*–C. Boys did far worse: just 31% achieved A* to C grades²¹. You can force young people to take foreign languages, but you cannot force them to pass their exams. If they lack motivation, they will not learn. If they do not learn, they will not pass.

There are two ways we can improve our performance in this area. First, we can teach languages well in primary schools. This is what other countries do: it is the secret of their

success. It will take time to reap the full benefits, but in the long run we will see a natural increase in linguistic abilities.

Second, we must encourage more young people to study languages at A-level and beyond.

Young people in England took 304,000 foreign language GCSEs in 2016. As **illustrated in table 4**, the number of A-level entries is less than a tenth of that figure, and falling. To put it another way, for every ten students who take foreign language GCSEs, only one carries on to A-level. Indeed, foreign languages represent less than 4% of all A level entries.

Compelling young people to take a foreign language GCSE will not move us in the right direction. Instead, we should focus on reversing the decline in A-level entries.

Table 4: A-level foreign language entries, 2012/13 and 2015/16 (provisional)

	2013	2016 (provisional)	Change
French	10,270	8,710	-15.2%
German	3,990	3,610	-9.5%
Spanish	6,950	7,750	+11.5%
Other modern languages	8,840	8,690	-1.7%
Total	30,050	28,760	-4.4%

Source: JCQ, A, AS and AEA Results, Summer 2016.



Learning from world leaders

Above: Pupils at UTC Reading use cutting edge robotic kits

A EUROPEAN PERSPECTIVE

England is one of a handful of countries where 16 is the strict dividing line between lower and upper secondary education. Elsewhere in Europe, choices are usually made earlier.

In Austria, for example, most students follow a common curriculum up to the age of 14, when they choose an upper secondary path based on their individual talents, ambitions and abilities. Only one in five attend academic secondary schools: they are substantially out-numbered by those who choose technical schools such as Fachshule and Höhere Technische Lehranstalt (HTLs), which have technical specialisms linked to the needs of the local and national economy.

In addition to basic subjects such as maths, German and English, students gain experience and knowledge of their chosen sector of industry. On average, Fachschule students spend about two days a week in workshops and complete their course in four years. HTL students follow a five-year programme comprising –

- General education, including classes in German, English, religion, geography, history, politics and sport (25%)
- Science and maths (14%)
- Classroom-based technical education (31%)
- Workshop skills and experience (16%)
- Design (10%)
- Business studies (4%)

In their final year, HTL students work in small teams on an extended project linked to their technical subject and local employers. They present their finished projects to a large audience and to a group of examiners.

Around half of all HTL students progress to higher education, either immediately or after a period of employment. Higher education includes both 'traditional' universities and 'Fachhochschulen' – Universities of Applied Science – which were launched in 1994.

A recent European Commission report on Austria says that, "The country's vocational education and training system is well adapted to the labour market, a factor



Case study: AUSTRIA

At the combined Fachshule and HTL in Fulpmes, near Innsbruck, the focus is on engineering. Classroom tuition is supported by practical experience in well-equipped workshops and laboratories, where students use a range of equipment for manufacturing and measuring metal and plastic components. They also learn to use IT, especially in the fields of computer numerical control machining (CNC) and computer aided design (CAD). that has contributed to it having one of the lowest youth unemployment rates in the EU."²² In the third quarter of 2015, 11.2% of Austrian 15-24 year olds were unemployed, compared with 15.2% in the UK and 19.9% in the European Union as a whole²³.

This is a vitally important point. Countries where a high proportion of students choose technical and vocational paths often have lower rates of youth unemployment, and vice versa. There are exceptions to this rule of thumb, Figure 3 tells its own story.



Figure 3: Enrolments in vocational pathways and youth unemployment in selected countries, 2013



% 15–19s in vocational upper secondary pathways (2013)

% youth unemplyoment, age 20–24 (2013)

Sources: 1. % 15-19s in vocational upper secondary pathways: OECD (2015), Education at a Glance 2015: OECD Indicators, OECD Publishing 2. % youth unemployment, age 20-24: Eurostat, youth unemployment by sex, age and educational attainment level, accessed via http://ec.europa.eu/ eurostat/en/web/ products-datasets/-/ YTH_EMPL_090 30 July 2016.

Both data sets are for 2013.

Learning from world leaders



Left, above and right: High quality technical and professional education in HTLs



A NORTH AMERICAN PERSPECTIVE

The value of technical and vocational pathways has never been in doubt in German-speaking countries or, more widely, in most of northern Europe and Scandinavia. The English-speaking world, on the other hand, has largely held on to the kind of general academic education defined in Robert Morant's Secondary Regulations of 1904.

However, this orthodoxy is coming under increasing challenge.

In New York City, Mayor Bloomberg actively encouraged failing high schools to close. In their place, he created a network of career and technical education (CTE) high schools, each specialising in a key sector of the city's economy. Thanks to their proven success, there are now 51 CTE schools across Bronx, Brooklyn, Manhattan, Queens and Staten Island –equivalent to one in eight of the city's high schools. Specialisms range from engineering and automotive to green careers and health science.

Alongside technical studies, students at CTE high schools work towards the standard high school diploma, which is awarded at 18+ and covers English, maths, science, global history and geography, and US history and government. It's not an easy option.

New York is not unique in expanding career and technical education. A recent report by the Thomas Fordham Institute looked at CTE in the state of Arkansas, and specifically at students who took three or more



Case study: NEW YORK CITY

The Food and Finance High School (FFHS) is on Manhattan's east side, in a school building once so notorious that there was a permanent police presence on site.

Today, FFHS is massively over-subscribed. Students queue up to attend in the knowledge that they will work on cutting-edge projects from aquaculture in the basement to hydroponic crop production on the roof, gain practical experience with leading chefs and restaurateurs and work with students and staff from Cornell University.

All culinary teachers at FFHS are professional chefs and bakers. The school benefits from extensive links with local businesses which provide work placements, guest lectures, paid internships for seniors (Grade 12 students) and support the school in many other ways.

CTE courses in high school – a group they called 'concentrators'. The outcomes were impressive:

Concentrators are 21 percentage points more likely to graduate from high school than otherwise identical students (with similar demographics, eighth grade test scores, and number of CTE courses taken) who do not concentrate. In the year after high school, concentrators are 0.9 percentage points more likely to be employed (with average quarterly wages that are \$45 higher), and 1.3 percentage points more likely to be enrolled in a two-year college, than similar non-concentrators.²⁴

Across the border in Canada, provincial governments have broadened the high school curriculum and encouraged links with the business community. In British Columbia, for example, the Dogwood Diploma is based on 48 mandatory credits and 28 units from elective courses, taken over the final three years at high school (age 15-18). Students take a solid core of English (or French, if that is their native tongue), maths, social studies, science and PE, plus a careers programme and either a fine arts or applied skills subject.

The 28 elective credits can be in academic or technical subjects, or a combination of both. Many students choose to take elective courses grouped into 'Focus Areas', including:

- Business and Applied Business
- Fine Arts, Design, and Media
- Fitness and Recreation
- Health and Human Services
- Liberal Arts and Humanities
- Science and Applied Science
- Tourism, Hospitality, and Foods
- Trades and Technology

According to the government of British Columbia, "Research has shown that students who focus their studies in areas that interest them are more engaged in school and more likely to graduate."²⁵





Left, above and right: Canadian high schools offer tuition in technical subjects from boat building to soldering



Conclusion

A key point about these examples from the USA and Canada is that core and technical subjects are taken side by side, over a period of several years. The same is true in Austria.

In England, the Government has set out plans for students to follow a largely academic curriculum in Key Stage 4, and to choose between academic and technical routes at 16. That will narrow options at 14, and reinforce the academic/vocational divide at 16.

As I said in 'The Digital Revolution', part of the problem is that we associate open-ended possibilities only with a general education. The basic assumption is that a knowledge-based curriculum keeps options open, while a technical curriculum narrows them. This is simply not true.

We have to prepare young people for jobs that do not exist yet, and for flexible ways of working. This means looking afresh at our school curriculum and building in the right mix of knowledge, skills, practice and teamwork so that young people are ready for whatever the Fourth Industrial Revolution throws their way.

We must of course make sure that all young people leave school with qualifications; but they must also develop personal attributes such as confidence in communicating with adults, flexibility, adaptability and above all, creativity.

That is why we need to broaden the EBacc at 16 and, in time, develop it into an over-arching diploma at 19. It is also why we need a diverse landscape of specialist schools and colleges, matched to the needs of young people and the future economy.

These proposals have been strongly influenced by the Tomlinson Report. It is therefore fitting to close with a quotation from the consultation document which led directly to the appointment of Mike Tomlinson's working group. Our proposals for a new 14–19 phase start from the notion that it should be marked by a clear beginning, middle and end:

- the 14–19 phase should begin with a review of progress between the pupil, his or her parents or carers and teachers in the school;
- the core of the phase contains the learning leading to qualifications; other learning undertaken for personal development, for example in citizenship; and wider activities, often outside the school or college environment;
- the end of the phase would be marked by a new overarching award which would recognise young people's achievements.²⁶

These were the right ideas in 2004. They are the right ideas today.

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Kenneth Baker was a Conservative MP from 1968-1997.

He was the first Minister for Information Technology and was responsible for introducing computers into schools; Local Government Minister; Environment Secretary; Secretary of State for Education and Science, introducing the National Curriculum, Grant Maintained Schools, City Technology Colleges and student loans; and Home Secretary. He left the Government after the 1992 election, was appointed a Companion of Honour, and became a member of the House of Lords in 1997.

Lord Baker is Chairman of the Edge Foundation, the education charity dedicated to raising the status of technical and professional education. He is also Chairman of the Baker Dearing Educational Trust, which is spearheading the development of University Technical Colleges. He is the author of several books, including '14-18: A New Vision for Secondary Education', which was published by Bloomsbury in 2013.



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