Re-assessing the future

Part 1 – how to move beyond GCSEs

Tom Richmond

About the author

Tom Richmond is the director of the EDSK think tank.

Tom has spent over 15 years in the world of education. He began his career teaching A-level Psychology at one of the country's leading state schools, having gained a BSc in Psychology from the University of Birmingham and an MSc in Child Development from the Institute of Education in London.

After three years in teaching, he moved into politics to work on policy development and research across the education, skills and welfare sector. This included roles at think tanks such as Policy Exchange and the Social Market Foundation, Pearson, G4S and working for an MP.

He subsequently spent two years as an advisor to ministers at the Department for Education, first under Michael Gove and then Nicky Morgan, where he helped to design and deliver new policies as well as improve existing ones. After leaving the Department for Education, he spent two years teaching at a Sixth Form College before moving back into education policy and research, first at the Reform think tank and then at Policy Exchange.

He has also written extensively for publications such as the TES and Schools Week and has appeared on numerous media outlets, including the BBC News Channel, Sky News, BBC Radio 4 Today, BBC Radio 5 Live, LBC and TalkRADIO.

Acknowledgements

EDSK would like to express our thanks to the Edge Foundation because without their financial support this report would not have been produced.

The author would like to thank the four external peer reviewers of this paper who kindly provided their feedback and comments during the drafting process. Thanks also to those who commented on specific sections of the report or provided expert input for one or more of the recommendations.

The views expressed in the report are attributable to the author and do not necessarily reflect those of EDSK's advisory board or supporters. Any errors remain the responsibility of the author.

About EDSK

EDSK is an independent, impartial think tank.

Our mission is to design new and better ways of helping learners of all ages succeed, particularly those from disadvantaged backgrounds.

We aim to achieve this by conducting research on topics across the education and skills landscape and then producing evidence-based recommendations for how the system needs to change, both now and in the future.

Our research covers primary schools, secondary schools, colleges, apprenticeships, technical education and universities. Whichever topic or policy area we are investigating, our priority is always to produce better outcomes for learners while also ensuring that the greatest support is given to the most disadvantaged members of society.

We work closely with a range of individuals and organisations to ensure that our research reflects a wide range of evidence on any given issue. EDSK retains copyright and full editorial control over our research, irrespective of how it is funded.

EDSK is a not-for-profit think tank registered in England and Wales.
(Company Registration No. 11795717)

Find out more at www.edsk.org

Contents

Executive Summary

The impact of COVID-19 on school examinations in 2020 and 2021 has been devastating, yet it would be wrong to assume that all was well before the coronavirus took hold. Examinations at the age of 16 – historically, the school leaving age – have been a central feature of secondary education in England for decades. First came O-levels in 1951 (accompanied by CSEs from the early 1960s), followed by GCSEs in 1988. Although the role of GCSEs as a school-leaving qualification has essentially remained unchanged, the raising of the 'participation age' from 16 to 18 has prompted serious questions about whether academic-style examinations for all students at age 16 are still fit-for-purpose. In addition, critics of GCSEs complain about the burdens they place on pupils and teachers, their distorting effect on the curriculum and the punitive effects of the accountability system that accompanies GCSEs. The extraordinary events of the last year have also highlighted the fragility of any assessment system that relies so heavily on high-stakes terminal exams.

In contrast, supporters of GCSE frequently draw attention to their emphasis on a 'broad and balanced' range of subjects, their rigorous curricula and their function as a valid and recognised currency among different stakeholders. The challenge, then, is to redesign the assessment and accountability system so that it carries forward the strengths of GCSEs while addressing the concerns noted above. This report is the first of two publications from EDSK that aim to plot a new course for state-funded secondary education in England. Both reports start from the premise that for any set of reforms to succeed, they must deliver the following four objectives for secondary education as a whole:

1. **RIGOUR**: all qualifications and training routes available in secondary schools and colleges must represent a high-quality programme of learning that prepares young people for the next stage in their educational journey.
2. **COHERENCE**: the system of qualifications and associated assessments must be easy to understand and easy to navigate because it is based on a single coherent narrative and a single set of terminology.
3. **VALUE:** all the programmes on offer to young people must be valued by all stakeholders, even if they serve different purposes for different learners.
4. **ASPIRATION**: the secondary education system must encourage young people to progress in their learning and be aspirational about what they can achieve.

This first report analyses the early stages of secondary education in England, which presently culminates in GCSE examinations at age 16 for the vast majority of state school pupils.

The role of GCSEs in secondary education

As pupils in England are required to be in some form of education and training up to the age of 18, it is reasonable to conclude that the current approach of setting 'school-leaving qualifications' at age 16 is no longer required. The decision to maintain a full suite of national examinations at 16 also puts England at odds with most other developed nations. In fact, England is one of only six countries in the OECD that sets national/regional examinations at this age, as most choose instead to award a 'certificate' based mainly on internal assessments that allows pupils to progress to the next phase of secondary education.

The introduction of two accountability measures in recent years – the 'EBacc' and 'Progress 8' – has also resulted in academic GCSE subjects being explicitly prioritised over other subjects such as art, music and design & technology, leading to alarming falls in exam entries in these subjects. Research from the Department for Education (DfE) has shown that schools which have seen notable rises in exam entries for academic GCSEs appear to have achieved this by significantly downgrading non-academic subjects to the point where they were sometimes being taught after school or as optional activities. On a related note, the average number of subjects studied by pupils at the end of Key Stage 4 (age 16) has fallen from 11.2 subjects in 2010/11 to just 7.7 subjects in 2019, so one might assume that the demands facing students may have become more manageable over time. On the contrary, pupils can easily find themselves taking over 30 hours of written GCSE examinations at the end of Year 11 – a staggering total given that age 16 is no longer the point at which pupils finish their schooling.

The cost to schools of supporting this overbearing exam system is considerable. Secondary schools face an estimated annual bill of almost £200 million to deliver the current examination system at age 16. This is equivalent to around £52,500 per school and over £100,000 a year for some of the largest secondary schools. What's more, the way in which GCSE exam papers are marked remains controversial. The use of 'comparable outcomes' essentially means that a pre-determined proportion of pupils must be awarded the lowest and highest grades irrespective of how well they perform in absolute terms. This fails to promote an aspirational mindset as one-third of pupils are destined to 'fail' each year. The GCSE resits policy compounds this issue because labelling pupils as having 'failed' English and / or maths at 16, only to insist that they should study these subjects beyond age 16, is counterintuitive at best.

The National Curriculum and statutory tests

Far from promoting a 'broad and balanced curriculum', the current approach to Key Stage 3 (ages 11-14) and Key Stage 4 (ages 14-16) often pulls in the opposite direction. Although the National Curriculum requires pupils to study a wide range of subjects up to age 14, there is

only a minimal set of requirements for teaching different subjects after this point. In fact, state-funded schools only have to offer one subject from each of the arts, design and technology, humanities and modern foreign languages in Key Stage 4. Worse still, academies (state-funded schools that operate outside of local authority control) are not required to follow the National Curriculum at all, meaning that there is not even a requirement to offer the full range of subjects at Key Stage 3 – let alone Key Stage 4. This has become a major point of controversy in recent months, with the chief executives of several large academy chains becoming embroiled in a fierce debate with Ofsted about whether it is appropriate to shorten Key Stage 3 down to two years to make room for delivering GCSEs over three years.

Beneath this public dispute lies a fundamental question about the curriculum in the first phase of secondary education. On the one hand, the DfE has explicitly given academies the freedom to design and implement their own curriculum. On the other hand, Ofsted appears to be using the National Curriculum as an informal benchmark for judging whether an academy's curriculum has enough 'breadth' and 'ambition'. There is evidently little agreement among stakeholders on which subjects should be provided across both Key Stage 3 and 4, and for how long. When academies can choose to ignore the National Curriculum altogether, this conflict between competing visions for Key Stage 3 was almost inevitable. The demise of SATs at the end of Key Stage 3, which were scrapped in 2008 following a collapse in the administration of these tests, has undoubtedly contributed to this fractious debate because an external assessment at age 14 would have strongly discouraged schools from narrowing their curriculum at the beginning of secondary school.

On a related note, the five-year wait from SATs at age 11 to GCSEs at age 16 is now the longest gap between statutory tests throughout primary and secondary education in England. Moreover, almost 60 per cent of OECD countries offer different curricula and programmes to those aged 15 or under – including high-performing countries such as Estonia, Japan, Korea, Slovenia and the Netherlands. In short, greater clarity is needed on the structure and purpose of this initial phase of secondary school so that all stakeholders and institutions are aligned around a single set of objectives for these vital years in every pupil's educational journey.

Vocational qualifications as alternatives to GCSEs

GCSEs were originally intended to sit alongside a broad range of vocational qualifications that appealed to pupils with different interests and aptitudes. In 2010, only a third of students took GCSEs without any vocational qualifications alongside them, illustrating the appeal of non-academic courses. Following the 2010 General Election, thousands of vocational qualifications were stripped out of school performance tables due to concerns that schools were taking advantage of the fact that some of these qualifications counted for as much as four or even six GCSEs. Eliminating such 'gaming' behaviour is a legitimate goal for

government policy, yet the crackdown on vocational qualifications has gone way beyond merely correcting these imbalances. In 2018, only 5 per cent of Key Stage 4 exam entries were 'Technical Awards' (approved vocational qualifications for 14 to 16-year-olds), demonstrating how GCSEs utterly dominate the 14-16 curriculum in state-funded secondary education.

Despite these meagre exam entry figures, the impact that Technical Awards have on pupils should not be underestimated. For pupils in state-funded mainstream schools, taking a Technical Award was associated with a 23 per cent reduction in unauthorised absences, a 10 per cent reduction in fixed period exclusions and a 62 per cent reduction in permanent exclusions. What's more, this pattern was repeated for pupils with Special Educational Needs. These outcomes suggest that, far from being a distraction, entry-level vocational qualifications can have a substantial positive impact on the pupils who select them.

Although numerous high-profile reviews in recent decades have decried the loss of vocational qualifications from the curriculum, the unequivocal preference for academic subjects within the current government's EBacc and Progress 8 accountability measures demonstrates how little value is now attached to vocational courses relative to their academic counterparts. If a government makes it clear that the best path to 'success' is to study a narrow range of academic subjects for the first five years of secondary school, there is little hope that vocational subjects will be given the space to thrive by school leadership teams across the country.

The institutions delivering secondary education

The most common type of secondary school in England is an 11-18 institution, with more schools of this kind than all the other schools and colleges combined. Nonetheless, there is a wide variety of institutions that any given pupil might end up attending. Depending on their local area, pupils can switch between secondary schools and colleges at either age 13, 14 or 16, yet the accountability measures for secondary schools continue to span the whole 11-16 age range. As a result, pupils might only attend 14-16 institutions such as University Technical Colleges (UTCs) for two years leading up to their GCSEs, yet UTCs are held to account for their pupils' progress over the previous five years. As a result, the performance of 14-16 institutions can be made to look significantly weaker. Performance measures such as Progress 8 also do not fully recognise the technical and vocational elements of the curriculum in these institutions or the qualifications that the employer sponsors of UTCs want pupils to study.

In 2016, Sir Michael Wilshaw, then Chief Inspector at Ofsted, stated that "for far too long, we have let down millions of young people and allowed their talents to go to waste because we have not given the non-academic pathway into employment the priority it deserves." He was also aware of the risk that UTCs in particular might "become a dumping ground for the difficult or disaffected". Even though Michael Gove was not a fan of UTCs either during or

after his stint as Education Secretary, he accepted in 2017 that "students whose poor academic prospects might hamper league table performance have been directed towards UTCs and higher-performing contemporaries have been warned off". In response, the DfE required local authorities to write to parents of 13-year-old children to let them know about local UTCs. In addition, the 'Baker Clause' now requires every state school to give training providers and colleges access to pupils aged 8 to 13 to discuss technical education and apprenticeships. Unfortunately, the evidence thus far suggests that many schools are continuing to ignore their legal responsibilities, meaning that thousands of pupils could be missing out on attending institutions that better match their aspirations and talents. The current admissions system is evidently not able to cope with the variation in starting ages among different institutions or the conflicts of interest that the admissions system generates at present.

Conclusion

The unprecedented events in recent months have created a rare opportunity to consider how we can do things better in future. Hundreds of thousands of 16-year-olds sitting up to 30 hours of onerous written examinations when they still have at least two more years of education or training ahead of them is plainly disproportionate and unnecessary. Meanwhile, the raising of the participation age to 18 demanded a recalibration of the assessment and accountability system in secondary schools and colleges that has simply never happened. Furthermore, some pupils are no longer receiving a broad and balanced curriculum in the run-up to their GCSEs, yet successive governments have refused to acknowledge or address this issue. The reticence of recent governments to discuss the movement of pupils between institutions at age 14 or promote vocational qualifications such as Technical Awards also serve to illustrate how GCSEs distort the education system well beyond the confines of the examination hall.

This report shows how, by 2025, we can move beyond the reliance on high-stakes GCSEs by replacing them with new low-stakes (yet equally challenging) digital assessments at age 15 that act as a 'staging post' for pupils on their journey towards the end of secondary education at age 18. This would be in stark contrast to the way that GCSEs are used to sort pupils and schools into successes and failures every year. Not only will these new digital assessments create a more effective and proportionate assessment system, the full set of recommendations in this report meet all four objectives for a high-performing secondary system – **rigour**, **coherence**, **value** and **aspiration** – in a way that the current system cannot match. Because low-stakes digital assessments can be delivered more flexibly in response to external shocks, this move towards digital assessments will also help to 'COVID-proof' our future school system. GCSEs have been an important part of our educational landscape for over three decades, but the time has come to consign them to the history books as we seek to build a secondary education system that helps all pupils progress as far as possible by the age of 18.

Recommendations

A new foundation for secondary education in England

- **RECOMMENDATION 1**: The state-funded secondary education system in England should be formally divided into two phases: Lower Secondary (ages 11-15) and Upper Secondary (15-18). This will underpin a single approach to assessment, accountability, pupil admissions and the curriculum throughout the secondary system.

The content and structure of Lower Secondary education (ages 11 to 15)

- **RECOMMENDATION 2**: Existing National Curriculum subject entitlements up to the age of 14 will be extended to age 15. The National Curriculum will also be made compulsory for all schools delivering the Lower Secondary phase of education, including academies.

- **RECOMMENDATION 3**: GCSEs should be scrapped and replaced by national computer-based assessments in almost all National Curriculum subjects at age 15. The assessments will be completed online in the summer term of Year 10 and will typically last for 1.5-2 hours per subject. Subjects with a significant practical element (e.g. Art, PE) will continue to use practical assessments alongside the new computer-based tests.

- **RECOMMENDATION 4**: The new computer-based assessments will test pupils' understanding of essential knowledge, key concepts and terminology. To achieve this, the content for each assessment will be derived from the National Curriculum for Key Stage 3 plus the first year of the current GCSE specifications in each subject. This will ensure the new assessments are as rigorous and respected as GCSEs.

- **RECOMMENDATION 5**: Having completed their computer-based assessments and practical work, each student will be awarded a 'Lower Secondary Certificate' (LSC) that documents the results they have achieved across all National Curriculum subjects. The LSC will show each student's overall score as well as their percentile rank i.e. the proportion of other pupils who scored lower than them. No letter- or number-based grades will be issued and the current system of 'comparable outcomes' will be scrapped.

A new accountability system for Lower Secondary education

- **RECOMMENDATION 6**: The new accountability system for Lower Secondary education will consist of two main measures for each school, which are calculated as three-year rolling averages:
  (i) **Progress** - the average progress made by learners between test phases (from SATs at age 11 to the new Lower Secondary tests at age 15) relative to the progress made by learners in other schools with similar SAT results
  (ii) **Attainment** - the overall average score achieved by learners across all Lower Secondary tests as well as their average scores in each subject

  Both measures will be reported on a scale using one of the following descriptors: 'well above average', 'above average', 'average', 'below average' or 'well below average'.

- **RECOMMENDATION 7**: National standards in Lower Secondary education will be measured through 'sample testing' i.e. inserting a selection of identical questions into the different computer-based subject tests every year to monitor standards over time independently of the performance of pupils and schools.

Reconfiguring the institutions delivering secondary education

- **RECOMMENDATION 8**: Lower Secondary education from the ages of 11 to 15 will be delivered by schools. Existing 11-16 schools will either reduce their provision by one year group or expand to become 11-18 institutions that encompass both the Lower Secondary and Upper Secondary phases. Schools that currently go up to age 13 ('middle schools') will either reduce their provision by two year groups or expand upwards to age 15 to provide the full Lower Secondary phase.

- **RECOMMENDATION 9**: Pupils will choose which type of Upper Secondary provision (e.g. school, college or apprenticeship) that they wish to pursue after age 15 based on the results of their Lower Secondary subject tests as well as advice given to them and their parents by teachers and careers advisors.

This first report from EDSK on reforming assessment and accountability focuses on the initial stages of secondary education in England. Having configured the new Lower Secondary system up to the age of 15 in this report, the next publication from EDSK (scheduled for Spring 2021) will consider how to design and implement an Upper Secondary system from the ages of 15 to 18 that builds on the same objectives and principles described in this report. This will include in-depth discussions of existing academic and vocational qualifications as well as the institutions that deliver them.

1. Introduction

> *"It would be difficult to exaggerate the importance of the question of examinations in secondary schools, or the complexity of their present organisation. The influence of these examinations, especially of those which are external, appears to penetrate and pervade the whole life of the schools. At the same time the intricacy of the system under which they are conducted is simply bewildering. …there is no unifying force at work, and the combined effect of the energies of many different and independent bodies has been to produce what one of our witnesses not unreasonably described as a state of chaos."* [1]

While such a description may feel all too poignant in the present day, it is in fact the opening paragraph of a report on secondary school examinations by a committee under the stewardship of former MP Arthur Herbert Dyke Acland in 1911 (the 'Acland Report'). At the time, the situation was indeed chaotic. Many universities as well as professional and commercial bodies were producing and conducting their own examinations for pupils of different ages to determine their suitability for certain courses and occupations. Worse still, these organisations did not ordinarily recognise each other's examinations as 'equivalent' and often refused to accept them as sufficient preparation for their own institution. The Acland Report was particularly concerned about "pupils who, at the age of 15 or 16, are not certain what they intend to do when they have left school, and who need a certificate of general education which will be accepted …as admitting them to the majority of careers which they are at all likely to follow."[2]

The Acland Report had "no hesitation …in stating our conviction that external examinations are not only necessary but desirable in secondary schools",[3] although it demanded that the "existing multiplicity of external examinations (including those of universities, and professional and other bodies) …should be reduced by concerted action."[4] More importantly, the Report recommended that all external examinations should be guided by the principle that "every secondary school should provide, for pupils up to an average age of 16, a sound basis of liberal education, which, though not necessarily of the same type in all schools, would serve as a foundation upon which varieties of further education could be based."[5] Thus, the 'Secondary School Certificate Examination' was rolled out in 1917,[6] which mainly consisted of written tests in various subject but also included practical and oral elements where appropriate.[7]

This set of assessments remained in place until 1951, when the General Certificate of Education (GCE) was introduced. Like their predecessors, GCE exams were normally taken at age 16 (Ordinary Level; O-level) and 18 (Advanced Level; A-level). However, unlike the

Secondary School Certificate Examination, which required pupils to pass a group of subjects in order to 'matriculate', the GCE system allowed them to sit and pass individual subjects.[8] That said, the GCE was explicitly aimed at high-ability pupils in private and grammar schools, meaning that most pupils at secondary moderns left school without any recognised qualifications. In response, the Certificate of Secondary Education (CSE) was introduced in 1965 to provide a set of qualifications that were distinct from O-Levels by covering both academic and vocational subjects, incorporating 'controlled assessment' alongside examinations and having exam questions that were typically shorter and more structured than O-Level papers.[9]

In 1986, O-levels and CSEs were swept away by the creation of the General Certificate of Secondary Education (GCSE) - a qualification for pupils at age 16 who could then leave school or progress onto A-levels or equivalent courses. The list of subjects offered as GCSEs was very broad to begin with, reflecting the variety of disciplines covered by O-levels and CSEs. Since then, there have been substantial changes to the structure, content, grading and format of GCSEs – some of which remain controversial to this day. In addition, a plethora of vocational qualifications available in the early stages of secondary education over the last 30 years, such as GNVQs, have also come and gone, creating yet more instability and uncertainty.

Some aspects of the current examination system in England are undeniably commendable, particularly the rigorous curricula used in many academic subjects and the robustness of the regulatory system (the fact that we even have a national examination regulator sets us apart from many other countries). Even so, the raising of the 'participation age' from 16 to 18 has prompted reasonable questions about whether the notion of a large number of academic-style examinations for all students at age 16 is still fit-for-purpose. Moreover, the devastating outbreak of the COVID-19 coronavirus, which led to the cancellation of all examinations in the summer of 2020 (and potentially 2021) as well as causing widespread disruption to the education system in this country and abroad, has emphasised the risks inherent in delivering academic and vocational courses that rely heavily on high-stakes terminal assessments. Other criticisms of GCSEs, which were being voiced well before COVID-19 arrived, include their impact on pupils' mental health,[10] their distorting effect on the school curriculum[11] and their impact on the perceived value of non-academic qualifications delivered in schools and colleges.[12]

This new report is the first of two publications from EDSK that aim to plot a new course for state-funded secondary education in England. Neither report will set out to revisit all the mistakes made over the past century of reforms. Instead, they will each try to learn from previous attempts to reform and ultimately improve the assessment and accountability system for state schools and colleges across England.

To this end, both of these EDSK reports will start from the premise that, for any set of reforms to succeed, they must deliver the following four objectives for secondary education as a whole:

1. **RIGOUR**: all qualifications and training routes available in secondary schools and colleges must represent a high-quality programme of learning that prepares young people for the next stage in their educational journey.
2. **COHERENCE**: the system of qualifications and associated assessments must be easy to understand and easy to navigate because it is based on a single coherent narrative and a single set of terminology.
3. **VALUE:** all the programmes on offer to young people must be valued by all stakeholders, even if they serve different purposes for different learners.
4. **ASPIRATION**: the secondary education system must encourage young people to progress in their learning and be aspirational about what they can achieve.

This first report concentrates on the early stages of secondary education in England, which presently culminates in GCSE examinations at age 16 for the vast majority of state school pupils alongside a much smaller number of vocational qualifications. These initial years of secondary education will be discussed from both a national and international perspective to understand which elements of our assessment and accountability system seem to be working well and conversely which areas may need reform. Following this discussion, a new model for assessment and accountability will be outlined that meets the above principles and addresses some of the most significant weaknesses of the present system leading up to GCSE examinations. It is therefore hoped that this report makes a useful contribution to the debate over the future of GCSEs in England.

2. The role of GCSEs in secondary education

Supporters of GCSEs continue to point to their academic rigour and the recognition that this qualification brand still commands among many stakeholders. Nevertheless, critics of GCSEs have become increasingly vocal. Lord Kenneth Baker, who oversaw the introduction of GCSEs in 1988, said recently that "they are redundant and I think therefore GCSEs should be quietly put to sleep."[13] The Conservative MP Robert Halfon, chair of the Education Select Committee, has called on the government to "get rid of GCSEs, which seem to me pointless" and Geoff Barton, leader of the Association of School and College Leaders agreed that "GCSEs are a product of a different era when many young people left education at the age of 16, but this is no longer the case".[14] This chapter will assess the background to, and merit of, these observations to assess whether GCSEs retain the value that their supporters claim.

The purpose of GCSEs

In the Acland Report over 100 years ago, the motivation behind their call for the introduction of a national system of examinations at age 16 was clear. In a world where universities and professional bodies were often producing their own examinations, the Acland Report noted that "there is practically no profession or University which demands that its entrance examination shall be passed when the candidate is below 16 years of age [so] no injury, therefore, is done, as a rule, to candidates for such careers by forbidding them to take external examinations at an earlier date."[15] In this context, it made sense to conduct the examinations at age 16 because this was the point at which pupils were supposed to move onto further education or employment. That said, the Report recognised that one of the biggest problems with this proposal was that it "would at present exclude large numbers of secondary school pupils altogether from its influence, and that large numbers of pupils would leave school without obtaining the School Certificate that would be based on this examination."[16] At the time, of the pupils who remained at school in England after reaching the age of 12, 63 per cent of boys and 45 of girls left school before they became 16 – and this doesn't even include those who had dropped out before the age of 12. These concerns triggered the first of several increases in the school leaving age in the following decades:[17]

- *The Education Act 1918* enforced compulsory education from the ages of 5 to 14
- *The Education Act 1944* raised the school leaving age to 15
- In 1972, the school leaving age was raised to 16
- *The Education and Skills Act 2008* (which came into force in 2013) initially required participation in some form of education or training until the school year in which a pupil turned 17, followed by the year a pupil turned 18 in 2015.

As it stands, the "participation age" for pupils in England is 18-year-olds, although technically the 'school leaving age' remains at 16 because a pupil can, for example, start an apprenticeship at this age (which still counts as 'education or training'). Critics of GCSEs repeatedly cite the participation age of 18 as a key reason why GCSEs are no longer needed. The logic espoused by the Acland Report that led to national examinations at age 16 was based on this age being the point at which universities and professions selected their preferred candidates, but the raising of the participation age has lifted this point to age 18 in the modern era.

Seeing as pupils in England are required to be in some form of education and training up to the age of 18, it is reasonable to conclude that the current approach of setting 'school-leaving qualifications' at age 16 is no longer required within our education system. What's more, the decision to maintain a full suite of national examinations at age 16 puts England at odds with most other developed nations. Two-thirds of OECD countries issue a 'certificate' on successful completion of the first phase of secondary education. However, England is one of only six countries in the OECD to set national/regional examinations at this point, as most award a 'certificate' based mainly on internal assessments of pupils that allows them to progress to the next phase of secondary education.[18] Meanwhile, in countries such as Australia, Canada, New Zealand and the United States, teachers steer pupils towards the most suitable type of secondary education without any certificate or formal testing.[19]

The academic focus of GCSEs

As noted in the introduction, GCSEs were effectively a merger of their two predecessor qualifications: O-levels (aimed at high-achieving academically minded pupils) and CSEs (a broad mixture of academic and vocational courses aimed at lower achievers). Despite initially catering for a wide range of abilities and aptitudes, the role of GCSEs in the modern era has evidently rejected this approach. Although GCSEs have existed for over 30 years, the accountability system around them has changed dramatically during this time. In 2010, a new measure of secondary schools in England – the English Baccalaureate (EBacc) – was introduced. Despite its confusing name, the EBacc is a performance measure that records the percentage of pupils who enter and pass their GCSEs in all the following subjects:

- English language and English literature;
- Mathematics;
- Either history or geography;
- A language (modern or ancient); and
- At least two of the three single sciences (biology, chemistry, computer science and physics) or 'Combined Science'

In 2016, another new headline measure of secondary schools in England was also devised – 'Progress 8'. This is calculated based on pupils' performance in three groups ('buckets') of qualifications: first, English and maths; second, any three remaining EBacc subjects (e.g. history, chemistry, French); and third, any other subject (either EBacc or non-EBacc, including vocational qualifications).

In July 2019, EDSK published an analysis of the EBacc measure that described the main trends in GCSE entries for different subjects over the past decade. The results were striking. The subjects included within the EBacc had mostly thrived. The single sciences (+38%) and both history (+23%) and geography (+42%) had seen substantial increases in GCSE entries, although languages had fared less well. Crucially, the contrast between EBacc subjects and non-EBacc subjects could hardly have been greater. Art & Design (-6%), Dance (-46%), Drama (-29%), Media/Film/TV Studies (-35%), Music (-24%) and the six Design & Technology subjects (-65%) had all seen a decline in entries.[20] Analysis by FFT Education Datalab, a group of academics and statisticians, showed that in 2019 entries in EBacc subjects were up 3.8% to 4,132,068 while entries in non-EBacc subjects were down 8.7% to less than a million – 943,607. There is now a roughly 80:20 split between EBacc subjects and non-EBacc subjects, compared to a split of about 70:30 just five years ago.[21]

These figures suggest that, far from echoing the mixture of academic and vocational courses previously offered by O-levels and CSEs, the current conception of GCSEs (as interpreted through the lens of performance measures) is that academic subjects are the only ones deemed advantageous for this age group. Although other subjects are not excluded altogether, policymakers have purposely relegated them to second-class status. To illustrate the impact of this approach, a recent study commissioned by the Department for Education (DfE) showed that schools which have seen notable rises in EBacc entry rates since 2010 appear to have achieved this by significantly downgrading non-EBacc subjects to the point where they were sometimes being taught after school or as optional activities.[22]

There is no empirical evidence to support the notion that, say, GCSE Geography is necessarily more valuable for pupils across the country than GCSE Music or Design & Technology. In addition, the decision by the Russell Group of universities to withdraw their list of 'facilitating subjects' for university entry – which has always been one of the key justifications used by the DfE to support the list of subjects included within the EBacc – shows why the focus on a specific group of academic subjects is not beneficial (and may be detrimental) to pupils. Given these developments, along with the rapid demise of creative and artistic subjects, it is fair to conclude that the current approach to GCSEs values academic pursuits above all else, and this has undoubtedly curtailed the choice of subjects available to pupils.

The demands placed on students and schools

One of the consequences of GCSE's previous role as a school-leaving qualification is that students are required to complete a significant number of examination papers at the end of Year 11. In 2010/11, students across schools and colleges in England were entered for an average of 11.2 subjects at the end of Key Stage 4 (either GCSEs or equivalent qualifications). Due to the subsequent changes to performance measures, notably the introduction of the EBacc and Progress 8 as well as the removal of many 'equivalent' qualifications from performance tables, the average number of entries had dropped to 8.8 by 2015 and fell again to 7.7 by 2019.[23]

Given the reduction in subjects at the age of 16, one might assume that the demands facing students as they enter the examination window at the end of Year 11 may have become more manageable. On the contrary, students still face numerous exam papers within a window of just a few weeks. Using the data from one of the main examination boards in England, Table 1 (overleaf) shows the range of assessments that a single student would face in a normal year for some of the most common GCSE subjects. If a pupil chose the minimum number of subjects required to fill all three 'buckets' within the Progress 8 performance measure, they could easily find themselves taking over 30 hours of examinations at the end of Year 11 – a staggering total given that age 16 is no longer the point at which pupils finish their education.

Subjects such as art operate differently given their emphasis on a portfolio of work from pupils' studies as well as an externally set assignment that is completed over 10 hours of supervised time. Similarly, Physical Education has a non-exam assessment of a practical performance that counts for 40 per cent of a pupil's overall GCSE mark. Nevertheless, swapping out an academic subject for a more applied course such as art could still leave a student facing around 26-27 hours of examinations over just a few weeks at the age of 16.

Aside from their burden on students, GCSEs also create a significant financial burden on schools. In the last two years, the price of each GCSE entry has risen by over 5 per cent, reaching £39.31 in 2019.[24] There were 542,568 pupils in state-funded secondary schools at the end of Key Stage 4 in 2019[25] and each pupil was entered for an average of 7.5 subjects.[26] This suggests that there were approximately 4.1 million exam entries for Year 11 pupils in 2019, which produces a total cost to schools of £160 million for delivering GCSEs. This staggering sum is probably an underestimate as it does not consider 'late fees' or fees for resitting exams. It also excludes typical entry fees of £60 for the 355,870 Tech Awards delivered in 2018/19[27] – thereby costing schools an additional £21 million on top of GCSEs. It is therefore estimated that secondary schools face an annual bill of approximately £181 million to deliver the current examination system at age 16. This is equivalent to around £52,500 per school but rises to over £100,000 a year for some of the schools with the largest GCSE cohorts.

Table 1: The list of assessments taken by Year 11 pupils completing 'academic' GCSE subjects

GCSE SUBJECTS	ASSESSMENTS	TOTAL EXAMINATION TIME
English Language	**Paper 1**: 1 hour 45 minutes **Paper 2**: 1 hour 45 minutes	3.5 hours
English Literature	**Paper 1**: 1 hour 45 minutes **Paper 2**: 2 hours 15 minutes	4 hours
Maths	**Paper 1**: 1 hour 30 minutes **Paper 2**: 1 hour 30 minutes **Paper 3**: 1 hour 30 minutes	4.5 hours
Biology	**Paper 1**: 1 hour 45 minutes **Paper 2**: 1 hour 45 minutes	3.5 hours
Chemistry	**Paper 1**: 1 hour 45 minutes **Paper 2**: 1 hour 45 minutes	3.5 hours
Physics	**Paper 1**: 1 hour 45 minutes **Paper 2**: 1 hour 45 minutes	3.5 hours
History	**Paper 1**: 2 hours **Paper 2**: 2 hours	4 hours
Geography	**Paper 1**: 1 hour 30 minutes **Paper 2**: 1 hour 30 minutes **Paper 3**: 1 hour 15 minutes	4.25 hours
French	**Paper 1 (Listening)**: 35 minutes **Paper 2 (Speaking)**: 10-12 minutes **Paper 3 (Reading)**: 1 hour **Paper 4 (Writing)**: 1 hour 15 minutes	3 hours

The calculation of GCSE grades

Leaving aside the question of how many GCSEs a pupil is entered for, there are several issues with the way that GCSE results are calculated and presented. For example, GCSEs use a system known as 'comparable outcomes', which essentially means that the percentage of pupils achieving each GCSE grade from 1 (lowest) to 9 (highest) is determined by looking at what cohorts with similar Key Stage 2 results achieved in previous years. As a result, a pre-determined proportion of students must therefore be awarded the lowest grades irrespective of how well they perform in absolute terms. This means that around one-third of pupils must be awarded Grades 1 to 3 each year – leading to accusations that GCSEs create a 'forgotten

third' because those pupils "who fall below this bar pay a high price in terms of reduced prospects in progression to further and higher education and to careers."[28]

The grades awarded to pupils are also questionable for several reasons. The use of number-based grades obscures the wide range of performance within each grade. For example, in 2019 around 16 per cent of pupils were awarded a Grade 4 (a 'Standard Pass') and another 16 per cent were awarded a Grade 5 (a 'Strong Pass'). In addition, there are large discrepancies between GCSE subjects in terms of the likely level of agreement between markers. The examination regulator Ofqual has noted that, on average, the probability that an exam marker will award the same grade as the Principal Examiner in maths is 96 per cent, whereas for history, English language and English literature, the average figures are around 55 to 60 per cent.[29] This lends further weight to the suggestion that the current approach of 'failing' a third of pupils each year and handing out 'grades' to pupils are of questionable value.

3. The National Curriculum and statutory tests

The 1988 *Education Reform Act* was arguably the most important piece of legislation related to schools since 1944. Alongside the establishment of grant-maintained schools and city technology colleges as well as the abolition of the Inner London Education Authority, the Act created the 'National Curriculum' (NC) that would apply to maintained schools in England. The NC comprised of a combination of 'core' subjects – English, mathematics and science – and 'foundation' subjects – history, geography, technology, music, art and physical education plus a modern foreign language in secondary schools.[30] For each subject, the NC set out:

- "the knowledge, skills and understanding which pupils of different abilities and maturities are expected to have by the end of each key stage;
- "the matters, skills and processes which are required to be taught to pupils of different abilities and maturities during each key stage; and
- "the arrangements for assessing pupils at or near the end of each key stage for the purpose of ascertaining what they have achieved in relation to the attainment targets for that stage" [31]

The 'key stages' defined in the Act to accompany the new NC and its associated targets and assessments were as follows:

- Key stage 1 (ages 5-7)
- Key stage 2 (ages 8-11)
- Key stage 3 (ages 12-14)
- Key stage 4 (ages 15-16)

The establishment of Key Stage 4 thus provided all the curriculum time necessary to deliver two-year GCSE courses, at least in theory.

What counts as a 'broad and balanced curriculum'?

It is often said by supporters of GCSEs that one of their most important features is that they guarantee pupils receive a 'broad and balanced' curriculum up to age 16. The 1988 *Education Reform Act* had also insisted that the curriculum for a maintained school needed to be "a balanced and broadly based curriculum which (a) promotes the spiritual, moral, cultural, mental and physical development of pupils at the school and of society; and (b) prepares such pupils for the opportunities, responsibilities and experiences of adult life."[32] However, it has always been unclear how such judgements would be made. For example, the figures on the

EBacc noted in the previous chapter raise obvious questions about the notion of pupils receiving a 'broad and balanced' curriculum during their GCSE years. As shown in Table 2, the current NC only has a minimal set of requirements for teaching different subjects at Key Stage 4, unlike the initial years of secondary education at Key Stage 3.

Table 2: The structure of the National Curriculum

NATIONAL CURRICULUM SUBJECTS	KEY STAGE 3 YEARS 7-9 (AGES 11-14)	KEY STAGE 4 YEARS 10-11 (AGES 14-16)
CORE SUBJECTS		
English	✓	✓
Mathematics	✓	✓
Science	✓	✓
FOUNDATION SUBJECTS		
Art and design	✓	
Citizenship	✓	✓
Computing	✓	✓
Design and technology	✓	
Modern foreign languages	✓	
Geography	✓	
History	✓	
Music	✓	
Physical education	✓	✓

In Key Stage 4, secondary schools must still offer at least one subject from the arts, design and technology, humanities and modern foreign languages[33] but this is a significant step down from making a broad and balanced range of subjects compulsory to age 16. To compound the weakened NC subject requirements in Key Stage 4, academies (state-funded schools that operate outside of local authority control) are not required to follow the NC at all, meaning that there is not even a requirement to offer the full range of subjects at Key Stage 3 let alone Key Stage 4. This has become a major point of controversy in recent months, after the chief executives of several large academy chains criticised Ofsted's new curriculum-focused inspections as being "a middle-class framework for middle-class kids" following claims that their schools are being marked down for running GCSEs over three years – thus squeezing Key Stage 3 down to two years.[34] In response, Sean Harford, Ofsted's national director for education, insisted that the inspectorate does not have a preferred length for Key Stage 3 and will not be automatically marking schools down for shortening it. Even so, he warned against schools simply extending GCSE teaching over three years, as it meant pupils might not study subjects such as art, music or languages again.[35]

In truth, Ofsted's inspection handbook takes a robust stance on this matter:

> *"In secondary education, inspectors will expect to see a broad, rich curriculum. Inspectors will be particularly alert to signs of narrowing in the key stage 2 and 3 curriculums. If a school has shortened key stage 3, inspectors will look to see that the school has made provision to ensure that pupils still have the opportunity to study a broad range of subjects, commensurate with the national curriculum, in Years 7 to 9."* [36]

The handbook adds that "inspectors will explore whether leaders are following the national curriculum and basic curriculum or, in academies, a curriculum of similar breadth and ambition".[37] Such statements about academies are open to interpretation by both inspectors and school leadership teams, creating even more room for misunderstandings and acrimony.

Beneath this public dispute lies a fundamental question about the curriculum in the first phase of secondary education. On the one hand, the DfE has explicitly given academies the freedom to design and implement their own curriculum. On the other hand, Ofsted appears to be using the National Curriculum as an informal benchmark for judging whether an academy's curriculum has enough 'breadth' and 'ambition'. This has injected a huge degree of subjectivity into discussions on the curriculum for pupils from the ages of 11 to 16, while the need to deliver good examination results at age 16 has heaped pressure on the variety of subjects that are supposed to be available at the start of secondary education. At the time of writing, the DfE has not openly sided with either Ofsted or academy trust leaders on this matter. This means that pupils' entitlement to a 'broad and balanced' curriculum is not being adequately protected either before or during their GCSE years.

Ultimately, this relates to the much deeper question of what the first few years of secondary education in state schools are supposed to deliver as well as what purpose this period of secondary education serves. For example, those who support the shortening of Key Stage 3 appear to hold the view that the purpose of the opening years of secondary school is to support the preparation of pupils for their GCSEs at age 16. This was exemplified by the leader of a major academy trust saying that "many of the children in our schools need a three-year run-up" to GCSEs to boost their performance, citing the disadvantaged background of their pupils as justification for this position.[38] In other words, they are happy to sacrifice the breath of the curriculum in order to improve their pupils' GCSE results. Meanwhile, Sean Harford from Ofsted argued that "a narrowed curriculum has a disproportionately negative effect on the most disadvantaged pupils, who often start school behind their peers and without the benefit of cultural experiences that other children take for granted."[39] These remarks suggest that Ofsted believes that a broad and balanced curriculum should be provided to all children throughout their time in secondary school, irrespective of any examinations that they may sit in future years.

It is clear the two sides of this debate do not agree on the role and purpose of the opening years of secondary schooling, and neither the government nor opposition parties appear willing to openly set out their position knowing that the respective positions are mutually exclusive. Without any clarity on this matter, it makes it almost impossible to come to an agreement among stakeholders on which subjects should be provided across Key Stage 3 and 4, and for how long. When academies can choose to entirely ignore the NC, this conflict between competing visions and aspirations for Key Stage 3 was almost inevitable.

This recent skirmish is not the first time that Ofsted has felt compelled to intervene on the issue on Key Stage 3. In 2015, Ofsted published a report entitled 'Key Stage 3: the wasted years?' in which they voiced their concerns about the failure of some schools to give pupils a good start to their secondary education. The report made the following observations:

> *"Inspectors reported concerns about Key Stage 3 in one in five of the routine inspections analysed, particularly in relation to the slow progress made in English and mathematics and the lack of challenge for the most able pupils. … The weaknesses in teaching and pupil progress identified by inspectors reflect the lack of priority given to Key Stage 3 by many secondary school leaders. The majority of leaders spoken to as part of this survey said that they staffed Key Stages 4 and 5 before Key Stage 3. As a result, some Key Stage 3 classes were split between more than one teacher or were taught by non-specialists. The status of Key Stage 3 as the poor relation to other key stages was exemplified in the way schools monitored and assessed pupils' progress."* [40]

In many respects, the way that school leaders have deprioritised Key Stage 3 is symptomatic of the lack of clarity around what purpose these crucial years serve as well as the absence of any assessments at the end of this period of learning – as will be discussed in the next section.

Gaps between national tests

With SATs at the end of the Key Stage 1 (age 7) and Key Stage 2 (age 11), there is plenty of assessment data underpinning the accountability system. The same cannot be said of secondary education, where there is a five-year wait from SATs at age 11 to GCSEs at age 16 – the longest gap between statutory tests throughout primary and secondary education from age 4 to 18. This pause in statutory assessments from 11 to 16 has not always existed. In the early 1990s, SATs were introduced for 7, 11 and 14-year-olds. However, following the collapse of the SATs marking process and a string of high-profile critical reports, the tests for 14-year-olds were scrapped in 2008.[41] The demise of SATs at the end of KS3 has undoubtedly contributed to the fractious debate over the shortening of KS3 in some academies, because an

assessment at age 14 would have strongly discouraged schools from narrowing their curriculum at the beginning of secondary school.

Although it is now merely a historical footnote, the Conservative Party election manifesto in 2017 stated that "to maintain progress as children go through secondary school, we will improve schools' accountability at key stage 3".[42] Unfortunately, no further details were provided in terms of how this might be achieved in the absence of KS3 SATs. The result of the 2017 election meant that observers never got the chance to see this policy enacted, yet it remains a clear acknowledgment that the current system of exams at 11 and 16 with nothing in between is an unsatisfactory approach to assessment and accountability for schools. As will be seen in later chapters, this issue becomes even more pertinent when some institutions such as University Technical Colleges can recruit pupils at age 14, yet the accountability system at the end of Key Stage 4 (essentially GCSEs) still holds these institutions to account for the progress of their pupils over the previous five years, not two.

Many other countries take a different view to England on the merits of waiting until age 16. Across the OECD, the median age of the first 'formal selection' between different educational programmes (e.g. academic or vocational) is 15-years-old, and almost 60 per cent of OECD members offer different curricula and programmes to those aged 15 or under – including high-performing countries such as Estonia, Japan, Korea, Slovenia and the Netherlands.[43] Many historical and cultural factors will have affected the structure of each country's education system as well as their performance in international tests such as PISA. Even so, these comparisons demonstrate that there is no empirical reason to assume that 16 is the optimal age for students to gain access to a wider range of educational pathways in secondary education.

It would be wrong to change the timing of GCSEs simply because other countries take a different approach. That said, the lengthy gap between SATs at age 11 and GCSEs at age 16 has had numerous consequences, not least the lack of clarity around the purpose of Key Stage 3 discussed in the previous section. In addition, the fact that assessments at age 14 have come and gone while some institutions have been allowed to start their provision at age 14 rather than 16 emphasises how disjointed the landscape has become. It is therefore essential that greater clarity is provided on the structure and purpose of this initial phase of secondary school so that all stakeholders and institutions are aligned around a single set of objectives for these important years in a pupil's educational journey.

4. Vocational qualifications as alternatives to GCSEs

As noted in the introduction to this report, the seemingly endless churn of reforms and initiatives has almost made it impossible for stakeholders – students, parents, employers and providers – to know whether any vocational qualification or programme will survive more than a few years. This chapter will therefore analyse the most significant challenges facing vocational qualifications in Key Stage 4 to understand the role played by these alternatives to more academic courses in state-funded secondary schools and colleges.

The provision of vocational qualifications at Level 2 and below

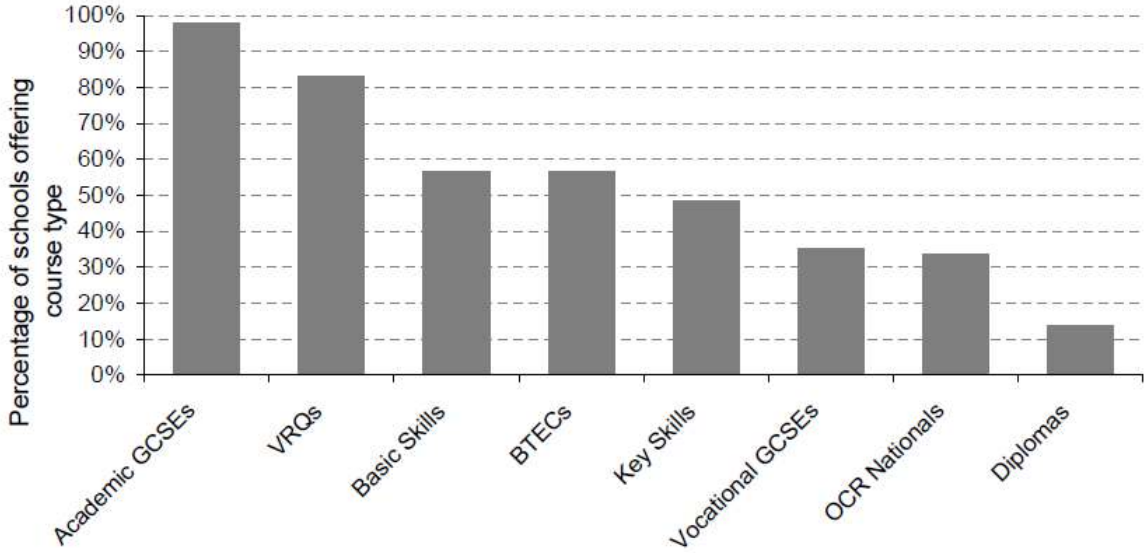
When GCSEs were originally proposed in the 1980s, the then Conservative Government accepted that "some schools prepare pupils for pre-vocational examinations other than O level and CSE (e.g. those of the City and Guilds of London Institute, the Royal Society of Arts, and the Business and Technician Education Council) during the years of compulsory schooling". In light of this, the government stated that "such courses will continue to be available to complement GCSE examinations as well, in the service of a curriculum which is broad, balanced, relevant, and differentiated in accordance with pupils' abilities".[44] It was clear, then, that GCSEs were never intended to close doors for those pupils with different interests and aptitudes across the full range of academic and vocational subjects.

As shown in Figure 1 (overleaf), at the beginning of the last decade it was entirely normal for a pupil to sit some form of vocational qualification alongside their GCSEs. Although academic GCSEs were the most popular course, the other options for 14 to 16-year-olds included:

- 'Vocationally Related Qualifications (VRQs; professional qualifications focused on specific areas of employment);
- Business and Technology Education Council courses (BTECs; an alternative work-related qualification available in areas such as sport, media and business);
- Vocational GCSEs (a more work-focused alternative to academic GCSEs, focusing on specific industries such as Health & Social Care and Leisure & Tourism).

In 2010, only a third of students took GCSEs without any form of vocational qualification alongside them, illustrating the appeal of the alternative courses.[45]

Figure 1: Percentage of schools offering Key Stage 4 course types (2009-10) [46]



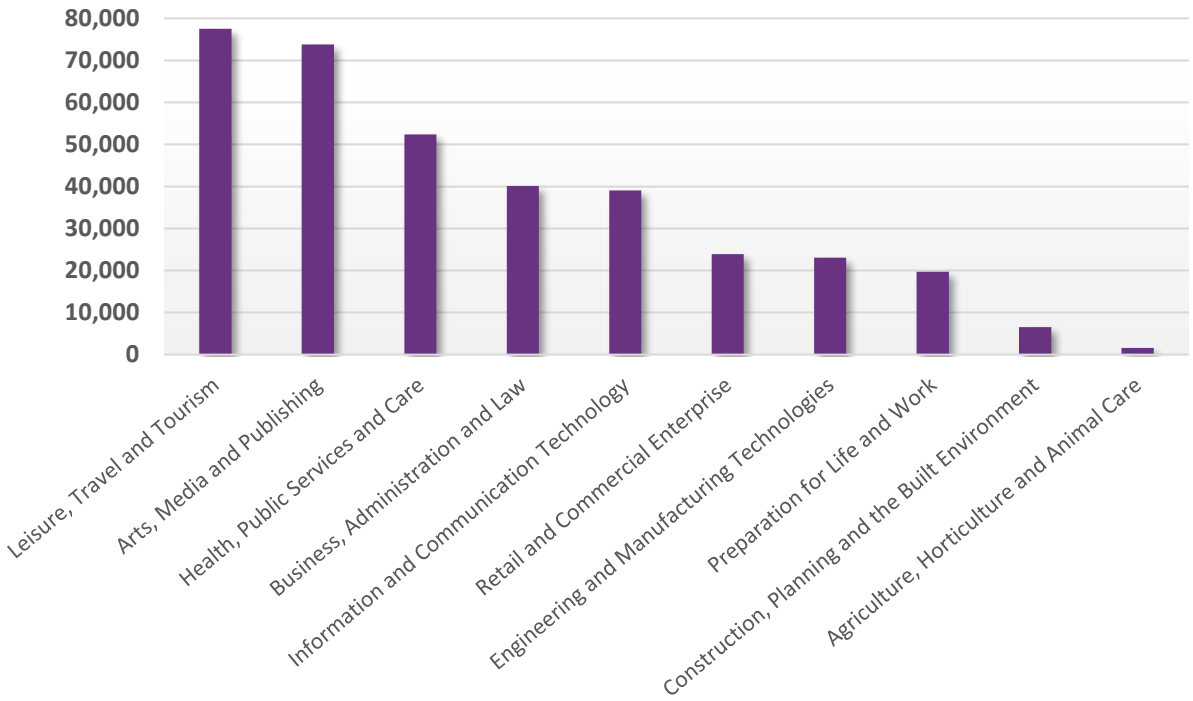
Following the 2010 General Election, thousands of vocational qualifications were stripped out of school performance tables due to concerns that schools were taking advantage of the fact that some of these qualifications counted for as much as four or even six GCSEs. Baroness Wolf – author of a government-commissioned review of vocational qualifications in 2011 – found that schools were "under enormous pressure to pile up league-table points", leading them to deliver qualifications that may offer poor progression after age 16 or did not include any external assessment.[47]

Almost ten years on, the effects of these changes are plainly apparent. The only approved vocational qualifications in Key Stage 4 are known collectively as 'Technical Awards', which the DfE define as "high quality level 1 and 2 qualifications that provides 14 to 16 year olds with applied knowledge and practical skills.".[48] 92 Technical Awards were included in the 2019 performance tables[49] and, as shown in Figure 2 overleaf, the most popular Technical Awards were in areas such as *Leisure, Travel and Tourism*, *Arts, Media and Publishing* and *Health, Public Services and Care*. However, there were only 358,000 exam entries for Technical Awards in 2019 compared to 5.1 million GCSE entries.[50] Previous analysis from the DfE had shown that although 35 per cent of pupils took at least one Technical Award, the majority of pupils took only one Technical Award and very few pupils took more than two Awards.[51] In short, GCSEs utterly dominate the 14-16 curriculum in state-funded secondary education.

Although they are dwarfed in number by GCSE entries, the impact that Technical Awards have on pupils should not be underestimated. The same analysis from the DfE showed that, for pupils in state-funded mainstream schools, taking a Technical Award was associated with a 23 per cent reduction in unauthorised absences, a 10 per cent reduction in fixed period exclusions and a staggering 62 per cent reduction in permanent exclusions.[52] What's more,

this pattern was repeated for pupils with Special Educational Needs. These outcomes suggest that, far from being a distraction alongside academic courses, entry-level vocational qualifications can have a substantial positive impact on the pupils who select them.

Figure 2: 2019 exam entries for Technical Awards [53]



On a related note, the lack of coherence in vocational education is neatly illustrated by the existence of another entirely separate brand of Level 2 vocational qualifications called 'Technical Certificates'. Despite operating at the same level as Technical Awards, they are targeted at 16 to 19-year-olds rather than 14 to 16-year-olds. This disjointed setup was always likely to emerge when each qualification and level is discussed in isolation rather than looking at the coherence of the overall system from the perspective of learners hoping to begin training in a specific industry sector or occupation.

The value associated with vocational qualifications

It is hard to find a major report on vocational education from the last few decades that does not lament the imbalance between academic qualifications and their vocational equivalents in terms of the esteem in which they are held by most, if not all, stakeholders. The 1991 White Paper *Education and Training for the 21st century* from the then Conservative Government declared that they would "establish a framework of vocational qualifications that are widely recognised and used […and] promote equal esteem for academic and vocational

qualifications, and clearer and more accessible paths between them".[54] The government at the time were convinced that "vocational qualifications in this country have been undervalued and underused",[55] adding that young people "should not be limited by out-of-date distinctions between qualifications".[56] This White Paper led to the introduction of the 'General NVQ' (GNVQ) that could be studied alongside GCSEs.

Shortly afterwards, a review of the National Curriculum in 1994 led by Sir Ron Dearing floated the idea of introducing of a high-quality vocational pathway into Key Stage 4 as part of a broad-based curriculum.[57] His subsequent review of 16-19 qualifications in 1996 proposed a single 'national framework of qualifications' that spanned both academic and vocational courses and would "make explicit the equal standing of academic, applied and vocational qualifications."[58] He insisted that "at the heart of the Review is a recognition of the centrality of applied and vocational education, and the need for both to be accorded the respect and esteem historically given to achievement in academic qualifications."[59]

On its conclusion in 2004, the final report of the working group on 14-19 reform chaired by Sir Mike Tomlinson ('the Tomlinson Review') also proposed a radical shift in both what was taught and the way in which it was delivered. In effect, the entire system of qualifications for 14 to 19-year-olds was to be replaced by a system of 'diplomas' in order to, among other things, "strengthen vocational routes [by] improving the quality and status of vocational programmes delivered by schools, colleges and training providers".[60] Despite sharing an affinity for improving the status of vocational and technical programmes, these interventions had differing views on how best to achieve this. The Tomlinson Review planned to sweep away the entire suite of existing 14-19 qualifications (including GCSEs and A-levels) and replace it with 'diplomas' that shared common elements known as 'core learning'. In contrast, Dearing was clear that "it would be wrong …to seek to build up common elements [between the qualifications] if this were to undermine the distinctive purposes" served by different qualifications.[61]

While proclamations of the value of vocational qualifications is broadly welcome, any government's commitment to this cause should be judged based on their actions, not their words. For example, the unequivocal preference for academic subjects within the current government's EBacc and Progress 8 measures for secondary schools in England demonstrate how little value is attached to vocational courses relative to their academic counterparts, and no declarations from ministers of the importance of vocational subjects can overcome this. If a government makes it clear that the best path to 'success' is to study a narrow range of academic subjects for the first five years of secondary school, there is little hope that vocational subjects will be given the space to thrive by senior leadership teams around the country.

5. The institutions delivering secondary education

As if the assessment system in the first part of secondary education was not enough to consider, the plethora of different types of schools and colleges adds a further layer of complication. Academies can exercise far more freedom over their curriculum than maintained (local authority) secondary schools, yet almost all state-funded secondary schools still conclude Key Stage 4 by entering their pupils for GCSEs. The latest government data show that 78 per cent of secondary institutions up to age 18 are now academies, with the dominant types being 'converter academies' (47 per cent) and 'sponsored academies' (22 per cent) along with a smaller number of Free Schools (essentially new academies), University Technical Colleges and Studio Schools.[62] This fragmentation caused by different ownership and governance structures compounds the pre-existing complications caused by the variety of age ranges found across the secondary education system in England.

Table 3 shows that the most common type of secondary school in England is an 11-18 institution, with more schools of this kind than all the other schools and colleges combined. Nonetheless, there is a wide variety of institutions that any given pupil might end up attending. This chapter will therefore compare the performance of different types of secondary institutions and consider how they interact with each other.

Table 3: types of mainstream secondary schools and colleges in England [63]

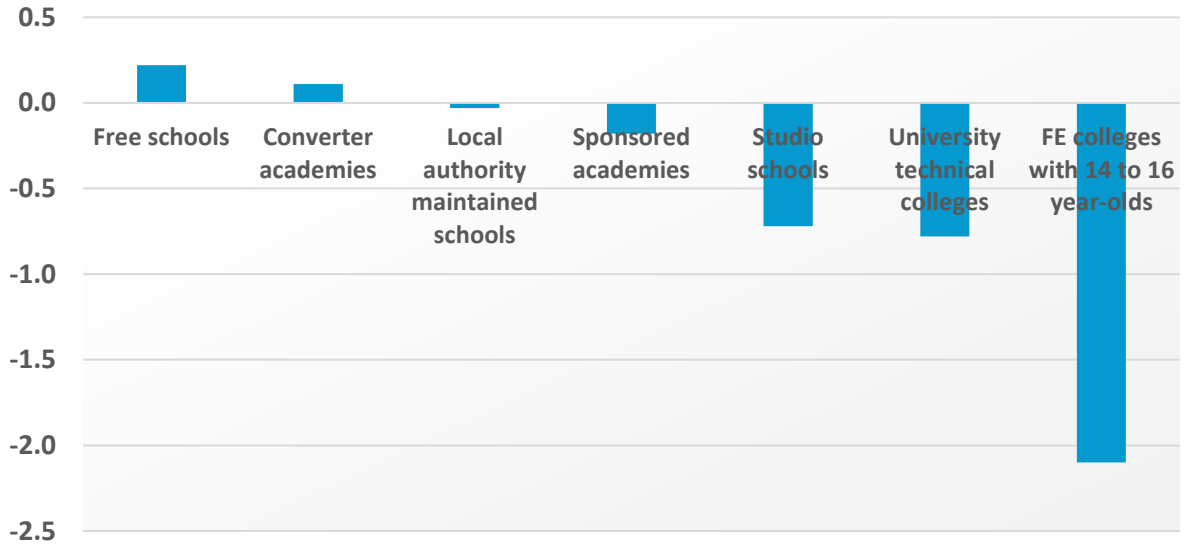
TYPE OF SCHOOL / COLLEGE	AGE RANGE	NUMBER IN ENGLAND
All-through schools	2-7 up to 18	160
Middle schools deemed secondary	Usually 9-13	108
Secondary schools	11-16	1096
Secondary schools	11-18/19	1911
Secondary schools	12/13-18/19	54
University Technical Colleges	Mostly 14-19	48
Studio Schools	Mostly 14-19	24
16-19 schools (e.g. Free Schools and Sixth Form Centres)	16-19	44
Sixth Form Colleges (including 16-19 Academy Converters)	16-19	82
General FE Colleges (including land-based colleges)	Mostly 16+	183

The performance of different provider types

As described in Chapter 2, the main measure of secondary school performance in England at age 16 is known as 'Progress 8'. Figure 3 (overleaf) shows the Progress 8 scores for the different

types of mainstream schools. A score above zero means pupils made more progress, on average, than other pupils who got similar results at the end of KS2, whereas a score below zero means pupils made less progress, on average, than pupils who got similar KS2 results. On this measure, institutions that admit pupils at age 14 – namely, University Technical Colleges (UTCs), Studio Schools and 26 FE Colleges – seem to perform poorly in terms of pupil progress.

Figure 3: Progress 8 (value-added) scores for pupils in mainstream schools and colleges at the end of Key Stage 4 in 2019 [64]



However, a recent report by the NFER identified several reasons why accountability measures such as Progress 8 may not be appropriate for these institutions.[65] For example, students only attend them for two of the five years between KS2 and KS4, but they are held to account for their students' progress over the full five years. Second, academic performance measures such as Progress 8 do not fully recognise the technical and vocational elements of the curriculum in these institutions or some of the qualifications that the employer sponsors of UTCs wish their students to study.

To illustrate the point, the average proportion of students who are entered for all five components of the EBacc (English, maths, one science, one language and either history or geography) was 40.8 per cent across all state-funded mainstream schools in 2019, but the equivalent figure was 8.2 per cent for Studio Schools, 2.6 per cent for UTCs and just 1.3 per cent for FE colleges that recruit at age 14. [66] This strongly suggests that their more vocational and technical curriculum is not being recognised in academic performances measures such as the EBacc and Progress 8 (which incorporates the EBacc), thus emphasising the imbalance between academic and vocational routes for young people.

Earlier in this report, it was noted how the accountability system sends out powerful signals to learners, parents and employers about which qualifications are considered appropriate for each age group. For example, the unequivocal message from performance measures at KS4 (GCSE level) is that academic subjects are deemed to be much more important than their vocational equivalents. The data in this chapter has shown that perceptions of institutions such as UTCs among parents, politicians and pupils can easily be distorted by the insistence on using academic performance measures to judge vocationally oriented institutions.

Students moving between providers

The decision to allow pupils to move between institutions at age 14 has always been a mixed blessing. In theory, it should give some pupils the opportunity to seek out a new type of curriculum or school that better suits their interests and aptitudes. In reality, things have not gone smoothly. In 2016, Sir Michael Wilshaw, then Chief Inspector at Ofsted, stated that "for far too long, we have let down millions of young people and allowed their talents to go to waste because we have not given the non-academic pathway into employment the priority it deserves." He added that "the consequences of an inflexible curriculum are plain to see. We see it in the demotivated youngsters who leave school with few relevant qualifications and an antipathy to learning. We see it in the ranks of the unskilled unemployed."

Despite his praise for the concept of UTCs, Michael Wilshaw was well aware of the risk that UTCs in particular might "become a dumping ground for the difficult or disaffected".[67] Although Michael Gove was not a fan of UTCs either during or after his stint as Education Secretary, he too noted the following year that "students whose poor academic prospects might hamper league table performance have been directed towards UTCs and higher-performing contemporaries have been warned off".[68] Such behaviour from nearby schools represented a genuine threat to the UTC model as it could undermine the aspirational message that they espoused around the virtues of technical education, yet there was little that each UTC or Studio School could do to stop other institutions treating them in this manner.

The recruitment challenges facing UTCs, caused in no small part by attempting to attract pupils at age 14, have been widely documented. Analysis by the Education Policy Institute (EPI) found that "some UTCs are struggling to recruit enough students to remain viable and some have closed as a result" and "in 2018, 20 UTCs that were still open had fewer students than in the previous year."[69] . The authors described this trend as "a warning sign" because "the UTCs that have closed so far had a history of struggling to recruit sufficient student numbers to operate sustainably."[70] For example, at Hackney UTC, only 11 per cent of student places were filled the year before it closed, compared to 50 per cent at UTCs that also opened in 2013.

In response to these concerns over recruitment, the DfE changed their approach to UTCs (and, to a lesser extent, Studio Schools). For instance, all local authorities were required to write to parents of 13-year-old children to let them know about local UTCs. In addition, the 'Baker Clause' – introduced in 2017 – requires every state school to give training providers and colleges access to pupils aged 8 to 13 to discuss technical education and apprenticeships. This was deemed necessary to overcome the disincentives for encouraging students to change schools at Year 10, given that schools are largely funded on a per-pupil basis.[71]

Unfortunately, the evidence thus far suggests that many schools are continuing to ignore their legal responsibilities. A Freedom of Information request by *Schools Week* found that no action was taken against schools in the first 12 months of operation after the Baker Clause became law.[72] At the time of writing, there is no reason to think that the situation has improved to any noticeable degree, although the DfE has recently announced plans to toughen the Baker Clause including a new minimum requirement for schools "about who is to be given access to which pupils and when".[73] The recruitment challenges facing UTCs have been so severe in some cases that two separate reports have recommended that their age range should be lifted to 16-19 from the current 14-19 so that they are aligned with existing admission arrangements for other state-funded provision instead.[74] It is clear, then, that attempting to set up new institutions that cater to a novel age range within a rigid secondary education system is likely to prove a struggle, even if those institutions manage to deliver a high-quality and popular curriculum.

6. Recommendations

The introduction to this report set out four objectives that together form the essential ingredients of a rigorous and respected secondary education system:

a) **RIGOUR**: all qualifications and training routes available in secondary schools and colleges must represent a high-quality programme of learning that prepares young people for the next stage in their educational journey.

b) **COHERENCE**: the system of qualifications and associated assessments must be easy to understand and easy to navigate because it is based on a single coherent narrative and a single set of terminology.

c) **VALUE:** all the programmes on offer to young people must be valued by all stakeholders, even if they serve different purposes for different learners.

d) **ASPIRATION**: the secondary education system must encourage young people to progress in their learning and be aspirational about what they can achieve.

Below is a summary of what the analysis in this report has revealed about how the current assessment and accountability regime in England in the initial phase of secondary education fares against these objectives:

- Despite the 'participation age' being raised to 18, much of the secondary education system still behaves as if pupils leave school at 16. The pivotal role still afforded to GCSEs at age 16 is an anachronism, seeing as school exams were only set at age 16 when this was widely regarded as the end of secondary education – hence the huge burden of 25-30 hours of examinations still facing many Year 11 pupils. Thus, the continued presence of GCSEs prevents meaningful conversations about pupil progression and the coherence of the 11-18 system.
- The quality and rigour of GCSE specifications provides a solid platform for academic programmes. That said, even before a pupil reaches their GCSEs, their curriculum can become severely restricted because there is no agreement on what counts as a 'broad and balanced curriculum' in the preceding years. Not only does the entitlement to a full and rich curriculum end at age 14, the National Curriculum from ages 11 to 16 is not even compulsory for academies. This means there is no guarantee that pupils will study an appropriate range of subjects in the years leading up to their GCSEs.
- The current grading system for GCSEs fails to promote an aspirational mindset, particularly when a third of pupils are destined to 'fail' each year. The GCSE resits policy compounds this issue as labelling pupils as having 'failed' English and / or

maths at age 16, only to insist that they should study these subjects beyond age 16, is counterintuitive at best.

- The lengthy gap between SATs at age 11 and GCSEs at age 16 does not sit comfortably alongside the shorter Key Stage 5 from 16 to 18. SATs used to be taken at age 14 to fill the long pause from assessments at ages 11 to 16, yet GCSEs remained unmoved after SATs at age 14 were abandoned.
- The accountability system – namely Progress 8 and the EBacc – leaves us in little doubt that the current government prizes academic courses above all else. The relentless focus on GCSEs at age 16 has crowded out alternative qualifications such as Technical Awards and the EBacc has made sure that any qualification sitting outside its narrow conception of 'valued' courses is relegated to second-class status. Vocational subjects from the ages of 14 to 16 are therefore trapped in the uneasy position of being tolerated yet downgraded.
- The knock-on effect of the low status afforded to vocational programmes is that the institutions seeking to specialise in providing alternative courses to GCSEs are prevented from thriving, especially in the way that the accountability system seems to punish non-academic specialisms.
- Many secondary institutions start at age 11 while some start at 14 and others at 16, yet the admissions system is not designed to cope with such variations. The determination of some schools to prevent their pupils from switching to other institutions at age 14 is plainly apparent. The accountability system operates from age 11 to 16 and then 16 to 18, meaning that the variation in school and college starting ages makes it impossible to hold those institutions that recruit at age 14 to account in a fair and proportionate manner.

In short, the secondary education system is failing to meet the four objectives described in this report. Moreover, minor adjustments to the status quo are unlikely to make a substantial contribution to meeting the four principles in future.

One of the biggest mistakes made by the most recent attempt to overhaul secondary education – Labour's diplomas in the early 2000's – was that they proposed throwing out the entire 14-18 system and starting all over again. Unsurprisingly, this reduced support for the plans because it was wrong to assume that everything was broken even if change was needed. Although the following recommendations in this report may seem conceptually radical in places, the full package of recommendations is designed to carry forward the most effective elements of the current system at the same time as reforming the least valuable parts. All the recommendations are intended to be deliverable by the summer of 2025, with the potential to move faster in some areas should the government wish to do so.

A new foundation for secondary education in England

RECOMMENDATION 1

The state-funded secondary education system in England should be formally divided into two phases: Lower Secondary (ages 11-15) and Upper Secondary (15-18). This will underpin a single approach to assessment, accountability, pupil admissions and the curriculum throughout the secondary system.

The incoherence of the secondary education system is visible everywhere you look. Pupil admissions and institutions are split over different age brackets while the lack of agreement over how long schools should spend teaching different subjects, as well as what subjects should be available across Key Stage 3 and 4, adds to the confusion. Numerous reforms spanning successive governments have created a bewildering landscape for pupils, parents, headteachers and policymakers. The only area of agreement among stakeholders is merely that secondary education should conclude at age 18, yet the educational journey for pupils from age 11 up to age 18 has become at best disjointed, and at worst simply unsustainable.

The most viable and least disruptive way to untangle this muddled terrain is to split secondary education into two distinct phases: **Lower Secondary** (LS) from the ages of 11 to 15 (delivered by schools), and **Upper Secondary** (US) from the ages of 15 to 18 (delivered by a mixture of schools and colleges). These phases will apply to all state-funded schools and colleges in England. As will become evident throughout the recommendations in this report, moving to a unitary structure for secondary education over two distinct phases will bring numerous benefits, including:

- A single approach to assessment and accountability during LS education that provides a fair reflection of the performance of pupils and institutions across the country
- A clearly defined structure, role and purpose for the initial years of secondary education (what is currently Key Stage 3)
- Alignment between academies and maintained schools in terms of the curriculum
- Clarity over pupil admissions and transitions between institutions

Furthermore, the introduction of a three-year US education phase from ages 15 to 18 – in contrast to the existing two-year phase from 16 to 18 – will allow for the creation of a more dynamic and flexible set of qualifications and pathways for students across all disciplines. The reforms needed to bring this about will be discussed in a subsequent EDSK report (to be published in Spring 2021), suffice to say that all the proposals outlined in this first EDSK report on the future of secondary assessment and accountability will provide a strong foundation on which the new US phase from ages 15 to 18 can be constructed.

The content and structure of Lower Secondary education (ages 11 to 15)

RECOMMENDATION 2

Existing National Curriculum subject entitlements up to the age of 14 will be extended to age 15. The National Curriculum will also be made compulsory for all schools delivering the Lower Secondary phase of education, including academies.

In this new model of LS education, the National Curriculum entitlements currently enjoyed in Key Stage 3 (ages 11 -14) will be extended for another academic year up to age 15 so that a broad and balanced curriculum is provided to all pupils throughout LS education. Subjects such as art and design, music, design and technology, languages, geography and history will therefore be taken by secondary pupils for a further year compared to existing entitlements. The exemption given to academies in terms of the National Curriculum has evidently caused consternation, not least the conflict between Ofsted and academy leaders. It is proposed that the necessary legislation (e.g. the *Academies Act 2010*) is amended so that this exemption is removed, meaning that all maintained schools and academies are now legally required to deliver the National Curriculum to all LS pupils.

RECOMMENDATION 3

GCSEs should be scrapped and replaced by national computer-based assessments in almost all National Curriculum subjects at age 15. The assessments will be completed online in the summer term of Year 10 and will typically last for 1.5-2 hours per subject. Subjects with a significant practical element (e.g. Art, PE) will continue to use practical assessments alongside the new computer-based tests.

With the split between LS and US education now occurring at age 15, national examinations at age 16 are no longer required. On that basis, GCSEs should be scrapped because age 15 is now merely as a staging post on a pupil's educational journey up to age 18 instead of representing a definitive endpoint. Nevertheless, a form of national testing is still necessary to hold schools to account and to assist pupils with their choices about which US programme is most suitable for them (see later section on 'Upper Secondary education'). Since GCSEs were created in 1986, the examinations have almost invariably been completed with a pen and paper, followed by a marking process delivered by external examiners. Other countries have long since moved beyond this antiquated approach through the introduction of computerised testing at various ages:

- **Australia**: The National Assessment Program – Literacy and Numeracy ('NAPLAN') is an annual assessment in May for students in Years 3 (ages 8-9), 5 (10-11), 7 (12-13)

and 9 (14-15). The NAPLAN is made up of tests in reading, writing, language (spelling, grammar and punctuation) and numeracy. All schools are expected to have transitioned from the paper-based version of the NAPLAN tests to the new adaptive computer-based assessments ('NAPLAN Online') by 2021.[75]

- **Norway**: after triggering its move to online testing in the early 2000's, Norway was the first country in Europe to implement 'e-assessment' on a national scale. Standardised online assessments are used to test all pupils in reading, mathematics and some parts of English language. These tests are usually held in the autumn after pupils have started the 5th grade (age 10), 8th grade (age 13) and 9th grade (age 14).[76]

- **Denmark**: all national tests for primary and junior secondary students are completed online and are 'adaptive' i.e. the difficulty of the questions adjusts during the test to match the proficiency of the pupil. Pupils must take ten national tests during compulsory schooling; a reading test every second year from the second grade (age 8), a maths test in grades 3 (age 9) and 6 (age 12) and other subject-specific tests in grades 7 and 8 (ages 13-14) such as Geography, Biology and English.[77]

These new tests at the end of the LS phase are intended to be low-stakes tests that last no more than 1.5-2 hours for most subjects and will be completed online. Additional non-exam assessments will still be required for subjects such as art (e.g. portfolios of work) and languages (e.g. oral assessments) but these should only be allowed if they are absolutely necessary, as this will help minimise the burdens on schools and teachers.

By moving to online assessments for almost every subject, the burden on students would be dramatically reduced. For example, History and Geography would switch from around 4 hours of assessments under GCSEs to just 1.5 hours, whereas the three sciences would drop from 3.5 hours down to 1.5 hours as well. English and mathematics would require slightly more assessment time given their importance within the curriculum, but this would still represent a reduction on the current GCSE examination time of 3.5 and 4.5 hours respectively. Those subjects requiring more practical forms of assessment such as art and PE will continue to use these assessment methods, although PE and Design and Technology would have an online assessment as well to replace their existing written papers. Although the overall number of subjects being assessed will be greater than the average number of GCSEs taken by Year 11 pupils, the substantial reduction in the scale and scope of each new online assessment will mean the total duration of assessments is likely to be at least 4-5 hours less than the current demands of GCSEs.

Table 4: the new suite assessments at the end of Lower Secondary education for all 15-year-olds in England

<table>
<tr><th>CORE SUBJECT ONLINE ASSESSMENTS (1 HOUR EACH)</th><th>SUBJECTS WITH SINGLE 1.5 HOUR ONLINE ASSESSMENTS</th><th>ASSESSMENTS FOR PRACTICAL SUBJECTS</th></tr>
<tr><td>ENGLISH
1) Reading
2) Writing
3) Spelling, grammar and punctuation</td><td rowspan="2">BIOLOGY
CHEMISTRY
CITIZENSHIP
COMPUTING
GEOGRAPHY
HISTORY
PHYSICS</td><td rowspan="2">ART AND DESIGN
Portfolio of work plus an externally set assignment
DESIGN AND TECHNOLOGY
60-minute online exam plus a non-exam assignment
LANGUAGES
Listening: 30 minutes
Speaking: 10-12 minutes
Reading: 40 minutes
Writing: 40 minutes
MUSIC
60-minute online exam plus performance and composition
PHYSICAL EDUCATION
60-minute online exam plus a practical performance</td></tr>
<tr><td>MATHEMATICS
1) Number and algebra
2) Ratios, proportion, geometry and measures
3) Probability and statistics</td></tr>
</table>

Because these new assessments are low-stakes tests, there is no reason why they could not be more spread out across the summer term than the narrow window used for GCSEs. This would give students more time to prepare in between tests while also reflecting the reduced external marking requirements for computer-based assessments. In addition, these measures will reduce the overall burden on pupils, with the intention that the shorter examinations spread over several weeks will reduce any anxiety and stress generated by the current battery of GCSE examinations.

A related benefit of the move towards online assessments is that it will make the exam system more resilient when faced with external shocks. Other parts of the education and skills sector have already tried to adjust to the challenges presented by COVID-19. For example, 'Functional Skills' tests for English and maths (often used in apprenticeships to demonstrate the necessary competence in these subjects) were approved for remote delivery in students' homes during the national lockdown in the middle of 2020.[78] Online tests offer more flexibility for schools and colleges because the examination timetable and test conditions could be easily adjusted, while some form of remote delivery would be an option even in the most

challenging circumstances. The considerably faster marking system offered by online tests is another critical component of being able to protect the validity of the proposed assessments when faced with external shocks. This ability to 'COVID-proof' the examination system, at least in part, would directly address the problems caused by the fragile nature of the existing GCSE regime that relies almost exclusively on a fixed schedule of paper-based testing in large venues with all the associated person-to-person contact that this necessitates.

Given that only a handful of subjects would now require extensive external marking or moderation (e.g. Art, speaking assessments for languages, PE), it is also worth considering the option of moving these practical assignments to shortly before or after the Easter break in Year 10 so that the results can be sent back to pupils and teachers during the summer term. This is important because, as will be described later in these recommendations, the results of these new Lower Secondary assessments will guide the choices of pupils and parents as to where pupils go next in their journey through secondary education.

RECOMMENDATION 4

The new computer-based assessments will test pupils' understanding of essential knowledge, key concepts and terminology. To achieve this, the 'question banks' for each assessment will be derived from the National Curriculum for Key Stage 3 plus the first year of the current GCSE specifications in each subject. This will ensure the new assessments are as rigorous and respected as GCSEs.

The National Curriculum was updated in 2014 because ministers wanted it to be "based on a knowledge-rich approach with a focus on core knowledge."[79] Moreover, all GCSE specifications have been rewritten over the past few years so that they are "underpinned by more rigorous content, preparing pupils for future careers in the industries that Britain needs."[80] Given that any high-performing secondary education system must deliver high-quality courses and assessments, it is proposed that the new computer-based assessments should be designed in line with the existing government objectives.

To this end, the new tests should focus on assessing pupils' understanding of essential knowledge and key concepts and terms within each subject. To reflect this aim, the tests will utilise short questions (typically multiple-choice) wherever possible because, if designed correctly, they can rigorously assess pupil's knowledge and understanding across multiple domains. Some flexibility will nevertheless be needed for specific subjects to ensure that their online assessments are a valid test of pupils' abilities. For example, 'extended answer' questions could be used to a greater extent for certain subjects, particularly humanities and modern languages.

One of the reasons cited in support of GCSEs is that it is claimed their demise would result in "watering down the curriculum".[81] To guard against this scenario, it is proposed that the new online assessments should use existing curriculum material, including the current National Curriculum and GCSE specifications. By drawing solely on the curriculum content that has been approved by successive governments, it will ensure that the level of rigour and respect that GCSEs command in many quarters can be carried through to the new computer-based assessments without any accusations of 'watering down' or 'dumbing down'. That said, an important difference between these new online assessments and GCSEs is that due to their low-stakes nature, each pupil's online assessment will comprise of questions from a large 'question bank' designed for every subject. This means that pupils will not necessarily answer the same questions as other candidates, although all pupils will be presented with questions of a similar size / difficulty over the course of the assessment.

RECOMMENDATION 5

Having completed their computer-based assessments and practical work, each student will be awarded a 'Lower Secondary Certificate' (LSC) that documents the results they have achieved across all National Curriculum subjects. The LSC will show each student's overall score as well as their percentile rank i.e. the proportion of other pupils who scored lower than them. No letter- or number-based grades will be issued and the current system of 'comparable outcomes' will be scrapped.

If GCSEs were removed from our secondary education system without a replacement being introduced, this would mean that there is no record of pupil achievement in between the ages of 11 and 18. To address this, the new computer-based assessments will produce a quantifiable score in most, if not all, subjects. These scores present an opportunity to collate each pupil's performance across the full range of National Curriculum subjects and present this in a simple format, much like GCSEs do today. However, as discussed earlier in this report, there are several issues with the way that GCSE results are calculated and presented such as the controversial use of 'comparable outcomes' as well as questions over the existing grading system in terms of its accuracy and appropriateness.

To begin addressing these concerns, the new computer assessments will produce two scores for each pupil:

(i) their overall result in a subject, expressed as a percentage score; and
(ii) a 'percentile rank' that shows the proportion of pupils who achieved a lower overall percentage score than the pupil in question.

No letter-based or number-based grades will be assigned to pupils' scores or percentile ranks because these new assessments are low-stakes and designed to help guide pupils' decisions

about their future pathway through secondary education instead of passing judgement on their abilities at age 15 when almost half of their secondary education journey is yet to come.

Moreover, the expanded use of multiple-choice questions will increase the reliability of the scores for each pupil at the same time as dramatically reducing external marking requirements. This approach will also decrease the overall cost of the examination system (discussed in more detail in the next chapter). As Ofqual recently stated, and as one might expect, "questions which have the best levels of agreement between markers are 'objective questions' such as multiple-choice questions." This explains why the rank order of subjects by the degree of agreement between markers "is essentially a reflection of the degree to which the assessment takes place through essay-style questions."[82] By focusing the new computer assessments on objective tasks such as multiple choice and other closed-response questions, an accurate picture of a pupil's knowledge and understanding of core ideas and concepts can be built up over the course of the assessment while also lessening the impact of marker variability on the results of each assessment.

'Comparable outcomes' is used for grading GCSEs because it helps ensure that the performance of each cohort of pupils is broadly equivalent to previous years. However, the obvious downside of this approach is that some pupils must be awarded the lowest grades even if they perform better than pupils in previous cohorts, thus guaranteeing that thousands of students every year must be deemed to have 'failed' their GCSEs. Because the scores from the new online assessments for each pupil reflect their raw performance and no grades are being issued, there is no longer any need to use comparable outcomes to force a set proportion of pupils to receive any particular grade. Nonetheless, the issue of monitoring national standards remains important and will be directly addressed in later recommendations.

To ensure that all pupils have an official record of their performance at the end of LS education at the age of 15, a new 'Lower Secondary Certificate' (LSC) should be issued to pupils once their results have been collated from the different subjects. The LSC will display a pupil's overall scores and percentile ranks in a simple format that can be given to pupils and their parents once the assessments have all been marked. Crucially, the results on the LSC will form the basis of the important conversations between teachers and pupils (and potentially their parents) about which subjects and pathways a pupil should select for new Upper Secondary phase from the ages of 15 to 18. An example of what the LSC might look like is shown in Figure 4 overleaf.

Figure 4: an illustration of how a new 'Lower Secondary Certificate' (LSC) could present the accomplishments of pupils

LOWER SECONDARY CERTIFICATE

Statement of provisional results

(NAME)

(CANDIDATE NUMBER)

SUBJECT	OVERALL SCORE (the average percentage score achieved across each subject's set of assessments)	PERCENTILE (the proportion of candidates who achieved a lower overall score)
English	76%	82
Maths	65%	74
SCIENCES		
Biology	52%	57
Chemistry	48%	56
Computing	61%	73
Physics	60%	62
HUMANITIES		
Citizenship	80%	77
Geography	69%	73
History	82%	80
French	68%	79
PRACTICAL SUBJECTS		
Art & Design	44%	68
Design & Technology	38%	62
Music	51%	61
Physical Education	53%	58

A new accountability system for Lower Secondary education

RECOMMENDATION 6

The new accountability system for Lower Secondary education will consist of two main measures for each school, which are calculated as three-year rolling averages:

- **Progress** - the average progress made by learners between test phases (from SATs at age 11 to the new Lower Secondary tests at age 15) relative to the progress made by learners in other schools with similar SAT results
- **Attainment** - the overall average score achieved by learners across all Lower Secondary tests as well as their average scores in each subject

Both measures will be reported on a scale using one of the following descriptors: 'well above average', 'above average', 'average', 'below average' or 'well below average'.

In line with the current accountability system for secondary schools, measures of 'progress' and 'attainment' should form the bedrock of the future accountability system following the introduction of computer-based assessments. The two measures should operate as follows:

- **Pupil progress**: a measure of the progress that pupils make between their SATs at age 11 and their scores in the new subject tests at age 15, and then comparing their progress with the progress made by pupils in other LS schools from age 11 to 15. By comparing the progress of similar pupils at different schools, an aggregated score of the 'average progress' made by pupils at each school can then be calculated.
- **Pupil attainment**: a measure of the average attainment (score) of all pupils at a school in each subject test across the National Curriculum. This will be reported as an aggregate score across all subjects, although the subject-by-subject breakdowns will also be published.

At present, Progress 8 gives a 'double weighting' to pupils' performance in English and maths to emphasise their importance to teachers and school leaders as they plan the curriculum. If policymakers wanted to maintain this approach in future, it would be entirely feasible to maintain this approach for the new measure of progress based on the performance of pupils in their new computer-based assessments in English and maths.

For the sake of simplicity, the score for both progress and attainment will be reported as 'well above average', 'above average', 'average', 'below average' or 'well below average' so that the results are easily understood by all stakeholders. In addition, the scores will be calculated as a three-year rolling average rather than being based on results from a single academic year.

RECOMMENDATION 7

National standards in Lower Secondary education will be measured through 'sample testing' i.e. inserting a selection of identical questions into the different computer-based subject tests every year to monitor standards over time independently of the performance of pupils and schools.

Many other countries such as Australia, Canada, France, New Zealand and Spain use 'sample testing' ('sampling') to judge the national performance of their education system, which involves assessing a sample of pupils rather than the entire cohort.[83]

In 2008, a committee in Parliament heard of numerous benefits of employing sampling to track national standards and the impact of government policy over time. These included reducing the stakes of the testing due to the anonymity of schools and pupils as well as testing the same questions each year to increase validity.[84] As the committee noted, sampling is a well-established technique and is used in international comparison studies such as PISA and TIMMS. It was also used in the UK from the mid-1970s and through the 1980s by the Assessment of Performance Unit within the DfE through the 'light' sampling of schools and pupils.[85] This led the committee to recommend that "the purpose of national monitoring of the education system, particularly for policy formation, is best served by sample testing to measure standards over time."[86]

This report endorses the same approach. While schools will be judged on the performance of their pupils in the new subject tests at age 15, national standards will be monitored separately (unlike now, where the results of all schools are simply bundled together to create a 'national average' that claims to represent national standards). This new approach will revolve around getting a random sample of pupils each year to answer a set of identical questions that were given to pupils in previous years within each subject. The pupils will be unaware of this during the test itself and will attempt to answer the questions as normal, but the fact that identical questions are answered by a large number of pupils each year means that national standards can be accurately tracked irrespective of the performance of schools (which could be affected by, for example inadvertent changes in the content and/or difficulty of GCSEs). This approach to monitoring national standards will also make it easier to judge whether future changes in government policy or teaching practices have a quantifiable effect on the performance of pupils in one or more subjects.

Reconfiguring the institutions delivering secondary education

RECOMMENDATION 8

Lower Secondary education from the ages of 11 to 15 will be delivered exclusively by schools. Existing 11-16 schools will either reduce their provision by one year group or expand to become 11-18 institutions that encompass both the Lower Secondary and Upper Secondary phases. Schools that currently go up to age 13 ('middle schools') will either reduce their provision by two year groups or expand upwards to age 15 to provide the full Lower Secondary phase.

As noted in the previous chapter, the most common type of secondary education provider in England is an 11-18 school but there are still many 11-16 schools in operation. 11-18 schools will have little difficulty adjusting to the new LS and US phases, whereas 11-16 schools will have to either reduce their provision by one year group (i.e. removing Year 11) or expand their provision up to 18 so that they can provide the US phase as well. Similarly, middle schools that currently educate pupils up to age 13 will either need to take on an additional two year groups up to age 15 or reduce their provision down to age 11.

The DfE must decide whether schools should make these decisions by themselves, or whether some kind of 'quality' requirements should be imposed on 11-16 and 7-13 schools that wish to expand upwards so that weaker schools do not overstretch themselves (Ofsted grades or recent examination results would be two possible performance indicators to support such decisions). Regional Schools Commissioners could take a leading role in this regard as they are already tasked with monitoring the performance of different schools in their respective areas. Inevitably, any change in the accommodation of year groups within a school will have implications for staffing and resources. That said, implementing these changes over 3-4 years will allow plenty of time for consultation on such matters. The 'area review' model used in the Further Education sector to rationalise and reorganise the range of courses and institutions available in different parts of the country offers a promising avenue to explore in this regard.

RECOMMENDATION 9

Pupils will choose which type of Upper Secondary provision (e.g. school, college or apprenticeship) that they wish to pursue after age 15 based on the results of their Lower Secondary subject tests as well as advice given to them and their parents by teachers and careers advisors.

One of the concerns cited by supporters of GCSEs is that in their absence, some pupils – particularly those from disadvantaged backgrounds – will be forced into less prestigious

courses and pathways. This is an erroneous argument because the way that students select courses and institutions is entirely within the control of policymakers and is a separate issue from the qualifications that are available. As discussed earlier in this report, most OECD countries allow students to move into their preferred 'route' before the age of 16. While it would be wrong to ask 11 or 12-year-olds to make such significant choices, the age of 15 is an appropriate time for students in England to make decisions about what and where they would like to study in their final years of secondary education.

The new LS phase will ensure that all students receive a broad and balanced curriculum up to age 15 (arguably to a greater degree than now, as academies will be forced to deliver the full National Curriculum). Although pupils will no doubt want to perform well in the new computer-based assessments to demonstrate their own achievements, the 'cliff edge' nature of GCSEs will only be removed if pupils are not directly impacted by the results they achieve in the subject tests as they progress through secondary education. Consequently, unlike GCSEs, there will be no consequences for pupils based on their performance in the new LS subject tests.

After age 15, the decision about which institution to attend and which pathway to focus on should be left with students and parents. This reflects the 'low stakes' nature of the new subject tests at age 15, as these tests are intended to support students' decisions about the US institutions and courses that would be most suitable for them. In contrast, many 16-18 providers currently use 'minimum entry requirements' in terms of GCSE results to prevent students from pursuing their preferred academic and vocational courses. Countries such as Australia, Canada, New Zealand and the United States let teachers 'steer' the choices of students as they move into the later stages of secondary education[87] but students and parents remain in control of the process. Consequently, to avoid accusations of 'dumbing down' or students being pushed towards courses that do not suit their interests and aptitudes, this report proposes that 'student choice' should be the main (if not the sole) driver of which institution they attend and which subjects / pathway they select in US education.

7. Areas for further consideration

Teacher assessment

A frequently cited proposal is to replace high-stakes tests such as GCSEs with assessments delivered by teachers, supposedly to produce a more 'rounded' view of pupils' achievements. However, the research evidence suggests that, far from promoting better judgements on pupils, teacher assessments are likely to be less valid and reliable than external tests. For example, a study by Burgess and Greaves (2009) found that teacher assessments "might be severely detrimental to the recorded achievements of children from poor families, and for children from some ethnic minorities", while "external testing in some way protects pupils from typically low-attaining groups from subconscious assumptions."[88] Using data for almost 5,000 pupils from the Millennium Cohort Study, research by Campbell (2015) "demonstrates biases in teachers' average ratings of sample pupils' reading and maths 'ability and attainment'" which corresponded to key demographic characteristics such as income-level, gender, special educational needs and ethnicity.[89]

A detailed literature review of the different assessment methods available across academic and vocational courses is beyond the scope of this report, but the research evidence does not appear to support a concerted move away from external testing towards teacher assessments. Discussions on how, when and where teacher assessment and other non-examined assessments could play a role in secondary education, particularly in the Upper Secondary phase from ages 15 to 18, are nevertheless worthwhile.

Retaking exams

One of the major driving forces behind the change from modular to linear examinations over the past decade was the growing concern around the seemingly endless retaking of exams by some students. Over a two-year course, it was perfectly feasible to sit the same exam at least four times, which consumed precious time that could have been invested in teaching and learning. Although the previous section noted how some flexibility could be offered for January sittings for specific subjects, this report is keen to avoid a return to a situation where exams become the main focus during a course.

Consequently, it is suggested that retakes should not be allowed for the new subject tests at age 15. As these tests are 'low stakes' and are intended to act as a guide for students' choices about US education, there is no reason for students to become overly concerned about how they perform (even if the test results are used for school accountability).

Creating and regulating the new computer-based assessments

There are several options available to policymakers regarding who is responsible for designing and delivering the subject tests:

- **The DfE**: the Standards and Testing Agency (STA), which is part of the DfE, designs the assessments used in primary schools (e.g. SATs at age 11) and then contracts with an external organisation - currently Capita - for the printing, distribution, and collation of test papers as well as administering the marking of test papers. The STA may therefore be a feasible option for designing these new computer-based assessments in each subject.
- **Examination boards**: given the expertise of many examination boards in designing assessments, plus the fact that they are regulated by Ofqual, another option would be for the DfE to contract with an examination board to both design and deliver the new online assessments for each subject. This would be similar to the model being rolled out for the new T-level qualifications for 16 to 19-year-olds, where one organisation is awarded a contract by the DfE for a set period of time during which they take on all responsibilities for designing, administering and marking the assessments.
- **Open tendering**: rather than restricting the contracting for the new online assessments to regulated examination boards, the DfE could instead run an open procurement that allows other assessment organisations to bid to run the contracts for each subject. This would allow new organisations with significant expertise in assessment to support the new system for secondary schools.

There are several other variations on the themes described above that could deliver similar goals and, as always, there are pros and cons to each of these options. Further consideration would need to be given to all these models as well as consulting with the assessment community before any decision is reached. Needless to say, the related question of who has responsibility for designing the necessary 'question banks' for each online assessment will also depend to a large extent on which model is chosen.

The decision over which model to use for the new online assessments could also have major implications for the examination regulator Ofqual. For example, if examination boards were responsible for designing and delivering the different assessments then the current functions of Ofqual in terms of monitoring their activities would still be relevant. Even so, the removal of formal grading and comparable outcomes from these new assessments would mean that Ofqual's role would be restricted to issues such as ensuring broad comparability between the different subjects in terms of the difficulty and breadth of the online assessments (which, in itself, would be a critical feature of the new assessment system). Needless to say, if the STA

took on a significant role in designing and delivering the online assessments then Ofqual's role would be greatly diminished. Either way, Ofqual would still be required to regulate and quality-assure the assessments in Upper Secondary education (ages 15-18).

Rules for conducting online assessments

The Joint Council for Qualifications (JCQ) publishes a set of regulations and requirements for schools that conduct exams. This includes the need to ensure that each school provides suitable accommodation and facilities for all examinations and assessments, including computer-based and on-screen assessments, to ensure that the work submitted by pupils was completed by them alone using only the permitted items or support materials. An appropriate number of invigilators is also required to make sure that candidates always observe the rules.

The move towards computer-based assessments for large numbers of students at age 15 will require careful consideration in terms of protecting the integrity of the test environment. A recent report from Ofqual highlighted several issues that might need to be addressed.[90] For example, it is possible that some schools will not have enough computers for every member of a year group to sit an assessment at the same time. In addition, the spaces currently used for assessments such as sports halls may not easily adapt to the needs of online assessments. This may require alternative arrangements to ensure that no information about the assessment is given to pupils before they sit a test, which could involve placing some students in 'isolation' while they wait for a computer to become available. Regardless of how it is resolved, the decision to aim for full implementation of the recommendations in this report by the summer of 2025 will provide ample opportunity to consider how best to operate a computer-based suite of assessments for 15-year-olds across England.

Conclusion

> *"…the dangers of examinations, and especially of external examinations, are considerable in their possible effects both on pupil and on teacher. We have no hesitation, however, in stating our conviction that external examinations are not only necessary but desirable in Secondary Schools. But we are equally convinced that if the admitted advantages of external examinations are to be secured and the dangers of them minimised, such examinations should be subjected to most stringent regulations as to their number, the age at which they are taken, and their general character."* [91]

Although it is over 100 years since the Acland Report was published, its underlying motives remain as relevant as ever. While almost all stakeholders recognise the value of some form of external assessment between the ages of 11 and 18, the benefits of such assessments can quickly diminish if the burdens they place on pupils and teachers outweigh their advantages. This report has argued that the current conception of GCSEs is flawed for precisely this reason. Despite the rigour that GCSEs offer, the notion of hundreds of thousands of 16-year-olds across England being required to complete as many as 30 hours of written examinations when they still have at least two more years of education or training ahead of them is completely disproportionate and entirely unnecessary.

Other countries have long since moved towards digital assessments as their preferred model for monitoring the progress of pupils. Far from being a radical move, online testing was openly considered by Ofqual as a means of delivering GCSEs and A-levels in the summer of 2021[92] and many schools already make use of commercial products that offer formative and summative assessments in a digital format. Meanwhile, the raising of the participation age to 18 demanded a recalibration of the assessment and accountability system that has simply never happened. Furthermore, many pupils are no longer receiving a broad and balanced curriculum in the run-up to their GCSEs, yet successive governments have refused to recognise this issue – let alone address it. The reticence of the same governments to discuss and debate the movement of pupils between institutions at age 14, or clarify the role and status of vocational qualifications such as Technical Awards, also serve to illustrate how GCSEs distort the education system well beyond the confines of the examination hall.

Throughout this report, four objectives have been cited as providing the foundation for any attempts to reform secondary education. The full package of recommendations described in the previous chapter have been designed to meet all four principles in a way that the current system simply cannot match:

1. **RIGOUR**: **all qualifications and training routes available in secondary schools and colleges must represent a high-quality programme of learning that prepares young people for the next stage in their educational journey.**
   By drawing on the rigorous content already used for the National Curriculum and GCSEs, there is good reason to think that the new computer-based assessments for almost every subject will maintain – if not improve – standards. What's more, the decision to effectively make the National Curriculum compulsory up to the age of 15 rather than 14 will provide an even broader curriculum for pupils than is required at present in state schools (particularly academies).

2. **COHERENCE: the system of qualifications and associated assessments must be easy to understand and easy to navigate because it is based on a single coherent narrative and a single set of terminology.**
   The proposed distinction between Lower Secondary (ages 11-15) and Upper Secondary education (ages 15-18) will bring far more coherence than is possible with the existing mix of providers, age ranges and admissions policies. This level of coherence will be bolstered by the same curriculum being delivered across every state school in England up to the age of 15 as well as the decision to only allow schools to deliver Lower Secondary education up to age 15 rather than involving colleges as well.

3. **VALUE: all the programmes on offer to young people must be valued by all stakeholders, even if they serve different purposes for different learners.**
   By ensuring that the current National Curriculum entitlements to subjects such as art, design and technology and music continue for an additional year up to the age of 15, the clear message to pupils, parents, teachers and school leaders is that they should treat all subjects as equivalent to one another. This will be reinforced by the new accountability system that places as much importance on the progress and attainment of pupils in design and technology as it does on their progress and attainment in geography or chemistry.

4. **ASPIRATION: the secondary education system must encourage young people to progress in their learning and be aspirational about what they can achieve.**
   The new secondary education system will treat 11-18 education as a single aspirational journey for all learners irrespective of which subjects are most appealing to them. Pupils will be able to use the new subject tests at age 15 to guide their choices about Upper Secondary education while the continued emphasis on both progress and attainment within the new accountability system will encourage teachers and school leaders to be ambitious about what their pupils can achieve.

The breakdown of the assessment and accountability system in 2020 and 2021 because of the tragic outbreak of COVID-19 has presented a rare opportunity to pause and consider whether we can do things better in future. This report has shown how, within the next few years, we can move beyond a secondary education system dominated by GCSEs and replace it with a new approach that provides a more effective, proportionate and coherent basis for supporting pupils on their journey from the age of 11 to 15. Having now reconfigured the Lower Secondary system in England, the next publication from EDSK (scheduled for Spring 2021) will consider how to design an Upper Secondary Education from the ages of 15 to 18 that builds on the same objectives and principles described in this report to ensure that our education system delivers the best possible outcomes for learners across the country.

References

[1] A.H. Dyke Acland, *Report of the Consultative Committee on Examinations in Secondary Schools* (London: Her Majesty's Stationery Office, 1911), 1.

[2] Ibid., 38.

[3] Ibid., 103.

[4] Ibid.

[5] Ibid., 104.

[6] Derek Gillard, 'Education in England - Chapter 7: 1900-1923', Webpage, 2018, 7.

[7] Acland, *Report of the Consultative Committee on Examinations in Secondary Schools*, 114.

[8] Derek Gillard, 'Education in England - Chapter 10: 1945-1951', Webpage, 2018.

[9] Wikipedia, 'Certificate of Secondary Education', Webpage, 2020.

[10] Sally Weale, 'Stress and Serious Anxiety: How the New GCSE Is Affecting Mental Health', *The Guardian*, 17 May 2018.

[11] Ofsted, 'HMCI's Commentary: Recent Primary and Secondary Curriculum Research', Webpage, 11 October 2017.

[12] The Times Editorial, 'The Times View on Proposals to Abolish GCSEs: Tested to Destruction', *The Times*, 20 November 2019.

[13] Ryan, George, 'Lord Baker: GCSEs Now "Redundant"', *Times Educational Supplement*, 11 February 2019.

[14] Sean Coughlan, '"Pointless" GCSEs Should Be Scrapped, Says Senior MP', *BBC News Online*, 11 February 2019.

[15] Acland, *Report of the Consultative Committee on Examinations in Secondary Schools*, 108.

[16] Ibid.

[17] Wikipedia, 'Raising of School Leaving Age in England and Wales', Webpage, 2020.

[18] Alan Smithers and Pamela Robinson, *Choice and Selection in School Admissions: The Experience of Other Countries* (London: Sutton Trust, 2010), 29.

[19] Ibid., 31.

[20] Richmond, Tom, *A Step Baccward: Analysing the Impact of the 'English Baccalaureate' Performance Measure* (London: EDSK, 2019), 1.

[21] Philip Nye and Dave Thomson, 'GCSE Results 2019: The Main Trends in Grades and Entries', Webpage, 22 August 2019.

[22] Richmond, Tom, *A Step Baccward: Analysing the Impact of the 'English Baccalaureate' Performance Measure*, 30.

[23] Derived from the GOV.UK 'Find and compare schools in England' dataset using historical data for the 'average number of Key Stage 4 GCSE and equivalents entries per pupil'.

[24] Office of Qualifications and Examinations Regulation, 'Qualifications Price Index 2019', Webpage, 2019.

[25] Department for Education, 'Key Stage 4 Performance 2019 (Revised)', Webpage, 2020, 4.

[26] Derived from the GOV.UK 'Find and compare schools in England' dataset.

[27] Office of Qualifications and Examinations Regulation, *Delivery of Vocational & Technical Qualifications in Performance Tables 2019* (Coventry: Ofqual, 2019).

[28] Association of School and College Leaders, 'The Forgotten Third', Webpage, 2019.

[29] Office of Qualifications and Examinations Regulation, '11 Things We Know about Marking and 2 Things We Don't …yet', Webpage, 2019.

[30] HM Government, *Education Reform Act 1988*, Chapter 40.

[31] Ibid.

[32] Ibid.

[33] Department for Education, 'The National Curriculum: Key Stage 3 and 4', Webpage, 2020.

[34] John Roberts, 'Ofsted Too Middle-Class, Say Harris and Outwood Grange', *Times Educational Supplement*, 10 January 2020.

[35] John Roberts, 'Ofsted Insists There Is No "preferred Length" for KS3', *Times Educational Supplement*, 9 January 2020.

[36] Ofsted, *School Inspection Handbook: Handbook for Inspecting Schools in England under Section 5 of the Education Act 2005* (Manchester: Ofsted, 2019), 42.

[37] Ibid., 43.

[38] Roberts, 'Ofsted Too Middle-Class, Say Harris and Outwood Grange'.

[39] Ibid.

[40] Ofsted, *Key Stage 3: The Wasted Years?* (Manchester: Ofsted, 2015), 5.

[41] Polly Curtis, 'Sats for 14-Year-Olds Are Scrapped', *The Guardian*, 14 October 2008.

[42] The Conservative and Unionist Party, *Forward, Together: Our Plan for a Stronger Britain and a Prosperous Future* (London: The Conservative and Unionist Party, 2017), 51.

[43] OECD, *Equity and Quality in Education: Supporting Disadvantaged Students and Schools* (Paris: OECD, 2012), 56–58.

[44] Derek Gillard, 'Education in England - Chapter 15: 1979-1990', Webpage, 2018, 15.

[45] Wenchao Jin, Alastair Muriel, and Luke Sibieta, *Subject and Course Choices at Ages 14 and 16 amongst Young People in England: Insights from Behavioural Economics* (London: Department for Education, 2011), 12.

[46] Ibid., 11.

[47] Jeevan Vasagar, 'School League Tables to Exclude Thousands of Vocational Qualifications', *The Guardian*, 20 July 2011.

[48] Department for Education, 'Guidance: Technical Awards', Webpage, 4 September 2017.

[49] Department for Education, 'Key Stage 4 Qualifications, Discount Codes and Point Scores', Webpage, 2020.

[50] Ofqual, 'Annual Qualifications Market Report: Academic Year 2018 to 2019', Webpage, February 2020.

[51] Department for Education, *Non-GCSE Qualifications in England: Key Stage 4 Entries and Absence and Exclusions Outcomes* (London: Department for Education, 2019), 4.

[52] Ibid., 20.

[53] Ofqual, 'Annual Qualifications Market Report: Academic Year 2018 to 2019'.

[54] Department for Education and Science, *Education and Training for the 21st Century (Volume One)* (London: Her Majesty's Stationery Office, 1991), 3.

[55] Ibid., 16.

[56] Ibid., 24.

[57] Ron Dearing, *The National Curriculum and Its Assessment: Final Report* (London: Her Majesty's Stationery Office, 1994), 19.

[58] Ron Dearing, *Review of Qualifications for 16-19 Year Olds* (Hayes: Her Majesty's Stationery Office, 1996), 12.

[59] Ibid., 74.

[60] Mike Tomlinson, *14-19 Curriculum and Qualifications Reform: Final Report of the Working Group on 14-19 Reform* (London: Working Group on 14-19 Reform, 2004), 5.

[61] Dearing, *Review of Qualifications for 16-19 Year Olds*, 17.

[62] Department for Education, 'Open Academies, Free Schools, Studio Schools and UTCs', Webpage, 2020.

[63] Adapted from GOV.UK, 'Get Information about Schools', Webpage, 2019.

[64] Department for Education, 'Key Stage 4 Performance 2019 (Revised)'.

[65] Kelly Kettlewell et al., *University Technical Colleges: Beneath the Headlines* (Slough: NFER, n.d.), 12.

[66] Department for Education, 'Key Stage 4 Performance 2019 (Revised)'.

[67] Ofsted, 'Sir Michael Wilshaw's Speech at the Baker Dearing UTC Conference', Webpage, 21 July 2016.

[68] Michael Gove, 'Dividing Our Children at 14 Has Not Worked', *The Times*, n.d., accessed 7 May 2020.

[69] Gerard Dominguez and David Robinson, *UTCs: Are They Delivering for Young People and the Economy?* (London: Education Policy Institute, 2018), 23.

[70] Ibid.

[71] House of Commons Library, *Briefing Paper Number 7250: University Technical Colleges* (London: Her Majesty's Stationery Office, 2019), 27–28.

[72] Ibid., 28.

[73] Freddie Whittaker, 'DfE to Toughen up Baker Clause and Extend Careers Requirement to Year 7s', *Schools Week*, 21 January 2021.

[74] House of Commons Library, *Briefing Paper Number 7250: University Technical Colleges* (London: Her Majesty's Stationery Office, 2019), 33–34.

[75] Australian Curriculum, Assessment and Reporting Authority, 'NAPLAN Online', Webpage, 2020.

[76] Leire Aranbarri, 'Digitise the Norwegian National Tests at Scale', Webpage, 14 January 2019.

[77] Louise V. Beuchert and Anne B. Nandrup, *The Danish National Tests at a Glance* (Aarhus: Aarhus University, 2017).

[78] Billy Camden, 'Students to Sit English and Maths Exams at Home during Covid-19 Lockdown', *FE Week*, 2 April 2020.

[79] Nick Gibb, 'Revising for GCSEs Is Tough, but It Will Be Worth It', *The Times*, 16 May 2019.

[80] Department for Education, 'New Gold-Standard GCSEs Prepare Pupils for Careers Britain Needs', Webpage, 14 May 2018.

[81] Mark Lehain, 'Scrapping GCSEs Would Advantage Only the Privileged', *Times Educational Supplement*, 12 February 2019.

[82] Office of Qualifications and Examinations Regulation, '11 Things We Know about Marking and 2 Things We Don't …yet', Webpage, 2019.

[83] House of Commons Children, Schools and Families Committee, *Testing and Assessment: Third Report of Session 2007–08 - Volume I*, HC169-I (London: Her Majesty's Stationery Office, 2008), 13.

[84] Ibid., 62.

[85] Ibid.

[86] Ibid., 66.

[87] Alan Smithers and Pamela Robinson, *Choice and Selection in School Admissions: The Experience of Other Countries* (London: Sutton Trust, 2010), 31.

[88] Lord Bew, *Independent Review of Key Stage 2 Testing, Assessment and Accountability: Final Report* (London: DfE, 2011), 49.

[89] Tammy Campbell, 'Stereotyped at Seven? Biases in Teacher Judgement of Pupils' Ability and Attainment', *Journal of Social Policy* 44, no. 3 (2015): 517–47.

[90] Office of Qualifications and Examinations Regulation, *Online and On-Screen Assessment in High Stakes, Sessional Qualifications: A Review of the Barriers to Greater Adoption and How These Might Be Overcome* (Coventry: Ofqual, 2020).

[91] A.H. Dyke Acland, *Report of the Consultative Committee on Examinations in Secondary Schools* (London: Her Majesty's Stationery Office, 1911), 103.

[92] Catherine Lough, 'Ofqual Suggests Online Tests for GCSEs and A Levels', *Times Educational Supplement*, 2 September 2020.