

# **Review of Vocational Education – The Wolf Report**

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# Contents

<b>Foreword by the Secretary of State for Education Michael Gove MP</b>	<b>4</b>
<b>Foreword by the Minister of State for Further Education, Skills and Lifelong Learning John Hayes MP</b>	<b>6</b>
<b>Executive Summary</b>	<b>7</b>
What we want to achieve	8
The wider environment	9
The way forward	10
<b>Recommendations</b>	<b>13</b>
<b>Scope</b>	<b>19</b>
<b>Part One: Introduction</b>	<b>20</b>
<b>Part Two: The Social and Labour Market Context</b>	<b>24</b>
1. The collapse of youth labour markets	24
The nature of the labour market	28
2. High returns to education and qualifications	30
3. High returns to apprenticeship and employment	33
4. Occupational change	35
5. The implications of change (A): Young people’s entry into the English labour market	36
The implications of change (B): How education systems are adapting – facts and misconceptions	39
The implications of change (C): challenges for vocational education	43

<b>Part Three: The Educational Context</b>	<b>44</b>
1. Vocational education in England	44
2. Key Issues A: Key Stage 4	46
3. Key Issues B: Upper Secondary, age 16-19	50
4. Key institutional features of 14-19 education in England	54
A. The English qualification system	54
B. Examination boards and awarding bodies	55
C. Funding by qualifications	58
5. The regulatory framework	62
<b>Part Four: An Audit of Current Provision</b>	<b>67</b>
1. The mis-match between labour market requirements and vocational education provision	70
2. The mis-match between progression requirements and vocational education provision	80
Assessment and standards	94
3. Inadequate quality assurance and regulatory arrangements	96
<b>Part Five: Recommendations</b>	<b>105</b>
1. Introduction	105
2. Conceptualising 14-19 education	106
3. Funding and Institutional Arrangements	119
A. Reforming 16-18 funding for educational institutions	120
B. Reforming funding for apprenticeships	122
C. Strengthening the system: improving access to high quality vocational instruction	126
4. Reforming the Regulatory Framework	132
Quality assurance	135
5. In conclusion	139
<b>Part Six: Conclusions and Destinations</b>	<b>141</b>
<b>Appendix I: Growth in Vocational Qualifications</b>	<b>145</b>
Most popular Vocational Qualifications at Key Stage 4: 2009-10	145
<b>Appendix II: Changes in the English Labour Market</b>	<b>147</b>
<b>Appendix III: Returns to Low-level Vocational Qualifications</b>	<b>150</b>
<b>Appendix IV: Regulation and Inspection of Vocational Education</b>	<b>155</b>
<b>Appendix V: Further examples of how English 16-18 education is funded</b>	<b>158</b>

<b>Appendix VI: Youth Pathways/LSYPE Charts in Full</b>	<b>160</b>
<b>Appendix VII: Apprenticeship figures and trends</b>	<b>164</b>
<b>Appendix VIII: Mathematics and English Post-16</b>	<b>170</b>
<b>Appendix IX: Extending the common core: the trend to delayed specialisation</b>	<b>173</b>
<b>Bibliography</b>	<b>176</b>
<b>Endnotes</b>	<b>185</b>

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Finally, I am, of course, grateful to the Secretary of State for Education for inviting me to carry out this Review. It was an honour to do so, and I hope that its conclusions will help to improve the vocational education system of this country.

# Foreword by the Secretary of State for Education Michael Gove MP

Since Prince Albert established the Royal Commission in 1851 policy-makers have struggled with our failure to provide young people with a proper technical and practical education of a kind that other nations can boast. 160 years later the same problems remain. Our international competitors boast more robust manufacturing industries. Our technical education remains weaker than most other developed nations. And, in simple terms, our capacity to generate growth by making things remains weaker.

Last year I asked Professor Alison Wolf to help us confront this long-standing problem by reviewing pre-19 vocational education. She has responded with this brilliant, and ground-breaking, report.

She starts by confronting us with some stark truths. Far too many 14-16 year olds are doing courses with little or no value because performance tables incentivise schools to offer these inadequate qualifications. As a result between a quarter and a third of young people between the ages of 16-19 are, right now, either doing nothing at all or pursuing courses which offer no route to higher levels of education or the prospect of meaningful employment. She is correct to say these young people are being deceived and that this is not just unacceptable but morally wrong.

This waste is a special tragedy because we know that encouraging genuine, high-quality, vocational education can guarantee access to further and higher education and rewarding employment. The kind of courses which lead to a passionate understanding of, and commitment to, the joy of technical accomplishment are immensely valuable.

We already know what good looks like. Apprenticeships at BT or Rolls-Royce are more oversubscribed than the most desirable course at the best university. These types of courses offer a route to good salaries and quick promotion at world-beating firms. What's more, many of the best courses – like those offered by BT – hold open the door for further study in higher education.

Professor Wolf argues that we need a wholesale realignment of incentives. Performance tables, funding systems and regulatory compliance are all pushing in the wrong direction – against the better judgment of teachers and lecturers working in our schools and colleges. To take one particularly shocking example: the system actively discourages 16-19 year olds from catching up with their English and Maths so that each year 300,000 18 year olds start adult life without the equivalent of a Maths or English GCSE.

Implementing these reforms so that we get the structure right will not, as she acknowledges, be simple. It will take years. But if we are going to give all our young people the opportunities they deserve we must get it right. Thanks to Professor Wolf we now have a guide to get us there.

Michael Gove MP,  
Secretary of State for Education.

# Foreword by the Minister of State for Further Education, Skills and Lifelong Learning John Hayes MP

Little makes more difference to people's lives than the empowerment they receive from education. But for those young people whose aptitudes and talents are practical, expectations are too often limited and opportunities restricted. For far too long vocational learning has been seen as the poor relation of academic learning.

While there have been many calls over the years for greater parity of esteem between academic and vocation qualifications, in practice this has meant making what is practical more academic, to the detriment of both. It is time, as the Secretary of State has said, that we recognise the 'inherent value of craftsmanship' – the intrinsic richness of manual work, practical and technical competences.

Recognising the value of practical skills matters for individuals and our society, and it matters for our economy too. Our future prosperity depends on building an advanced economy founded on high-level technical skills. To extend individual opportunity and rebalance our economy we must raise expectations and unleash talent. For those young people who choose the vocational route it must be a highway, not a cul-de-sac.

In September last year, the Secretary of State asked Professor Alison Wolf to investigate how we can ensure that vocational education provides for progression to higher learning and employment. Alison's report represents a fresh approach. Rather than advocating yet more qualification reform, it recommends that we embrace and extend the forms of vocational learning we know work well, both here and abroad. In particular, Alison identifies Apprenticeships as a key route to skilled employment and national prosperity.

To deliver economic growth with all that means for standards of living and communal wellbeing we must prioritise vocational learning, promote Apprenticeships and so produce a new generation of craftsmen and women capable of building Britain's future.

John Hayes MP,  
Minister of State for Further education, Skills and Lifelong Learning.

# Executive Summary

In England, today, around two and a half million young people are aged 14 to 19. The vast majority are engaged full or part time in education, and they are growing up in a world where long periods of study and formal credentials are the norm. Vocational education is an important part of that world. Most English young people now take some vocational courses before they are 16; and post-16 the majority follow courses which are largely or entirely vocational.

Vocational education today includes, as it always has, courses and programmes which teach important and valuable skills to a very high standard. It offers a direct route into higher education which has been followed by hundreds of thousands of young people; and prestigious apprenticeships which are massively over-subscribed. Conventional academic study encompasses only part of what the labour market values and demands: vocational education can offer different content, different skills, different forms of teaching. Good vocational programmes are, therefore, respected, valuable and an important part of our, and any other country's, educational provision.

But many vocational students are not following courses of this type. Alongside the many young people for whom vocational education offers a successful pathway into employment or higher education, there are hundreds of thousands for whom it does not. For example:

- Many of our 16 and 17 year olds move in and out of education and short-term employment. They are churning between the two in an attempt to find either a course which offers a real chance for progress, or a permanent job, and are finding neither.
- The staple offer for between a quarter and a third of the post-16 cohort is a diet of low-level vocational qualifications, most of which have little to no labour market value. Among 16 to 19 year olds, the Review estimates that at least 350,000 get little to no benefit from the post-16 education system.

- English and Maths GCSE (at grades A\*-C) are fundamental to young people's employment and education prospects. Yet less than 50% of students have both at the end of Key Stage 4 (age 15/16); and at age 18 the figure is still below 50%. Only 4% of the cohort achieve this key credential during their 16-18 education. Worse, the funding and accountability systems established by government create perverse incentives to steer 16+ students into inferior alternative qualifications.

The result is that many of England's 14-19 year olds do not, at present, progress successfully into either secure employment or higher-level education and training. Many of them leave education without the skills that will enable them to progress at a later date. The Review received many hundred submissions from individuals and groups with extensive knowledge of our vocational education system. Many highlighted its strengths and achievements. But none wanted to leave things as they are; nor did they believe that minor changes were enough. This is surely correct.

### ***What we want to achieve***

Our society believes in equality of opportunity for all its citizens. That means equipping young people for a world in which their education makes a critical difference to their future lives, and for an economy undergoing constant and largely unpredictable change. We need to make sure that vocational education for 14-19 year olds really does serve the purpose of creating and maintaining opportunities for all young people.

This review makes a number of detailed recommendations to that end. Underlying them are three very clear organising principles for reform.

***First***, our system has no business tracking and steering 14 year olds, or 16 year olds, into programmes which are effectively dead-end. Any young person's programme of study, whether 'academic' or 'vocational', should provide for labour market and educational progress on a wide front, whether immediately or later in life.

***Second***, we should tell citizens the truth. That means providing people with accurate and useful information, so that they can make decisions accordingly. Good information becomes more critical the more important the decisions. For young people, which vocational course, qualification or institution they choose really can be life- determining. 14-19 education is funded and provided for their sakes, not for the sake of the institutions who provide it. This may be a truism; but it is one which policy too often seems to ignore.

In recent years, both academic and vocational education in England have been bedevilled by well-meaning attempts to pretend that everything is worth the same as everything else. Students and families all know this is nonsense. But they are not all equally well placed to

know the likely consequences of particular choices, or which courses and institutions are of high quality. Making that information available to *everybody* is the government's responsibility. Too often, it, and its agencies, have failed at this task.

At issue here is not simply good general careers guidance and advice to individuals, to which everyone signs up happily. It is also, and fundamentally, about how government oversees and reports on performance. Vocational education has been micro-managed from the centre for decades. This is a bad idea, and not just because it is inherently ineffective. It also means that government takes direct public responsibility for success and failure, and finds it correspondingly impossible to be honest

**Third**, the system needs to be simplified dramatically, as a precondition for giving people good and accurate information, to free up resources for teaching and learning, and to encourage innovation and efficiency. English vocational education is extraordinarily complex and opaque by European and international standards. This is because of central government: its repeated, overlapping directives, and the complex, expensive and counter-productive structures that result. We have had over twenty years of micro-management and mounting bureaucratic costs, and it is time this changed.

Of course, good information is only helpful if people are able to act upon it. The institutional framework for 14-19 education is one in which most young people are already able to exercise a considerable degree of choice – and do. However, the review also looked at constraints on institutions' ability to respond efficiently to students' preferences and demand.

### ***The wider environment***

We know from well-based research studies that 30 or 40 years ago vocational routes offered young people better and more secure prospects than is the case today. It is always tempting to look back at a golden age; but trying to recreate 1960s education is not the answer. It was a different world and, above all, a different economy and labour market.

Today's vocational education system must respond to five key labour market characteristics. *First*, full-time education or training to age 18 is now the dominant pattern. In England, virtually everyone stays on post-GCSE, and an overwhelming majority participate to age 18. This change has knock-on effects for the labour market and is also in part a response to (and not just the mirror image of) the implosion of the youth labour market.

This change in the youth labour market is the *second* critical aspect of today's labour market which vocational education must recognise. It is quite recent and involves a

dramatic change in teenagers' options. Even twenty years ago, there were very large numbers of jobs available for 16 and 17 year olds. Today, this is not true, for a variety of reasons including changes in employment-related regulation and employers' assumptions about school-leavers' skills. In this and other respects, the English labour market is more and more like that of our major European neighbours.

*Third*, employers nonetheless continue to value and reward employment experience and not just formal credentials. Good apprenticeships are valuable as much for the general skills they teach as for the specific ones; and employment of any sort has value for people's later careers and chances. Even though formal credentials are seen as increasingly important, they are not, in fact, all-determining. Work experiences still offer an alternative progression route, while many formal qualifications are not worth having at all.

*Fourth*, good levels of English and Mathematics continue to be the most generally useful and valuable vocational skills on offer. They are a necessary precondition for access to selective, demanding and desirable courses, whether these are 'vocational' or 'academic'; and they are rewarded directly by the labour market throughout people's careers.

*Fifth*, young people change jobs very frequently, within a labour market which is also in constant flux. So students need general skills; and the educational system needs to respond quickly and flexibly to change. All five of these developments need to inform vocational as much as academic curricula.

### ***The way forward***

Today's labour market conditions bear very hard on young people. Underlying structural trends have been made worse by recession. We need to ensure that students have every opportunity to gain the most important and generalisable skills, including those gained in employment. This means making certain that institutions focus on students' demands and needs, not those of government agencies, and that the funding and oversight regime for 14-19 year olds helps institutions to be flexible, efficient, and directly responsive to labour market changes. Government should focus on its key roles of monitoring and ensuring quality, and providing objective information, and withdraw from micro-management.

To that end, the Review proposes some major changes. Funding should be on a per-student basis post-16 as well as pre-16, and institutions should be expected to offer and provide coherent programmes of study, within broad parameters, rather than being funded on the basis on individual qualifications. Post-16, English and Mathematics should be a required component of study programmes for those without good GCSEs in these subjects. Programmes will vary in how they organise this, depending on the

students concerned. For some, intensive remedial reading will be required; for others, alternative qualifications such as the Free-standing Mathematics qualifications will be appropriate; for others, immediate GCSE re-sits. Every other country in the developed world concentrates on improving the language and mathematics skills of its post-16 vocational students, and so, belatedly, should England.

At the same time, there should be much greater freedom for awarding bodies to develop and for institutions to offer the vocational qualifications they prefer for 16-19 year old students. Regulation should move away from qualification accreditation towards awarding body oversight, and there should be no obligation for vocational qualifications for 16-19 year olds to be part of the Qualifications and Credit Framework.

Pre-16, it is critical that young people not be tracked in irreversible ways. High quality vocational qualifications can and should be identified by the government, as part of its task of providing objective information to citizens. Only those qualifications – both vocational and academic – that meet stringent quality criteria should form part of the performance management regime for schools. However, schools should also be free to offer whatever other qualifications they wish from regulated awarding bodies.

Performance measures should also reinforce the commitment to a common core of study at Key Stage 4, with vocational specialisation normally confined to 20% of a pupil's timetable; and should remove incentives for schools to pile up large numbers of qualifications for 'accountability' reasons. This retention of a large common core is, the Review notes, consistent with recent developments and current practice among our European and other OECD partner nations

The proposed changes to funding and accountability regimes should remove the perverse incentives which currently encourage schools and colleges to steer young people into easy options, rather than ones which will help them progress. This should reduce costs, and allow closer and more direct links among awarding bodies, employers and 'providers' (i.e. schools, colleges and training providers.) In addition, the Review suggests a number of other measures which should improve the quality and efficiency of provision.

Clarifying and activating the legal right of colleges to enrol students under 16 should increase 14-16 year olds' access to high quality vocational provision, and increase the range of institutional innovation. The Review also recommends reforms in teacher qualification requirements and that QTLS (the FE equivalent of Qualified Teacher Status) should be recognised in schools. It recommends that employers should be directly involved in quality assurance and assessment activities at local level, and argues that this is the most important guarantor of high quality vocational provision. The proposed

funding changes should also make it easier for institutions to collaborate in innovative ways.

Last but by no means least major efforts should be made to provide greater access to the workplace for 16-18 year olds. Apprenticeship offers great opportunities to young people, and this government is, like its predecessor, committed to increasing apprenticeship numbers. However current trends underline the difficulty of doing so rapidly for those under 19. The Review therefore recommends subsidies to employers when they are involved in general education rather than specific skill training. It calls for apprenticeship contracting arrangements to be aligned with international best practice, through joint activity by DfE and BIS. It also recommends, as a matter of urgency, that more 16-19 year olds be given opportunities to spend substantial periods in the workplace, undertaking genuine workplace activities, in order to develop the general skills which the labour market demonstrably values.

Vocational education already offers great benefits to many of our young people, and makes enormous contributions to the economy and to their lives. The recommendations of this Review are designed to extend these benefits, and offer better education and training, better prospects, and continued opportunities for progression to all English young people.

# Recommendations

## **Recommendation 1**

The DfE should distinguish clearly between those qualifications, both vocational and academic, which can contribute to performance indicators at Key Stage 4, and those which cannot. The decision criteria should be explicit and public. They will include considerations of depth and breadth (including consultation with/endorsement by relevant outside bodies), but also assessment and verification arrangements which ensure that national standards are applied to all candidates.

## **Recommendation 2**

At Key Stage 4, schools should be free to offer any qualifications they wish from a regulated Awarding Body whether or not these are approved for performance measurement purposes, subject to statutory/health and safety requirements.

## **Recommendation 3**

Non-GCSE/iGCSE qualifications from the approved list (recommendation 1 above) should make a limited contribution to an individual student's score on any performance measures that use accumulated and averaged point scores. This will safeguard pupils' access to a common general core as a basis for progression. At the same time, any point-based measures should also be structured so that schools do not have a strong incentive to pile up huge numbers of qualifications per student, and therefore are free to offer all students practical and vocational courses as part of their programme. (See also Recommendation 26 below)

## **Recommendation 4**

DfE should review current policies for the lowest-attaining quintile of pupils at Key Stage 4, with a view to greatly increasing the proportion who are able to progress directly onto Level 2 programmes at age 16. Performance management indicators and systems should not give schools incentives to divert low-attaining pupils onto courses and qualifications which are not recognised by employers or accepted by colleges for progression purposes. (See also recommendation 28)

### **Recommendation 5**

The overall study programmes of all 16-18 year olds in ‘vocational’ programmes (i.e. currently everything other than A levels, pre-U and IB, and including ‘Foundation Learning’) should be governed by a set of general principles relating primarily to content, general structure, assessment arrangements and contact time. Provided these are met (and see recommendation 6 below), institutions should be free to offer any qualifications they please from a recognised (i.e. regulated) awarding body, and encouraged to include non-qualifications-based activity.

### **Recommendation 6**

16-19 year old students pursuing full time courses of study should not follow a programme which is entirely ‘occupational’, or based solely on courses which directly reflect, and do not go beyond, the content of National Occupational Standards. Their programmes should also include at least one qualification of substantial size (in terms of teaching time) which offers clear potential for progression either in education or into skilled employment. Arrangements for part-time students and work-based 16-18 year olds will be different but the design of learning programmes for such students should also be considered.

### **Recommendation 7**

Programmes for the lowest attaining learners – including many with LDD as well as those highly disaffected with formal education – should concentrate on the core academic skills of English and Maths, and on work experience. Funding and performance measures should be amended to promote a focus on these core areas and on employment outcomes rather than on the accrual of qualifications.

### **Recommendation 8**

The DfE and BIS should evaluate the extent to which the current general education components of apprenticeship frameworks are adequate for 16-19 year old apprentices, many of whom may wish to progress to further and higher education. It does not appear appropriate, given this Government’s commitment to progression through apprenticeship, that frameworks should, as at present, be drawn up entirely by SSCs, who conceive their role in relation to *current* employers, and current, occupationally specific job requirements. The review of frameworks should also consider ways to increase flexibility and responsiveness to local labour markets and conditions.

**Recommendation 9**

Students who are under 19 and do not have GCSE A\*-C in English and/or Maths should be required, as part of their programme, to pursue a course which either leads directly to these qualifications, or which provide significant progress towards future GCSE entry and success. The latter should be based around other Maths and English qualifications which have demonstrated substantial content and coverage; and Key Skills should not be considered a suitable qualification in this context. DfE and BIS should consider how best to introduce a comparable requirement into apprenticeship frameworks.

**Recommendation 10**

DfE should continue and if possible increase its current level of support for CPD for mathematics teachers, and give particular attention to staff who are teaching post-16 students in colleges and schools. DfE and BIS should discuss the possibility of joint funding for post-16 CPD activities in English and Mathematics, especially as they relate to apprentices and to general FE colleges recruiting adults as well as young people.

**Recommendation 11**

Funding for full-time students age 16-18 should be on a programme basis, with a given level of funding per student. (This can and should be adjusted for differences in the content-related cost of courses, and for particular groups of high-need student.) The funding should follow the student.

**Recommendation 12**

There should continue to be no restrictions placed on a young person's programme in terms of which level or type of qualification they can pursue. If it is appropriate for a student or apprentice to move sideways (or indeed 'downwards') in order to change subject or sector, that is their choice.

**Recommendation 13**

Young people who do not use up their time-based entitlement to education (including apprenticeship) by the time they are 19 should be entitled to a corresponding credit towards education at a later date. The existing system of unique student numbers plus the learning accounts being developed by BIS should make this straightforward.

### **Recommendation 14**

Employers who take on 16-18 year old apprentices should be eligible for payments (direct or indirect), because and when they bear some of the cost of education for an age-group with a right to free full- time participation. Such payments should be made only where 16-18 year old apprentices receive clearly identified off-the-job training and education, with broad transferable elements.

### **Recommendation 15**

DfE and BIS should review contracting arrangements for apprenticeships, drawing on best practice internationally, with a view to increasing efficiency, controlling unit costs and driving out any frictional expenditure associated with brokerage or middleman activities that do not add value.

### **Recommendation 16**

DfE and BIS should discuss and consult urgently on alternative ways for groups of smaller employers to become direct providers of training and so receive ‘training provider’ payments, possibly through the encouragement of Group Training Associations (GTAs).

### **Recommendation 17**

At present teachers with QTS can teach in FE colleges; the FE equivalent – QTLS – should be recognised in schools, which is currently not the case. This will enable schools to recruit qualified professionals to teach courses at school level (rather than bussing pupils to colleges) with clear efficiency gains.

### **Recommendation 18**

Clarify and evaluate rules relating to the teaching of vocational content by qualified professionals who are not primarily teachers/do not hold QTLS. Many schools believe that it is impossible to bring professionals in to demonstrate/teach even part of a course without requiring the presence of additional, salaried teaching staff. This further reduces the incidence of high quality vocational teaching, delivered to the standards that industries actually require.

### **Recommendation 19**

Make explicit the legal right of colleges to enrol students under 16 and ensure that funding procedures make this practically possible. Colleges enrolling students in this age group should be required to offer them a full KS4 programme, either alone or in collaboration with schools, and be subject to the same performance monitoring regime (including performance indicators) as schools.

**Recommendation 20**

All institutions enrolling students age 16-18 (post-KS4), and those offering a dedicated entry route for 14-year old entrants, should be required to publish the previous institutions and, where relevant, the qualifications and average grades at the time of enrolment of previous entrants. (This should be done on a course-related rather than an institution-wide basis)

**Recommendation 21**

DfE should evaluate models for supplying genuine work experience to 16-18 year olds who are enrolled as full-time students, not apprentices, and for reimbursing local employers in a flexible way, using core funds. Schools and colleges should be encouraged to prioritise longer internships for older students, reflecting the fact that almost no young people move into full-time employment at 16; and government should correspondingly remove their statutory duty to provide every young person at KS4 with a standard amount of “work-related learning”.

**Recommendation 22**

DfE should encourage Ofqual to move as quickly as possible away from regulating individual vocational qualifications and concentrate on regulating awarding bodies. When there is reason for concern about a particular qualification, Ofqual should continue to intervene.

**Recommendation 23**

DfE should confirm and clarify that qualifications offered to 14-19 year olds and funded through YPLA will not in future need to be either QCF-compliant or belong to a specified group with additional approval criteria (GCSE, A Level, Diploma etc). They should, however, be offered by a regulated awarding body. As an immediate and temporary measure the Secretary of State should use his powers, under Section 96, to approve the funding of key established qualifications which have not been approved by SSCs, and have therefore not been accredited, but which are recognised by DfE as playing an important role in the country’s vocational education system, and which are clearly valued by employers and/or higher education.

**Recommendation 24**

DfE and BIS should discuss and consult on the appropriate future and role of National Occupational Standards in education and training for young people, and on whether and how both national employer bodies – including but not only SSCs – and local employers should contribute to qualification design.

### **Recommendation 25**

The legislation governing Ofqual should be examined and where necessary amended, in order to clarify the respective responsibilities of the regulator and the Secretary of State

### **Recommendation 26**

DfE should introduce a performance indicator which focuses on the whole distribution of performance within a school, including those at the top and bottom ends of the distribution.

### **Recommendation 27**

At college and school level the assessment and awarding processes used for vocational awards should involve local employers on a regular basis. Awarding bodies should demonstrate, when seeking recognition, how employers are involved directly in development and specification of qualifications.

# Scope

The purpose of this review is:

To consider how we can improve vocational education for 14-19 year olds and thereby promote successful progression into the labour market and into higher level education and training routes.

‘Vocational education’ for 14-19 year olds can incorporate a wide range of provision, with very different purposes and outcomes. We have never, in this country, adopted an official definition. We do, however, have a relevant working one available. 14-19 is a highly regulated phase of education dominated by formal qualifications; and regulators currently require that all these qualifications other than GCSEs, A levels, iGCSEs and the IB incorporate clear vocational content and referencing. This rule usefully delineates the scope of this enquiry as involving, at a minimum, any such qualifications delivered to 14-19 year olds, and all young people on courses leading to them. This group of students is the focus of the Review.

# Part One: Introduction

In England, today, around two and a half million young people are aged 14 to 19. The vast majority are engaged full or part-time in education, and they are growing up in a world where long periods of study and formal credentials are the norm. It is a world in which record numbers of people enter university, and in which the aspiration to higher education is almost universal among the parents of young children. And it is one in which governments must and should acknowledge families' and students' aspirations, and take seriously their own political commitments to equal opportunity. No young person should be in an education or training programme which denies them the chance to progress, immediately or later in life, or fails to equip them with the skills needed for such mobility.

The world of our 14-19 year olds is also one of very high youth unemployment and continuing economic change. It is a world in which employers value the skills learned in employment and the workplace, as well as those acquired in classrooms; and in which a substantial number of economically important and well-paid jobs, such as doctor, chef, or aircraft maintenance engineer, require skills acquired through demanding and vocationally specific study and training. Many of today's teenagers, like those of preceding generations, do not want to remain in academic programmes; they want to be in work, treated as (and earning like) adults, even though they may well return to study later. And a sub-group, because of personal circumstances, struggles to cope or engage with school or training of any sort.

So how good is the education we are providing for these young people, and for their, and our, future? Good only in parts; which is to say, not good enough.

14-19 education covers 'academic' as well as 'vocational' subjects. But asking about 14-19 education inevitably means asking about vocational education, because it involves the overwhelming majority of the 14-19 cohort. A small minority follow entirely academic GCSEs, but most 14-16 year olds take some form of 'vocational' qualification, and some follow a programme in which GCSEs play quite a small part. Post-GCSE, about a third take only A levels, the conventional 'academic' route. In other words, two-thirds do not – and almost all of these young people will spend all or some of the years from 16 to 19 on courses which are partly or wholly 'vocational'.

Many of these courses are excellent. They include well-established post-16 routes into higher education and skilled employment, taken by a quarter of the cohort. They include high quality apprenticeships, some of which are over-subscribed to a far higher degree than any Oxbridge or Russell Group university course. They include imaginative and exciting options for 14-16 year olds.

But English education is also failing far too many people; and those who are ill-served are to be found, overwhelmingly, outside the conventional academic tracks. A good deal of vocational provision allows for clear progression into higher levels of education and employment. But among 16 and 17 year olds about a third are in, or moving in and out of, ‘vocational’ provision which offers no clear progression opportunities. Meanwhile apprenticeship programmes, which become ever more important as our youth labour market implodes, remain too rare, and an increasing proportion are offered to older people, not to teenagers. As explained below,<sup>1</sup> I estimate that at least **350,000 young people in a given 16-19 cohort are poorly served by current arrangements. Their programmes and experiences fail to promote progression into either stable, paid employment or higher level education and training in a consistent or an effective way.**

This is not just the fault of educational provision. It also reflects recent and major changes in the labour market which have closed off opportunities enjoyed by previous generations. However, many of our vocational programmes are not as good as they could or should be, in terms of what either the labour market or higher education demand. These failures are not despite but *because* of central government’s constant redesign, re-regulation and re-organisation of 14-19 education. And the numerous examples of good quality innovation and success are achieved not with the help of our funding and regulatory system, but in spite of it. This is in spite of unprecedented levels of spending; and after thirty years of politicians proclaiming, repeatedly, their belief in ‘parity of esteem’ for vocational and academic education.

The priority must be to move 14-19 vocational education away from the sclerotic, expensive, centralised and over-detailed approach that has been the hallmark of the last two decades. Such a system inevitably generates high costs, long delays and irrational decisions. The best international systems, in contrast, delegate a large amount of decision-making and design to the local level.

England has a large population and a complex economy. It has thousands of education and training institutions, and hundreds of thousands of employers, all of them with a more or less active stake in vocational education. They need to be involved far more directly with each other, and with the awarding bodies who design and deliver

qualifications. This does not mean abandoning accountability – but it means combining a small amount of tight oversight and outcome measurement with far less micro-management and far less centralised dictat.

**This review therefore proposes a fundamental simplification of the vocational education system for 14-19 year olds.** It proposes major changes in its organisation and funding, its regulatory structures, and its quality assurance mechanisms. These will allow institutions to respond to local and changing labour markets; and engage employers more directly in delivery and quality assurance. They will give schools greater access to vocational professionals, and young people greater access to specialised instruction. The proposed changes will increase efficiency across the system, and reduce direct expenditures in a number of areas. It will also ensure that the courses and qualifications offered to young people have genuine labour market value and credibility.

While decentralisation and flexibility are critical, central government retains a core responsibility to set broad policy and assure quality. It must ensure that our education system takes account of a changing world, of the demands made by the labour market, and the world economy, and of what this implies for young people's long-term progression, opportunity and success. It must also assure basic quality.

**Coherent programmes of learning and activity for *all* young people should be the centre of attention for educational institutions, and for funding and oversight systems.** Young people need to think about their education as a whole, and institutions need to help them to do so, and be rewarded for this. Policy-making, funding, and oversight should encourage this rather than militating against it. Unfortunately Government has instead created a situation which encourages institutions to pile up qualifications with a highly short-term focus. The review duly calls for major changes in funding mechanisms, and in accountability measures. They will shift the focus towards programme delivery and away from individual qualifications chosen for financial reasons, or to improve league table performance.

There are no recommendations for new centrally written qualifications, or for mutually exclusive and rigid pathways. We should recognise that our awarding bodies are a potential source of innovation and quality as well as deeply embedded in our whole education system and labour market. We should also take seriously what the labour market tells us about the importance of genuine employment experience, and do far more than at present to help young people obtain it.

If we can shift vocational education in the directions summarised, we will have done an enormous amount to promote young people's progression – both directly and indirectly

into the labour market, and both directly and indirectly into higher level education and training. We must make that change.

In order to set the review's detailed recommendations in context, the next two sections identify key issues in the English labour market, to which vocational education must respond, and summarise the current structure of 14-19 'vocational' education in England, which is unfamiliar to many people, even those working in education. Part Four analyses the major problems with current arrangements, and Part Five makes a series of recommendations for change.

### **Box 1**

There is no formal definition of 'vocational education' in England, and the term is applied to programmes as different as the highly selective, competitive and demanding apprenticeships offered by large engineering companies and the programmes which recruit highly disaffected young people with extremely low academic achievement. Some submissions to the review were concerned that using the term 'vocational' for the latter was wrong, and damaged the former. Others insisted that low-achievers needed vocational programmes and vocational qualifications and argued for their protection.

The many ways in which the term vocational is used reflect the many different purposes which 14-19 education serves and its large and diverse student body. Some qualifications are highly specific, oriented to a particular occupation. Others are more general, and are referred to sometimes as vocationally-related or pre-vocational. Some are very difficult and demanding, others not. A particular qualification can serve different groups, some with a clear career goal and others without, just as for a particular individual, a combination of the highly specific and the highly general may be more appropriate than just one or just the other.

No government report can change the way people use language. And giving something a new name in official discourse simply means that the new name acquires the overtones and connotations of the old. What can be examined clearly is whether or not different educational pathways encourage young people's progression. This was the charge given to the review; and it is in this light that it examines the whole range of vocational education for English 14-19 year olds.

# Part Two: The Social and Labour Market Context

Our education system operates in a wider social and economic context which has changed dramatically in recent years; and the same is true of our OECD partners. The whole developed world, including England, is today characterised by:

- a vanishing youth labour market. Most countries also have very high unemployment among 19-24 year olds
- high returns, on average, to education and qualifications. The returns vary, however, not only by level but also by subject and type; and countries vary greatly in the level of absolute (as opposed to relative) returns to different types of qualification
- a more or less universal aspiration to higher education. For example, among children born in the UK in 2000 (the Millennium Cohort) 98% of all mothers, and 96% of mothers with minimal or no formal qualifications, want their children to go to university<sup>2</sup>
- high returns to employment experience and to apprenticeship
- rapid economic change with major implications for the job market. Much of this is in directions that were completely unpredicted thirty years ago, and significant aspects have been ignored or misunderstood by governments.

All these features of society and the economy have major implications for 14-19 education, and especially the future of its 'vocational' programmes. In the past, a number of important policies have rested on a mis-reading of how the labour market actually functions, and what it demands. If we are going to do better in the future, we need to be aware of, and responsive to, the labour market realities of today.

## *1. The collapse of youth labour markets*

Only a few decades ago, the large majority of young people were in full time employment by their mid teens. Today, **full-time education until the age of 18** is the OECD norm. The major exception to this pattern is that in some countries a sizeable number of young people are **apprentices, with apprenticeship contracts** – which means they are employed, albeit under specialised conditions.

The numbers who enter apprenticeship vary greatly, although, as discussed below, the English system is unique in a number of respects. To take three very different examples, in Germany, around two-thirds of an age cohort undertakes an apprenticeship by the time they are 25 (though many are not able to find one immediately after leaving school). In Denmark around a third do so. France, which resembles England in its emphasis on formal qualifications, has successfully revived apprenticeship with recruitment now around 8% and rising, and high proportions on advanced ('level 3') courses. The consensus of all studies of apprenticeship is that it is generally a highly effective route into stable employment.<sup>3</sup> Apprenticeships tend to be highly sought after. In Germany, for example, there are regular and sometimes severe problems with over-demand/under-supply, even though large numbers of employers offer places; Denmark and France report similar problems.<sup>4</sup>

Apprenticeship aside, fewer and fewer young people are in employment; education participation rates are at record levels; and among those young people who are looking for work, unemployment rates are high.

This pattern holds, to varying degrees, everywhere in the developed world. English policy has been designed, for many years, to increase participation, and retain the whole cohort in education or training throughout the upper secondary (16-18) phase. What has not been widely recognised is that this has, more or less, already occurred. *In 2009/10, 94% of 16 year olds (year 12, post-GCSE) were enrolled in education or (for a small proportion) apprenticeships; so were 85% of those aged 17.*<sup>5</sup>

The rapid change in young people's typical activity and experiences can be summarised using three of the big longitudinal studies for the UK which look at people born in 1958, 1970 and 1991 respectively. Table 1 below summarises their activity at age 18 and highlights both the steep decline in employment – from three quarters to 40% – and the increase in the proportion 'out of the workforce.' While the latter figure is partly cyclical, because of the 2009 recession, it also reflects another change in the English labour market. Young people have always suffered first and most in recessions, but England is now also increasingly like other European countries in having very high structural youth unemployment rates, up to and including 25 year olds.<sup>6</sup>

Table 1 (adapted from Schoon and Duckworth (2010)<sup>7</sup>)

3 UK Cohorts at Age 18

	NCDS: born in 1958, aged 18 in 1976	BCS: born in 1970, aged 18 in 1988	LSYPE: born in 1991, aged 18 in 2009
Employed (with or without off-the-job training )	74%	68%	40% (33% paid work, 6% apprenticeship)
FT education or training	17%	25%	45%
Out of the Labour Force	9%	7%	16%

Why has this happened? While there are no definitive studies, both recent English patterns and comparisons with Europe suggest that increased participation is only partly because of the economic ‘pull’ of higher-level qualifications, and partly because *young people are pushed into education*, by a lack of jobs. This is borne out both by the ‘churning’ in and out of the labour market that characterises many young people’s early years of employment (see below), and, in the English case, by the large numbers of 16 and 17 year olds (10% in 2009) who report that they are in education and training but would accept a job offer if available.<sup>8</sup>

The young have suffered more in the current recession than have older workers; but that is par for the course. What is striking is that, during the boom years that preceded 2009, youth unemployment was also rising. This shows up clearly for both 16-17 year olds and for 18-24 year olds in the unemployment statistics: see Figures 1a and 1b below. In the case of 16-17 year olds, those actively looking for work were finding it harder to find it (hence the unemployment rate rose): but fewer and fewer were doing so, meaning that, as a proportion of the age group, the numbers unemployed have remained quite stable.

Figure 1a: 16-17 year olds, unemployment<sup>9</sup> (UK)

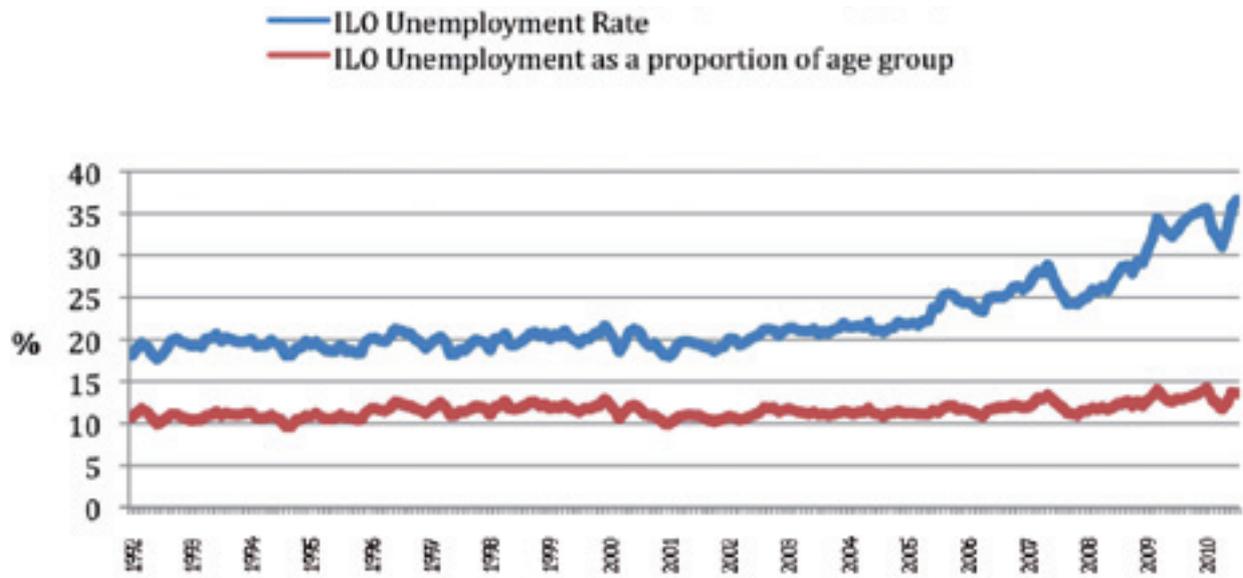
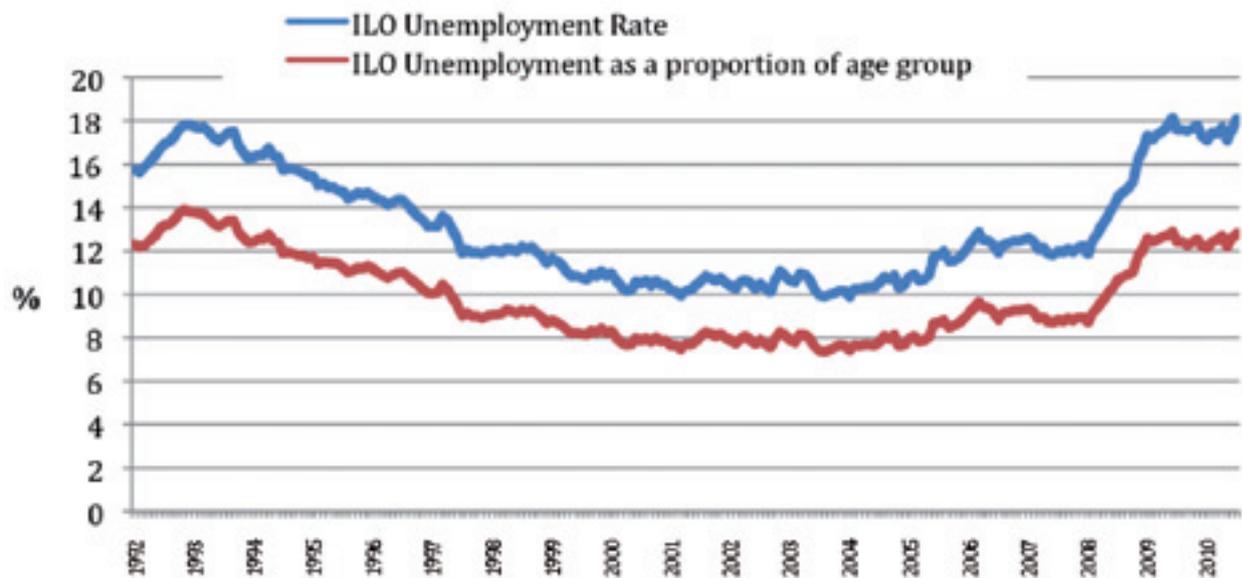


Figure 1b – as above for 18-24 year olds



ONS: Labour Market Statistics Historical Supplement

Running parallel to these figures are big increases in the numbers enrolled in formal education (especially 16-18), and some rather more complex changes in the proportions of people who are ‘NEET’ – not in education, employment or training. DfE estimates show that, for 16-18 year olds,<sup>10</sup> the percentage who were ‘NEET’ was high in the early ’90s (also reflecting recession), fell very sharply in the late ’90s, but then rose again to early ’90s levels in 2005, in spite of a booming economy. Since then, proportions have fallen again (though remaining well above those of 2000). However, on a rather looser definition, namely those who state that their main economic activity is neither education, employment or training, numbers and proportions have continued to rise.<sup>11</sup>

According to LSE economists who have analysed the data, this ‘suggests that many more teenagers are choosing to stay in school rather than face a hostile labour market. The planned extensions of compulsory schooling will cement these trends.’<sup>12</sup>

## **Box 2**

Youth unemployment was actually falling in England from the late 80s to the early 2000s, and started to rise well before recession (2004 onwards). LSE researchers have examined whether, in the specific English case, record levels of immigration might be important, and concluded this is unlikely.<sup>13</sup> IFS research also dismisses the suggestion that the problem lies with older people remaining in the labour force for longer than in the past.<sup>14</sup>

Professor Anna Vignoles points out that the absolute size of recent teenage English cohorts has been very large, which may translate into higher unemployment rates.<sup>15</sup>

## **The nature of the labour market**

The conventional wisdom has been that developed countries need to employ more and more ‘knowledge workers’, that the skill requirements of all jobs are rising fast, and that unskilled employment will effectively vanish. These ideas imply that youth unemployment is likely to be the result of the young people concerned not having high enough skills, and have driven recent governments’ policy on both skills and productivity.<sup>16</sup>

However, the argument that there is a severe shortage of skills across the whole labour force is impossible to sustain. (See Box 3 and Table 2) Youth unemployment is an OECD-wide problem. European experience of long-standing youth unemployment, current experience with English apprenticeships, and rising credentialism<sup>17</sup> at the higher ends of the occupational scale also suggest that a self-reinforcing dynamic may be at work.

### Box 3 Over-education and skill shortages

There is a substantial literature which examines whether and how often individuals are over-qualified for their jobs, in the sense of holding formal qualifications at a level higher than is required to carry them out. They are consistent in finding high levels of over-education in this sense: typically between a quarter and a third of contemporary employees fall in this category.<sup>18</sup> At national level, government research confirms that the number of individuals holding a qualification at a given level is far higher than the number of jobs that require that level of certificate in every category except jobs requiring no formal qualification at all.<sup>19</sup> Employer surveys also indicate that skill shortages are generally low on their list of issues and problems.<sup>20</sup>

However, this general picture can be and is combined with shortages, sometimes acute, in specific areas. One important piece of evidence for this is the very different returns to different degree subjects. At present, quantitative degrees currently bring especially high returns in the English labour market (as does law), and have done for a good many years.<sup>21</sup> This suggests a genuine shortage of quantitative, and especially mathematics, skills; something which is confirmed, at a more micro level, by employer surveys. Similarly, data analysis by the UK Commission for Employment and Skills indicates genuine skill shortages in a number of specific occupations and sectors.

A sizeable number of European countries have, for many years, had ‘dual’ labour markets, combining secure jobs for a large number of employees with very insecure, short-term employment for others, especially the young. This has been the result of restrictive employment legislation, which dissuades employers from hiring. France is a clear example of this, recorded and analysed in depth by, for example, researchers at CÉREQ.<sup>22</sup> England has boasted of its flexible labour market, but this has changed in significant ways. Recent years have seen, for example, the introduction of legislation which directly or effectively bars young people from a number of traditional forms of employment (such as childcare.) More generally, under current labour market regulation, employers fear that it will be very difficult to dismiss workers once hired,

As figures indicate (see below and Appendix VII), and as National Apprenticeship Service officials, the Association of Learning Providers and individual providers have confirmed to the Review, it is now much easier to find apprenticeship places for those over 18 than under 18. Most employers interviewed for this Review also confirmed their reluctance to take on 16 and 17 year olds as apprentices, citing health and safety concerns which must also, one assumes, apply to the shrinking number of ‘normal’ hires.

It seems also to be the case that employers see those young people (16 or 17) who are looking for employment as likely to be low-achieving, or below average in terms of personal qualities such as application and perseverance. This perception is a direct result of the ever-greater proportion of the cohort who do remain in full time education: the more young people stay in education, the more employers perceive the remainder as ‘low quality’. *This does not mean these young people are, necessarily, without the skills needed to do the jobs they are applying for – but they are perceived as likely to be.*<sup>23</sup> From an employer’s viewpoint, when 70% of 16 and 17 year olds were in the labour market, he or she had a good chance of hiring a ‘good’ employee at that age. Now, the chance is perceived to be much lower – and so they prefer older applicants.

It is difficult to quantify the effects of such perceptions. They are, however, a mirror image of what seems to be happening at the graduate employment end of the market, where many jobs which were once open to 18 or even 16 year old leavers are now ‘graduate entry’, without actually having changed substantively. Often, jobs have become ‘graduate entry’ because that way employers feel they can target the top end of the market, including the sort of young people they might once have hired at 18 and who now go on to university.<sup>24</sup>

## ***2. High returns to education and qualifications***

As might be deduced from the previous section, modern labour markets are a place where education and qualifications ‘pay’. The more education you acquire, and the more qualifications you obtain, the higher your earnings are likely to be, and the lower your chances of unemployment. This explains the huge growth in demand for university places all over the world, as young people and their families respond to the changing labour market around them.<sup>25</sup> The mothers of ‘Millennium Cohort babies’, who so overwhelmingly want their children to enter higher education,<sup>26</sup> understand their children’s world. **Indeed on average, and over time, individuals are generally good at recognising what is of value in their local labour market – if not always able to obtain it.**<sup>27</sup> This is not just true for degrees. For example, waiting lists for plumbing courses have soared since people became aware of the current earning potential of a plumber; and apprenticeships with companies such as Rolls Royce and Airbus attract enormous numbers of applications.

‘Returns to qualifications’ denote the fact that someone with a given type or level of qualification earns more, on average *in comparison with* someone who is like them in every respect other than holding the qualification in question. The point is not whether more educated people earn more on average (which they do). Instead, ‘the relevant question is subtly, but crucially, different: do people with more education earn more, on average, than if *they* had acquired less education?’<sup>28</sup> If the answer is yes, then getting other people to undertake that sort of education will be, *prima facie*, a good idea: they, too, are then likely to earn more. And if not, not. The question is far more relevant to policy-makers than simply whether graduates, or BTEC National Diploma holders earn more than the average (which they do); and far harder to answer.

Since returns are a *relative* measure, in a world where almost everyone obtains some sort of qualification, it is impossible for all of them to be highly ‘profitable’.<sup>29</sup> Other things being equal, high returns to a particular form of qualification mean high demand for, or short supply of, the skills and qualities to which it attests. If returns to all qualifications are fairly low, this could mean that no-one was acquiring any useful skills – or that all qualifications were rather good. The returns will also reflect other factors such as whether a country’s economic system generates high levels of income inequality, or, as in Scandinavia, actively works to prevent them emerging.

The English labour market offers very high returns to degrees, in absolute and relative terms, compared to most other European countries.<sup>30</sup> It also offers very low returns indeed to low-level vocational qualifications obtained in educational institutions or training schemes. These often appear as negative in analyses, indicating that people earn less as a result of taking them than if they had skipped the qualification and remained in employment. In other words, *many English low-level vocational qualifications currently have little to no apparent labour market value*. Typical figures from research in this area (of which there has been a great deal; see Appendix 3), are shown in table 2.

The figures here relate to ‘level 2’ qualifications. English governments first assigned ‘levels’ to qualifications when National Vocational Qualifications were created in the early 1990s, and government departments have since then worked to ensure that all qualifications provided in publicly funded education are given a formal level. The level indicates (in theory) the difficulty of a qualification, and how much it demands of people. So level 2 qualifications include GCSEs at grades A\*-C as well as a wide range of vocational awards; A levels are level 3, and so on. Table 2 shows that occupationally specific level 2 vocational awards (NVQs) generally offer poor or even negative returns, and are of particularly low value to males who obtain them in college or on public training schemes, and whose wages are on average 12% or 23% lower than those of matched contemporaries who are ‘less’ qualified.

**Table 2: Wage Returns to NVQ Level 2 qualifications (proportional increase/decrease in wages for those with an NVQ level 2, compared to individuals with either no qualifications, or level 1 qualifications only.)**

	Males	Females
All (average)	-0.054	-0.008
Qualifications obtained at College	-0.116**	-0.009
Qualifications obtained in employment	0.018	0.017
Qualifications obtained in government training scheme	-0.225**	-0.166

\*\* significance at 5% level. Source Dearden, McGranahan and Sianesi (2004) Labour Force Survey data.

Returns to qualifications are, to repeat an earlier point, not simply about the quality of the education and skills they signal. They also reflect more general features of a labour market.<sup>31</sup> But for both reasons, they provide important information on whether there is a good fit between education and that labour market, and whether we provide people with an *education which justifies the time and money that they and we spend on it.*

These figures suggest very clearly that in England we frequently do not. Large gaps between the rewards from ‘top’ qualifications and low-level ones may reflect the high quality of English degrees. But it may also, as some leading commentators have concluded, show the low quality of many of our qualifications and of the education we give to many of our lower-achieving pupils.<sup>32</sup> **Level 1 and 2 vocational awards are central to much of 16-19 provision. It is therefore of particular concern that researchers consistently find them associated with low and negative returns.**

Conversely, English and mathematics skills are extremely important for labour market entry, and continue to have a significant impact on career progression and pay. Individuals with very low literacy and numeracy are severely disadvantaged in the labour market.<sup>33</sup> English and Maths GCSE (A\*-C) are of critical importance for employment. Employers use them as a signal and sifting device and they are also of critical importance for entry into selective programmes post-16, and HE. As Professor Lorna Unwin told the Review,

**“There is only one real Level 2. Maths and English A\*-C.”**

Skill shortages are not, on the whole, identified by employers as a major issue or problem (box 3 above) However, the UKCES do identify a number of specific shortages, which are largely in STEM-related areas.<sup>34</sup> (The other major shortage areas tend to be in construction).<sup>35</sup>

The discussion so far has focused on the value of the skills to which a qualification attests. But it is important to emphasise that employers are not always looking for skills which align in a one-to-one way with a particular qualification: much of the time they use qualifications as signals of general rather than highly specific skills.<sup>36</sup> They also necessarily rely on those with which they are familiar, and which they can interpret, either in terms of content or as an indicator of someone's likely relative ability.<sup>37</sup> Research on employers' hiring practices shows that, in England, employers not only concentrate on a limited number of familiar qualifications as screening and selection tools, but have consciously decided not to try and keep up with constant reform and change.<sup>38</sup>

In England, degrees are highly valued. So are A levels (especially Maths, which carries significantly higher returns than other A levels) and English and Maths GCSE. BTEC National Diplomas are also valuable in the labour market,<sup>39</sup> and a familiar and acknowledged route into higher education, alone or in conjunction with 1 or 2 A levels. Traditionally, established 'craft' qualifications – from City and Guilds and the now-vanished RSA<sup>40</sup> – also show clear income returns for adults holding them.<sup>41</sup> **Conversely, as already noted, many low level vocational qualifications, obtained outside apprenticeship, do not bring their holders any apparent income gains whatsoever.** This includes many 'level 2' qualifications, officially classified as equivalent to GCSE A\*-C.

### ***3. High returns to apprenticeship and employment***

While employers may be unwilling to offer full-time employment to young school-leavers, there is a wealth of evidence indicating that they value work experience, and that the best way to obtain a job is to have one – and failing that, to at least have had one recently.<sup>42</sup> This is partly because a genuine workplace teaches both general and specific work-skills more effectively than any education-based simulation can, however hard it tries; and partly because, as noted above, employers use employment records as signals that individuals have acquired important character traits and ways of behaving.

The general returns to employment are very important in explaining why apprenticeship shows such high returns, both historically and today, and in understanding what it offers young people. As already noted above, apprenticeships are valuable even though many of the qualifications taken by apprentices have low returns when obtained in other settings. This may be partly a reflection of differences in substantive skills (even though people have the 'same' qualification) but it also reflects the general aspects of apprenticeship. These make **apprenticeship highly valuable even when, as very often happens, people move to an occupation different from the one in which they originally trained.**

Young people appear very well aware of this. ‘Advanced apprenticeships’ offered by established companies attract huge numbers of applicants, with a ratio of applicants to places far higher than for most selective/Russell Group universities. Nationally there is a very large excess of demand over supply because apprenticeships combine high quality training with direct work experience. (See Appendix VII).

More generally, labour market research has consistently highlighted the importance of employment history in explaining earnings. Experienced workers earn more because they are more skilled and therefore command a premium. Human capital theory is often presented as though such capital is formed entirely in formal education and training, but in fact that is not what the seminal works on the subject argue, and it is certainly not what earnings data indicate. Becker’s seminal work emphasises the extent to which skills are learned on the job<sup>43</sup>. In spite of the growing importance of formal credentials, occupational mobility and earnings in mid-adult life are very strongly affected by experience and success at work.<sup>44</sup>

A large volume of research confirms that the best predictor of being employed in the future is being employed now; and also that temporary and part-time jobs can play a significant and important role as stepping-stones to longer-term and more permanent employment.<sup>45</sup> As a recent OECD analysis of youth unemployment notes, “For many youth, temporary contracts are more...a stepping stone to a permanent contract than a dead end.”<sup>46</sup> Conversely, long periods out of employment are severely damaging to employment prospects; and most analyses (including for the UK), suggest that periods of youth unemployment have a permanent effect on life-time earnings – there is a long-lasting unemployment scar.<sup>47</sup>

For the Review, the Centre for the Analysis of Youth Transitions (CAYT) examined the impact of employment, and unemployment, on recent cohorts of young people. In particular, they examined what happened to people who were in their teens during the 1990s, and who have been tracked since as they complete education and enter the labour market. They found that periods out of both employment and education (‘NEET’ – not in education, employment or training) were extremely damaging:

**“Being NEET has a long run, persistent effect. Being in any kind of work... is better than being NEET in terms of individuals’ long run, decade long outcomes.”<sup>48</sup>**

In the last fifteen years, the English workforce has grown to record levels; but combined this, as we have seen, with high levels of youth unemployment. If vocational education is to improve young people’s chances of progression, it needs to take explicit account of

this, and also of the value that employers attach to employment experience. That is why it is so important that Government makes it easier for more learners to pursue apprenticeships and obtain employment experience.

#### **4. Occupational change**

The existence of rapid economic and occupational change is a truism. Unfortunately, the nature of that change is often ill-observed and mis-understood. Too much government policy, from the late 1980s onwards, has combined the assertion that we cannot predict precise employment needs with the setting of precise quantitative targets for qualification ‘levels’: something that makes sense only if we can, in fact, predict exactly that.<sup>49</sup>

At political level, not only in the UK but in much of the developed world, there has been an assumption that ‘un-skilled’ jobs will vanish. This has been the major rationale for successive governments’ determination to increase the numbers of formal qualifications acquired by both young people and adults. A spiral of certification may indeed mean that we are all much more qualified in terms of possessing formal certificates, but the UK workforce, in aggregate, already possesses far more qualifications at a given, overall level, than current occupations require.<sup>50</sup>

The differential pace of technical progress and productivity improvements can have a dramatic impact, year-on-year, on the number of jobs in a given sector or occupation. In recent years our economy – as in most other developed countries – has moved in the direction of an egg-timer or hourglass, with growth at the top and bottom and shrinkage in the middle, rather than an inverted pyramid with more and more ‘top’ jobs.<sup>51</sup>

In the USA in the 1950s, some 50% of the workforce were in lower paid, lower-skilled service, leisure and production jobs, but by 2003 that had increased to 75%.<sup>52</sup> In the UK, Labour Force Survey data for 2007 classified 8 million employees as holding knowledge-intensive jobs, broadly defined, while 19 million did not.<sup>53</sup> A recent analysis of job polarisation in Europe showed a common pattern (albeit to varying degrees): between 1993 and 2006, the share of total hours worked has risen for highest *and* lowest-income occupations, and fallen for middle-income ones.<sup>54</sup>

The UK Commission for Employment and Skills (UKCES) has done a comprehensive analysis of occupations and recent occupational changes, and Appendix II summarises key statistics (including some produced for the Review.) Many skilled manual jobs have declined in number, and many mid-level white-collar clerical jobs have been squeezed out by new technologies. The decline is not uniform – construction (a major user of craft skills) has grown. But across the developed world, there is pressure on employment in the middle, and especially in middle-level private-sector jobs.

The UKCES figures show that our largest occupations are, in order, sales assistants, care assistants, general office assistants, and cleaners. Fifth in size, and the first managerial category, are marketing and sales. Growth figures can be very deceptive: rapid growth in glamorous high-tech industries does not translate into large numbers of jobs in absolute terms. (Facebook currently employs under 2000 people worldwide.) Conservation officers and town planners are among the ten fastest growing occupations in this country. But the largest absolute growth in numbers over the last decade has been in educational (teaching) assistants and care assistants – something which was certainly not predicted in government skills policy documents of the 1980s or even 1990s.

Looking at English occupations which have declined, the differences in absolute and proportional change are less marked: assemblers and operatives figure in both groups. This reflects the relative decline of manufacturing employment in this country, which itself derives in part from higher productivity and not just the undermining of manufacturing by global off-shoring trends, or high exchange rates.

These changes underline the rapidity of economic change, and also its unpredictable nature. None of the developments summarised here has been predicted by, let alone central to training and education policy in the UK, which has promoted highly specific qualifications based on current jobs.<sup>55</sup>

### ***5. The implications of change (A): Young people's entry into the English labour market***

As part of this review, in-house DfE analysts, and the DfE-supported Centre for the Analysis of Youth Transitions (CAYT), looked in detail at the labour market experiences of young English people. Our *first* major question was how far young people tend to follow a stable occupational path, in which more or less specific vocational education or apprenticeship leads, or could lead, into the corresponding occupation and career. Our *second* involved those who are out of education *and* out of employment. Have large numbers of young people simply walked away in some sort of conscious (and misguided?) decision to 'become NEET'?

In response to the first question, researchers established that **young people are very likely to change not just jobs but occupations in their first years of employment.** CAYT distinguished between job changes (new employer, but doing much the same thing); occupational changes (doing a different sort of job, though within the same sector, as defined by government employment statistics); and sectoral change (new occupation, new sector).

**In the cohort born in 1991,<sup>56</sup> 62% of employed young people changed sector in the one year interval between age 17/18 and 18/19. About 40% also changed their broad occupational level.<sup>57</sup> Taking an 11-year period (1998-2008), an analysis of those in their 20s and early 30s who remained in employment throughout showed that the average such individual changed jobs 3.5 times, changed occupations 2.5 times and changed sectors 1.8 times.<sup>58</sup>**

In other words, young people change what they are doing frequently, and the changes are major ones. The young person who follows first a level 2 course in a vocational area, then a level 3 one, and then goes on to a long-term career in that sector is the exception not the rule. **Instead, young people who take a vocational qualification in one field very often end up working in quite different ones. Moreover, the lower level the qualification, the less likely it is to be associated with employment in the sector concerned:** so for example, someone with a ‘level 4’ nursing qualification is more likely to be employed in the health sector than someone with a ‘level 2’ ICT qualification is to work in computing.<sup>59</sup>

Detailed analyses of this type are not readily available for other countries. But we do know that a very large proportion of German apprentices also end up working in fields other than the one they trained and qualified for.<sup>60</sup> Such movement is also highly consistent with the evolution of the labour market, as discussed above. There is also evidence to suggest that large-scale occupational change is not new, at least in the Anglo-Saxon world.<sup>61</sup> And evaluations of GNVQ students, in the late 1990s, found that only a minority entered occupations in their field of GNVQ study.<sup>62</sup>

Second, as discussed above, in recent years, the proportion of young people out of the workforce has risen, as well as the proportion in full-time education. Youth unemployment is high, and was rising before the recession; and job openings for 16 and 17 year olds have declined.

These developments, along with successive governments’ emphasis on extending formal education and qualification levels, have directed increasing attention to the numbers of young people who are “not in education, employment or training.” Headline figures refer to “so many thousand NEETs” and many submissions to the Review talked of the risk that young people would “become NEET” if not ‘caught’ at the right moment by an innovative or motivating programme.

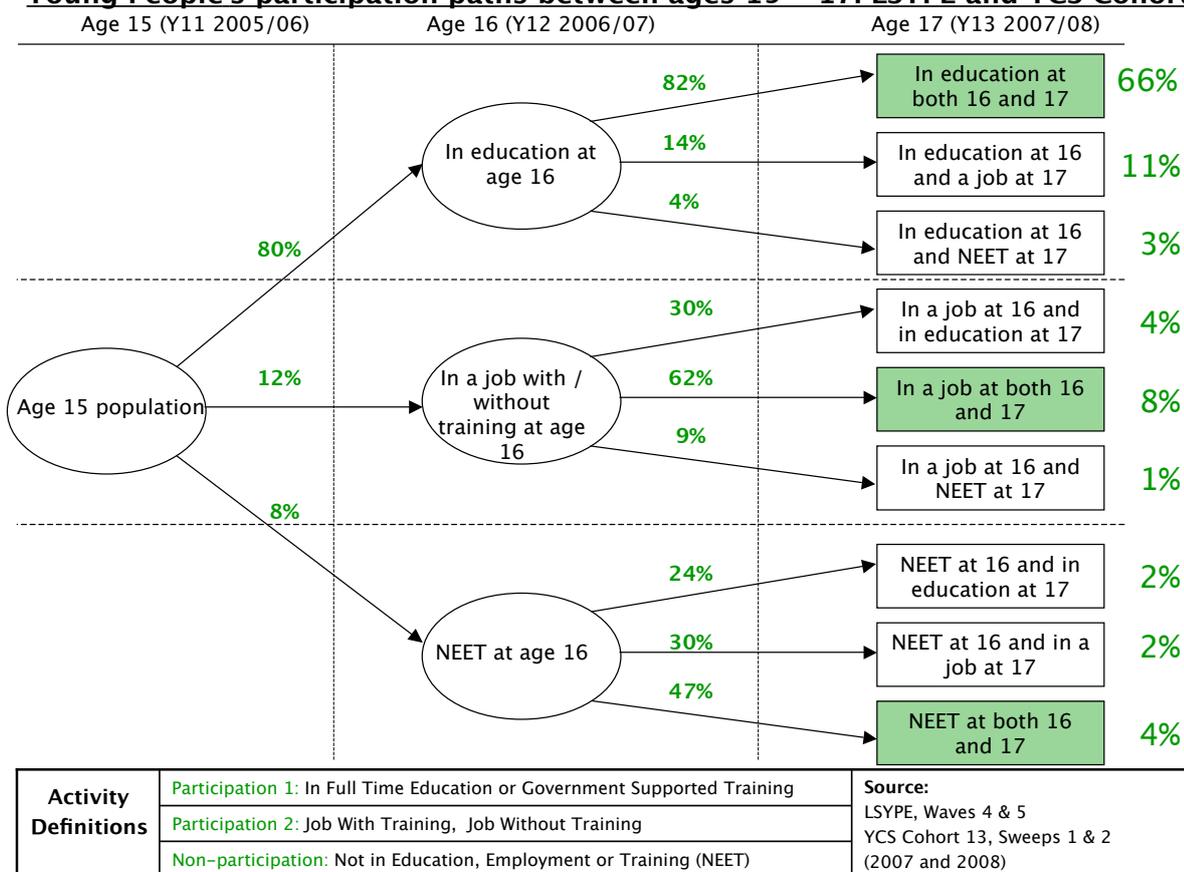
**The implication is that many young people walk away at age 16 and become long-term, or indeed permanent ‘NEETs’. However DfE analyses indicate that**

**this is not the case. A far more common pattern is one of ‘churn’ in and out of education and employment.**

Figure 2 below illustrates the way in which many English young people move in and out of education, short-term employment, and ‘non-activity’. (See Appendix VI for a full summary of pathways 16-18). It is based on what young people reported to be their main activities at age 16, 17 and 18. It shows that, for example, nearly 1/3 of the group who were not in formal education at age 16 were participating at age 17 (and about a fifth of that group were participating at age 18.) Half of those who were ‘NEET’ at 16 were either in education or employed at 17 – even though some of those were ‘NEET’ again a year later. Moreover, when asked what they are currently doing, a majority of those who are ‘NEET’ are actively looking for work, and the rest are, overwhelmingly, either waiting for a course or job to start, doing voluntary work or a placement, or looking after the family and home.

Figure 2: English young people’s participation pathways, age 15-17

**Young People’s participation paths between ages 15 – 17: LSYPE and YCS Cohort 13**



Longitudinal Surveys Team, Department for Education, December 2010

Source: DfE

Overall, these numbers do not suggest that large numbers of young people are walking away from education and employment. They *do* indicate that a significant group of young

people – between a third and a half of the cohort – are struggling, very actively, to find appropriate courses and appropriate jobs which will give them a secure entry into the labour market, with prospects of continued progression. The impression this gives of considerable ‘churn’ (in contrast to the settled trajectory of A level students) is confirmed for the sample of young people where we have monthly activity data. Here, the most recent available data show that 31% of 18 year olds have been ‘NEET’ at some point since leaving compulsory education, and that 8% spent 12 months or more not in education or employment. However, only 1% are ‘NEET’ continuously between age 16 and 18.<sup>63</sup>

In-depth qualitative studies bear out the finding that being out of education and employment is usually an aspect of ‘churn’, reflecting a lack of satisfactory options, rather than a decision to opt out of the labour force, or, indeed, education altogether. Academic studies of young people with very few (or even no) academic qualifications confirm this pattern. (See Box 3)

### Box 3

Liz Atkins and colleagues at Nottingham Trent University studied young people in vocational education programmes in a sample of schools and colleges and concluded that:

The ‘messy’ trajectories experienced by these young people included moving from school to work and then back to college following redundancy, ‘progression’ at the same level, but across vocational areas, and enforced education due to limited availability of apprenticeships and many unforeseen contingent events as well as much-extended transitions for those who began a post-16 trajectory at level 1.<sup>64</sup>

For young people with poor qualifications, the collapse of youth employment is a double problem. The qualifications they are offered are often not valued in the labour market. And while in the past, it was relatively easy to offset a lack of ‘valuable’ qualifications through labour market experience, this is no longer true.<sup>65</sup> Improving opportunities for this substantial group of young people must be seen as a national priority.

### **The implications of change (B): How education systems are adapting – facts and misconceptions**

Many of the developments and problems faced in England are common to the whole developed world. And just as the trends summarised above are common to all developed countries, so, in all of them, education has changed as a result. Unfortunately, much of the English policy discussion has not taken account of these changes and refers to

supposed practices in other countries which are in fact historical, and long-since superseded.

Developed countries all retain the vast majority of their young people in full-time education until age 18. They all have a group of young people who have low academic achievement in their mid-teens and find it hard to make a successful transition to secure employment or further studies. Here, England is like its neighbours and partners.

However, the general pattern is also that, in response to a changed labour market, **developed countries' education systems delay specialisation to later and later stages.** The pressure to delay specialisation is directly linked to parents' and students' desire to keep options open and secure the chance of progression. England is an outlier here, with earlier and more complete specialisation in both the academic and the vocational tracks than any of its developed country peers.

Among our OECD partners, delayed specialisation manifests itself in two major ways (discussed in more detail in Appendix IX).<sup>66</sup> First, there is more and more provision for young people to move between pathways, rather than being placed in a particular curriculum track which they cannot change. Second, all young people tend to follow an overwhelmingly or entirely general education curriculum until the end of (roughly) Key Stage 4, with vocational options postponed until after this stage.

This pattern is well illustrated by current German practice. English policy-makers have been preoccupied with German education and apprenticeship for well over 100 years.<sup>67</sup> Germany has an unusually large and widely admired apprenticeship system, which has been analysed extensively. This 'dual system' combines workplace training with a large amount of time spent in formal college-based training and education. Apprenticeship, however, is entirely post-school (in the English sense of the word.)

At school level, most of Germany<sup>68</sup> has a tripartite, tracked system. Young people enter an academic secondary school (Gymnasium); an intermediate school (Realschule); or a Hauptschule which provides a basic general education. In England, the Hauptschule is often referred to as a 'vocational' school because it is the traditional entry point for apprenticeship, but this is incorrect. It is the general lower secondary school, and compulsory for anyone not attending another secondary institution.

Each type of school issues a leaving certificate to students who pass the programme successfully. To enter university you must pass the *Abitur* examination, normally available only to pupils in a Gymnasium, and obtain the *Hochschulreife*. The certificate from the Realschule offers progress to advanced technical education: for university entry, students

must transfer to the Gymnasium for additional study after gaining their Realschule certificate. The Hauptschule certificate offers entry to apprenticeship, and will normally be obtained at age 16 or 17 – although the most advanced and competitive apprenticeships will often be taken by Gymnasium graduates (see Appendix VII).

Because they are the traditional gateway to apprenticeship, English observers tend to assume that the Hauptschulen offer a highly practical and vocational curriculum. But they do nothing of the sort. Hilary Steedman, one of this country’s leading experts on apprenticeship, explained to the Review that

German employers are not in the least interested in any training the schools might give... but in the educational level of the applicants. Employers want the training to be done by them, not by a school or college. Schools do their best to get their students’ general education to a decent level.

All German schools are thus typical of our European partners in offering a classroom-based general education to age 16. Table 3 shows the Hauptschule curriculum. It is far more traditional, general and ‘academic’ than would be the case for the vast majority of English schools at present. Calling these schools ‘vocational’ is thus misleading. The curriculum for the Realschule (as well as, of course, for the Gymnasium) is also entirely general for this part of the cohort.

**Table 3: The curriculum to age 16 in the German Hauptschulen. (Apprenticeships can start post-graduation)**

German	History
Mathematics	Social and pre-vocational studies (Arbeitslehre)
Modern foreign language, usually English	Music
Physics	Art
Chemistry	Sport
Biology	Religious education
Geography	(In some Länder: economics, domestic science)

Source: Education, Audiovisual and Culture Executive Agency, European Commission (2010) Organisation of the Education System in Germany: 2008/9 (EURYBASE report) Brussels: European Commission/Eurydice. See especially pp 99-101.

Denmark, which has a large and highly respected apprenticeship track, is in other respects more similar to the UK, with comprehensive secondary schools. But it is similar to Germany in postponing vocational courses. Until the end of what would be our Key Stage 4 (GCSE-level) Danish students all follow a common, and traditionally ‘academic’ curriculum. (See Appendix V for details).

A general retreat from any form of vocational training or specialisation before age 16/17 characterises European and North American education. Parents' and young people's desire to keep options open, and remain in general education, is also apparent in the declining numbers attending schools which lead directly into the labour market. In Germany, the proportion of the cohort attending Hauptschulen has fallen from 70% in the 1960s to 20% today. Hauptschulen, are 'increasingly seen as problematic 'leftover' schools'<sup>69</sup> This is not commonly understood in England, where many people apparently believe that German vocational schools enjoy very high prestige. The Netherlands operates a 'vocational track' with schools which offer a highly practical pre-vocational curriculum; but these too are being abandoned by their traditional clientele.<sup>70</sup> Between 1982 and 2006 the proportion of the Dutch cohort which left secondary school with a 'vocational school' certificate (VBO) rather than a diploma from one of the higher-level, more general tracks fell from 41% to 27%.<sup>71</sup>

Specialisation has been delayed as much in response to parents' pressure (and understanding of the labour market) as through governmental initiative. For example, in the 1990s, France developed and piloted a 'technological' curriculum for the equivalent of Key Stage 4 (14-16), designed to provide an alternative to the general education curriculum, with which many students struggled. This has been abandoned, because parents and students were not willing to choose or be allocated to it. All students now follow the same common and general education curriculum up to the end of *collège*.<sup>72</sup> And upper secondary vocational programmes all contain a very large element of general education as well.

In this, as in so many other ways, England is an outlier. We face the same labour market pressures and forces as our OECD partners, but are currently very different in the way we structure young people's education and transitions. In particular England offers far more vocational options and courses than the OECD norm in KS4 (lower secondary in European terms) and there is active discussion of the benefits of more, still earlier specialisation.

That it is not what happens among our major European and North American trading partners. **Across the developed world, a more or less entirely common curriculum until age 16 is the norm, and in recent decades specialisation has been progressively and substantially postponed.**

### **The implications of change (C): challenges for vocational education**

The data discussed above provide some clear if general lessons for a good quality vocational education system.

- first, it needs to take into account the very varied job histories which young people can expect to experience, even in the early years of their working lives
- second, it needs to recognise that the labour market is not, in the near future, likely to provide ever more ‘knowledge’ jobs for everyone
- third, it must recognise and respond to the fact that aspirations for higher level study are very widespread indeed. European and North American experience, as well as our own, demonstrates that people will, if given the choice, select pathways and options which help them to progress and keep options open. Even if people do not move directly into higher education, many will be keen to do so later
- fourth, ours is a market in which employers are very reluctant to take on young people
- fifth, being out of education and the labour market for significant periods is very harmful to future prospects; but
- sixth, and conversely, employment experience can still make up for a lack of academic success

As already noted, there are clear signs of problems in the way vocational education currently operates in England. The next examines in detail the sources of such problems, and where current challenges are being more or less adequately addressed.

# Part Three: The Educational Context

## *1. Vocational education in England*

We are very prone, in England, to assume that everything we do is worse than elsewhere: and this report will, unfortunately, have much to say about current problems, and the changes needed. But we also need to recognise the historical strengths of vocational education in this country. Any further reforms need to **preserve and build on current strengths and achievements**; and the following pages will highlight some of the most impressive, and the lessons they offer for the future.

This said, the Review found conclusive evidence of serious problems in current provision: problems which impact directly on young people and their futures. Large numbers of young people are not on programmes which will help them to progress either educationally or in the labour market. Moreover, far too much time and money is spent on counterproductive bureaucracy and regulation. At a time of rising youth unemployment across Europe, ever greater competitive pressures on our economy, and rising demands for formal qualifications, **too many of our young people are being short-changed.**

How do we know this? Evidence includes:

- large numbers of young people taking **vocational qualifications which the labour market does not reward in any way**
- **established vocational qualifications** which are recognised, valued and indeed critical to key industries being **denied accreditation and funding by government agencies**
- **young people encouraged to take qualifications at age 14-16 which will block their progression** to many valuable post-16 options, and for reasons which have nothing to do with the pupils' own best interests
- **high drop-out rates and 'churning'** as 16-18 year olds try to find appropriate pathways

- funding and performance management systems which have **actively deterred schools and colleges from providing substantial maths and English courses** post-16 to those without good GCSEs
- **a significant and marked decline, over the last 25 years, in the average returns to post-16 vocational education** for those who move from it straight into the labour market

These and other problems are discussed and substantiated below.

It is important to emphasise, at the outset, that these problems have not been created by individual vocational qualifications, or how they are taught. The report will argue, instead, that the major causes are the complex, expensive and inflexible regulatory system created by successive governments, and the perverse incentives created by current funding and accountability mechanisms. Unravelling this government-created tangle, and restoring clear, direct links between 14-19 vocational education on the one hand, and the labour market and higher level training and study on the other, is therefore a major priority for the future of millions of young people.

As anyone within 14-19 education is all too aware, vocational education in England has been subject to rapid and repeated change over both the last quarter century, and the last few years; and its current condition can only be understood in relation to these. Examples include:

- a whole succession of new ‘non-academic’ qualifications for young people designed by central government, with the Diploma merely the most recent
- increasing regulation of school and college-based qualifications for the 14-19 age group, academic and vocational alike
- complete redesign of all vocational qualifications with a specific occupational focus. Many of these are taken by both young people and adults
- successive changes in the performance management regime used by central government, including the construction of accountability measures
- apprenticeship reform, with a statutory base and with delivery mechanisms which are distinctive and specific to this country
- constant changes in the funding formulae used for post-16 provision

Meanwhile qualifications for the critical labour market skills of mathematics and English have been the subject to serial redesign, especially in the case of qualifications for students on ‘vocational’ programmes.

Within this constantly shifting and unpredictable environment there continues, as already noted, to be a great deal of excellent vocational education on offer. The English education system still offers teachers a chance to develop innovative approaches and varied programmes. Many institutions, alone or in collaboration, are offering imaginative and effective provision, as evidence to the Review made clear. There are specialist colleges with a deservedly national and international reputation, as well as more general colleges with highly successful courses linked closely to employers, whether in aircraft maintenance, optics, accountancy, construction, or leisure. Many tens of thousands of young people are on upper secondary vocational courses which are established routes into higher education.

So given the rate, and cost, of recent upheavals and redesigns, it might seem that leaving things alone would be reform enough. Unfortunately, it would not.

This Review received many hundreds of submissions, including evidence from many recognised centres of excellence, and all were clear on the need for change, not stand still. Otherwise, major problems will continue and resources will be wasted; and it is young people who suffer.

In clarifying not just what is going wrong but how things might improve, it is important to understand the extraordinary and (fortunately) unique regulatory framework of English education, and also our system's long-standing institutional features, some of which are also very distinctive. **This part of the report lays them out (and those who are already highly familiar with the sector may wish to skip directly to Part Four.)** Much of the regulatory structure is common to provision across the 14-19 age range. However, there are also major differences between Key Stage 4 (age 14-16) and post-16 provision, both in organisation and funding, and in the issues these create for vocational education. These key issues are therefore identified separately in the next two sections.

## ***2. Key Issues A: Key Stage 4***

The study programmes of 14 and 15 year olds are structured around National Curriculum requirements, since our governments, like almost all others, lay down requirements for what must be taught in state-funded schools.<sup>73</sup> Until quite recently, a combination of National Curriculum requirements at 'Key Stage 4' (KS4) and the nature of our performance management systems meant that, for the vast majority of 14-16 year olds (year 10 and 11), education was organised overwhelmingly around GCSE syllabuses and examinations.

English schools traditionally offered a range of practical classes and qualifications in practical subjects,<sup>74</sup> and under the Thatcher governments, there was a major effort to improve the status and importance of technical, business, and vocational skills.<sup>75</sup> Design and Technology's place as a National Curriculum subject (with multiple GCSEs available) is a legacy. Nonetheless, until recently, vocational qualifications occupied only a small proportion of 14 or 15 year old pupils' timetables.

When General National Vocational Qualifications (GNVQ) were introduced in the 1990s, they marked a distinct break with the past, in that all 11-18 schools were encouraged, for the first time, to offer a distinctive 'vocational' programme – **but at first only post-16**.<sup>76</sup> GNVQs were intended originally for the 16-18 year old group; targets for take-up were set for that group; and through the 1990s, the encompassing nature of National Curriculum requirements made them quite unsuited to large-scale KS4 uptake.

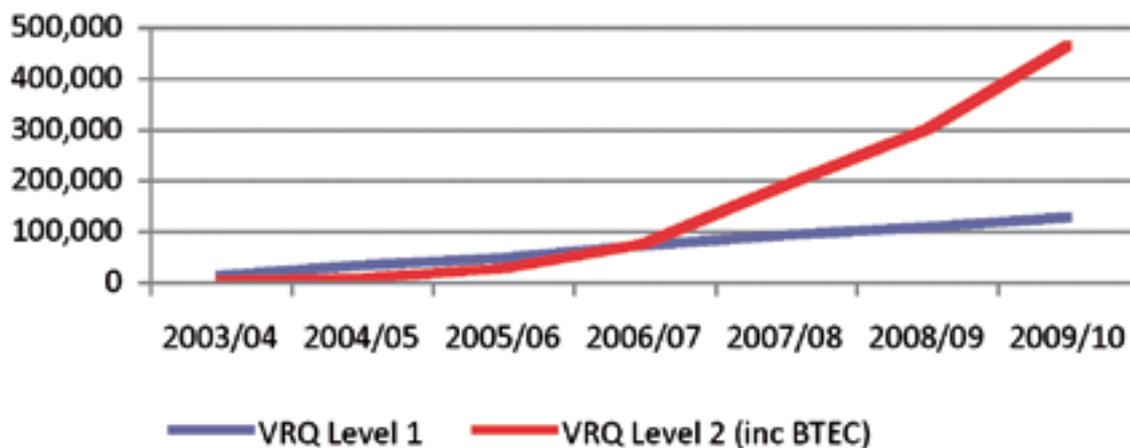
By contrast, recent years have seen an enormous growth in the numbers of pupils taking vocational, non-GCSE courses. This included, until their abolition last year, the spread of GNVQs into KS4 provision. As tables 4 and 5 and Figure 3 below indicate, the growth in both the absolute number of vocational awards taken, and their contribution to government performance measures has been enormous and very rapid.

**Table 4: Other (non GCSE/GNVQ) qualifications achieved at the end of Key Stage 4 in all schools (L1 & L2 only)**

	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10
VRQ Level 1	11,007	30,832	45,470	69,862	90,641	106,329	125,367
VRQ Level 2 (inc BTEC)	1,882	6,298	24,791	73,119	187,538	297,620	462,182
NVQ Level 1	1,708	2,713	4,340	5,921	6,188	6,347	7,776
NVQ Level 2	14	66	225	601	797	1,055	1,815
NVQ L1 Language Unit	216	835	1,874				
NVQ L2 Language Unit		339	584				
Basic Skills Level 1	292	1,982	9,608	21,867	35,525	46,153	49,527
Basic Skills Level 2	123	6,448	37,627	85,822	140,704	156,133	160,819
Free Standing Maths L1	–	–	542	586	756	1,063	780
Free Standing Maths L2	–	–	120	470	609	903	1,284

Source: DfE

Figure 3: Level 1 and Level 2 VRQs (‘Vocationally-related qualifications’) achieved at the end of KS4: England 2003-10



It became possible for vocational qualifications to make far greater contributions to performance measures than in the past because ‘GCSE equivalencies’ were ascribed to a large number of such qualifications. BTEC awards have grown particularly fast. Most employers and higher education institutions are familiar with the long-established level 3 BTEC Nationals but as these figures illustrate, it is the lower level ‘BTEC Firsts’ that have grown very rapidly indeed in recent years. (There are also ‘BTEC Introductory’ qualifications at level 1, but they do not contribute to the GCSE performance measures.) A BTEC First Certificate is worth 2 and a First Diploma is worth 4 GCSEs A\*-C in current performance measure calculations.

As Table 5 shows, the non-GCSE awards which contribute to the government’s key performance measures have themselves changed in recent years, reflecting repeated reforms in both KS4 and 16+ secondary qualifications, including the withdrawal of the GNVQ. The Diploma will contribute to the 2010 results since this was the first year when full GCSE-equivalent Diplomas were completed by students. However, since only about 3000 students completed Diplomas successfully at this level (i.e. about one half of one percent of the cohort), their contribution in 2010 will be tiny.

**Table 5: Contributions of equivalencies towards the ‘5+ GCSE A\*-C’ Key Stage 4 measure in England**

	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10
Contribution made by:						
GCSE only (inc short course)	51.7	52.1	52.6	54.7	55.7	56.3
GCSEs in Vocational Subjects	1.3	1.6	1.7	1.8	1.8	1.5
Full GNVQs	3.4	4.1	3.4	0.2		
BTECs	0.1	0.5	1.6	4.2	6.7	10.2
All other qualifications	0.3	0.8	2.0	4.4	5.8	7.4
<b>Percentage of pupils achieving 5+A*-C GCSE and equivalent</b>	<b>56.8</b>	<b>59.0</b>	<b>61.4</b>	<b>65.3</b>	<b>70.0</b>	<b>75.4</b>

Source: DfE

Table 5 shows clearly the rapid growth in the contribution that ‘vocational’ or ‘vocationally related’ awards have made since 2006 to the proportion of the cohort achieving the government’s key performance indicator. This in turn reflects completion of the major programme of establishing ‘**equivalencies**’ between all sorts of different qualifications, carried out by government agencies. The programme, carried out by Qualifications and Curriculum Authority, was explicitly intended to ‘include all approved qualifications in school and college performance measures’ and in particular to remove the ‘disincentive to the appropriate (sic) use of the full range of approved qualifications’.<sup>77</sup> Put differently, it was designed to ensure that **all** qualifications at a given ‘level’ were treated as substantively equivalent (and enjoying parity.)

As explained earlier, English qualifications offered in publicly-funded provision are all assigned an official ‘level’; and these are embodied in the ‘National Qualifications Framework’.<sup>78</sup> The key level for the GCSE performance tables is ‘level 2’ which is given to a GCSE pass (grades A\*-C.) Any other award at this level is formally equivalent to this.

‘BTECs’ are qualifications which were developed in the 1980s by the Business and Technology Education Council as advanced post-compulsory awards. They were originally full-time (Diplomas) or part-time (Certificates). They grew rapidly in volume as a major part of 16-19 education alongside A levels. Many young people who take level 3 ‘BTEC Nationals’ continue on to higher education. More recently, lower level awards have been offered as part of the BTEC ‘stable’ including BTEC Firsts at level 2. Firsts remained a small-volume qualification for some years, but from 2003 on, numbers exploded, as did the proportion of Firsts awarded in schools. One of the other big awarding bodies (Cambridge Assessment/OCR) has started to market its own comparable level 2 qualifications actively. All these are qualifications designed for educational

institutions. Many other of the qualifications now being offered at KS4 are, by contrast, much more ‘occupational’ in focus. Appendix I lists the most popular ‘vocational’ and ‘vocationally-related’ awards taken in Key Stage 4 over the last three years.

This dramatic shift in the volume and nature of ‘vocational’ education at KS4 raises a number of key issues, all articulated during the review as well as in previous discussions:

- **why are students being encouraged to take so many more of these awards than they did just a few years ago?**
- **do these qualifications increase substantive achievement and/or staying-on rates, notably by increasing motivation?**
- **do they allow for effective progression?**
- **are schools adequately equipped to teach them?**

### ***3. Key Issues B: Upper Secondary, age 16-19***

At post-16/upper secondary level, there have been none of the sudden changes in qualification uptake which have occurred in years 10 and 11 (KS4). This is a period of considerable specialisation, for all students, and a very large number of different qualifications and subjects is available, at various different ‘levels’. Young people in most parts of the country have a wide choice of institutions, and frequently travel large distances to the course or institution of their choice.<sup>79</sup>

By far the largest single group of upper secondary students study for AS and A levels, and this is also the ‘sixth form’ pathway which is best known to adults. In addition, a very substantial number of students in upper secondary education are enrolled full-time for non-A level courses which are also ‘level 3’: and most of these are BTEC awards. BTEC level 3 awards differ markedly from A levels in that they all have a more or less specific vocational orientation,<sup>80</sup> but they are also well-recognised by higher education, and widely accepted for entry onto degree courses, especially for courses in similar areas. They are, unlike A levels, teacher-assessed. The awarding body (Edexcel/Pearson) takes responsibility for ‘verifying’ standards across institutions.

In contrast to these two very large and well-known pathways, other students in upper secondary education are enrolled for very different combinations of qualifications, at very different levels. Table 6 summarises the distribution.

**Table 6: Study programmes of 16 and 17 year olds in educational institutions**

	As a % of 16-and 17 year olds enrolled in education (excluding apprentices) 2009-10	% of age-group (based on an average of 87% participation in education across the 2 years)
A levels only (3+) – clear academic route	38%	33%
1 or 2 A levels plus other qualifications	7%	6%
No A levels, but at least one Level 3 course of study. NB 85% of level 3 non-A level enrolments are for BTEC level 3 awards	21%	18%
Level 2 or Level 1 or below Level 1	34%	30%

The remainder of the cohort are in apprenticeships (see Appendix VII), other forms of government training, employment or unemployed. In 2009/10 94% of 16 year olds (year 12) and 85% of 17 year olds (year 13) were in some form of either education or government-supported training. Source: DfE, YPLA

Overall, almost two-fifths of the upper secondary/post-16 cohort are now on A-level based programmes. Around another fifth are on advanced craft or BTEC level 3 courses with clear progression value (although, as discussed below, the quality of these qualifications, including the BTECs, is under threat from recent regulatory changes.) A rather small number are on apprenticeships, and an even smaller number on advanced apprenticeships leading to level 3 qualifications. Although apprenticeship has been the subject of a great deal of political interest and commitment in recent years, recent growth has been largely in adult apprentices: as one academic submission to the Review noted

“Despite the policy ‘noise’ of the previous government about apprenticeship being one of the three main pathways for 16-18 year olds, apprenticeship actually plays a very minor role (in current provision).”<sup>81</sup>

However, those who secure an employer-based apprenticeship generally find that it has substantial positive outcomes.<sup>82</sup>

It is among the remaining group – not in apprenticeships, not following A levels, BTEC National Diplomas, or other level 3 vocational courses, – that severe problems are evident.<sup>83</sup> Put briefly, there are too few apprenticeships and enormous excess demand for places, especially on advanced (level 3) apprenticeships. There are ever fewer jobs. While a good many students in level 2 programmes progress satisfactorily, either to higher-level study or into the job market, with new skills, many others do not.

**Large numbers of young people ‘churn’**, moving between qualifications that provide little scope for progression, and unsatisfactory, often short-term employment or periods of unemployment. (See Figure 2 above and Appendix VI for details). **Many level 2 qualifications bring no positive returns in the labour market** (Table 2 above and Appendix III); indeed, the data show that many of those who hold level 2 vocational qualifications and who gained these outside the workplace would have been substantially better off if they had not taken them, and been employed instead. The differing returns to level 2 awards suggest that being on government training courses may actually be harmful, presumably because it sends out poor ‘signals’ to employers.<sup>84</sup>

#### **Box 4**

With an average cohort size of 600,000 plus, there are about 1,800,000 (close to two million) 16, 17 and 18 year olds in England at any given time. At least 10% experience substantial periods out of employment and education, and another 20% have identifiable periods of ‘churn’. 20% of each cohort, of whom only a small proportion have severe physiologically-based learning difficulties, currently finish KS4 at too low a level to start Level 2 courses of whom many will never start, or achieve, such awards. Post-16, about 18% achieve a level 2 award but no higher;<sup>85</sup> and we know from repeated studies that vocational level 2 awards tend to have little or no labour market value if obtained outside apprenticeship. Obviously some of these categories overlap to some degree (though not perfectly); but on even the most conservative of interpretations, it seems clear that **at least one in five of each cohort** is getting very little benefit from the post-16 secondary education system. Put simply, as a society **we are failing at least 350,000 of our 16-18 year olds, year on year.**

Those who leave KS4 without even the GCSE attainment level that allows them to start a ‘level 2’ course fare especially badly.<sup>86</sup> Current estimates are that as many as 20% of KS4 completers are not able to start a level 2 course, a percentage which is significantly higher than in comparable countries to our own, and, one may therefore infer, considerably higher than it need or should be. Young people with these low achievement levels at age 16 have been offered training schemes or ‘experiential’ programmes which provide little or no opportunity for progression (see Box 5).<sup>87</sup>

**Box 5**

Studies of KS4 pupils highlight the problems for those who fall outside mainstream provision. An in-depth study by Nottingham University of young people who were permanently excluded, or at risk of exclusion, highlighted

- the lack of control they or their families had over the nature of their placements
- the positive impact of placements with employers
- students' scepticism about the value of much of what they were doing

For example, one work experience site explained to the researchers that “the research is well-documented as to why these activities are beneficial to them...a wide experience base; team building...a huge chunk here which is going to be key skills”. The student interviews suggested that “most view it as just doing a load of digging.”<sup>88</sup>

There are major progression problems.

For example, one student's programme was based around entirely “OCNs”: the following extract highlights the problems:

Student “...it's kind of hard to get into college with OCNs because you need GCSEs”

Researcher “Have you found that?”

Student “I've applied to places like College A and College B and they've said that if I can't get GCSEs then I will have to do GCSEs there...”<sup>89</sup>

Overall, large numbers of young people are not obtaining rewarding education or training. In policy terms, the main issues that this situation raises for post-16 vocational education may be summarised as follows:

- **why do so many vocational programmes below level 3 not provide for clear progression within education?**
- **why are young people enrolling for courses which are not providing them with progression opportunities?**
- **why is apprenticeship for 16 and 17 year olds growing much more slowly than envisaged by ministers or than young people would like?**

**The discussion so far has taken place to a large degree in terms of ‘qualifications’ rather than programmes. This will appear entirely normal to an English (or indeed British) reader; but in order to understand both our current vocational education system, and the ways in which reform might be feasible, it is also necessary to highlight its distinctive institutional features. Foremost among these is the nature and range of formal qualifications offered and the fact that education is organised around them.**

#### ***4. Key institutional features of 14-19 education in England***

##### **A. The English qualification system**

A highly distinctive aspect of English education is its use, outside HE, of large numbers of separate qualifications and of non-governmental ‘awarding bodies’ or ‘awarding organisations’. We are also distinctive in the way we use qualifications (as opposed to government-set tests) as a key component in accountability systems, in high stakes ‘league tables’ and as the basis for funding allocations to post-16 (non-university) education.

Previous English governments intentionally moved our academic school system away from one based on an internationally standard type of ‘grouped award’, namely School Certificate. This had two levels equivalent, respectively, to upper-level school-leaving qualifications such as the *Baccalauréat*, *Abitur*, US High School Diploma or *Maturita*, and to lower level ones such as the French *Brevet* or Danish Lower Secondary certificate. Instead of School Cert, the post-war Labour government and its Conservative successor effectively forced the examination boards to introduce instead our current unique system of multiple single-subject awards (O levels, A levels, CSE, GCSE, AS levels).<sup>90</sup>

This reform was, in fact, the exception that proves the rule: a major and sudden change in school-leaving and university entrance certificates. These certificates are, in every modern country, embedded in the operation of the labour market, higher education and national consciousness, and extraordinarily difficult to alter. Change is usually gradual – for example, adding new sorts of *baccalauréat* in France while retaining both the name and its formal status as a university entrance qualification; or adding more stringent graduation requirements to American high school diplomas. Conversely, attempts to create radical new awards risk running aground on the entirely justifiable conservatism of employers, families and students. Dramatic change was possible in post-World War II England because at that time only a small portion of the population (and the labour market) was affected: most people left school with no formal qualifications.

Today, the vast majority of the population holds formal qualifications. Families are increasingly concerned about formal education, increasingly (though only partially) informed – and increasingly suspicious of reform. When GNVQs were introduced, less than 20 years ago, they were intended to enrol a quarter of the 16-18 cohort. At their peak, just four years after their national launch, about 20% of 16 year olds (year 12) were enrolled for GNVQs, and there had been extremely rapid growth in the first two years.<sup>91</sup> The Diploma, launched with far greater preparation, publicity, and financial incentives for schools and colleges, is now in its third year. In 2009/10, enrolments post-16 amounted to 0.6% of 16-18 enrolments (or about one half a per cent of the cohort as a whole).<sup>92</sup>

**Any further large-scale reform involving new centrally designed sets of qualifications is bound, at present, to meet enormous resistance. Young people and parents will again vote with their feet.**<sup>93</sup>

## **B. Examination boards and awarding bodies**

England's qualification system evolved independently of the state, which is why our qualifications – both academic and vocational – are not awarded by the state and were, until recently, not designed by it either.<sup>94</sup> By contrast, most countries not only have far fewer separate qualifications, but most of them, especially for young people, are developed, run and awarded by governments. In a number of other developed countries, key vocational qualifications involve other bodies in cooperation with government, but these are employer and craft/professional associations, not specialist examining and awarding organisations.

The non-governmental origin of English qualifications also meant that there were not only many vocational qualifications but also many different awarding bodies – overwhelmingly, pre-1990, genuinely independent of government and government finance.<sup>95</sup> However, in the first of repeated attempts to achieve a complete overhaul of vocational qualifications, the second Thatcher government commissioned a review that was designed to eliminate the supposed 'jungle of vocational qualifications'. It was the first of a series of attempts to reduce the number of awarding bodies, reduce the number of qualifications, and rationalise structures: all in the name of greater efficiency, making things clearer to employers and young people, and raising the status of vocational awards. Twenty years on we have more qualifications than ever before, and the number of awarding bodies is, after a short-term fall, rising. Those offering 'approved' qualifications rose from 98 in 2002 to 144 in 2009.<sup>96</sup>

This repeated failure to ‘rationalise’ qualification numbers confirms that **there are strong forces, within both the labour market and the education and training system, which generate large numbers of vocational awards. This has been regarded, repeatedly, as a problem, but there is no intrinsic reason for it to be so.**

I know of no empirical evidence to indicate that employers, in the past, had any trouble understanding and evaluating the vocational qualifications *specific to their sector*. (The rest were ignored.) Conversely, we do have empirical evidence that employers today are confused by the repeated reform drives which generate new qualifications for young people, and lead to the frequent reworking, by government-appointed bodies, of their specific occupational qualifications.<sup>97</sup> We have evidence that employers recognise and value familiarity, often with the awarding body as much as with the particular award and especially when associated with their own experiences when young.<sup>98</sup> Finally, as discussed further in Box 6, the way that each centrally-driven reform of vocational qualifications quickly generates serious (and similar) problems indicates that there are structural issues at work. These are not going to be solved with yet another determined push from the top.

**Box 6**

The first major governmental attempt to organise and rationalise the whole field of vocational qualifications occurred in the 1980s. Government policy-makers became convinced that one of the forces holding back productivity growth was the ‘jungle of vocational qualifications’. It was argued that, if vocational qualifications could be improved and made completely transparent, this would greatly improve the efficiency with which employers were able to identify and hire skilled people. Rather than independent awarding bodies developing qualifications, there should be nationally-created occupational standards, underpinning National Vocational Qualifications. While awarding bodies would continue to award and certificate, their qualifications could only be offered in publicly-funded contexts if they were approved as meeting these standards.<sup>99</sup>

This was the rationale for the funding of ‘Standards’ development for the vast majority of occupations, using ‘Industry Lead Bodies’, and the creation of a new regulator, the National Council for Vocational Qualifications. NCVQ was created in 1986 and 1997 its functions were taken over by the Qualifications and Curriculum Authority (QCA). Standards development was later taken over by ‘National Training Organisations’ and is now the responsibility of Sector Skills Councils; and regulation is now shared by them and Ofqual.

The arguments advanced back in the 1980s have continued to inform policy-making and repeated reforms. However, because a complex modern economy has a correspondingly complex occupational structure, central attempts to impose a neat, uniform and ‘logical’ structure on it always fail. A recent example is that of ‘Stand-Alone’ qualifications. Under the last government, there was an attempt to put all qualifications taken by young people into one of four pathways. In practice, it proved necessary to accredit, and allow the teaching of, qualifications that did not fit into one of the pathways. Otherwise well-established awards, which were valued by important sectors and employers, and used by them as part of their recruitment and training, would have vanished. Similar problems are being created by the current policy of requiring SSC approval for all accredited vocational awards. (See Box 20)

**The great strength of the English system of independent awarding bodies is that it allows for multiple direct links between qualification development, the labour market and higher education. However, this feature has been systematically undermined by government policies and regulatory changes.** Current reforms are generating further, serious problems. These developments, and their impact on quality, and costs, are discussed in more detail in Part Four.

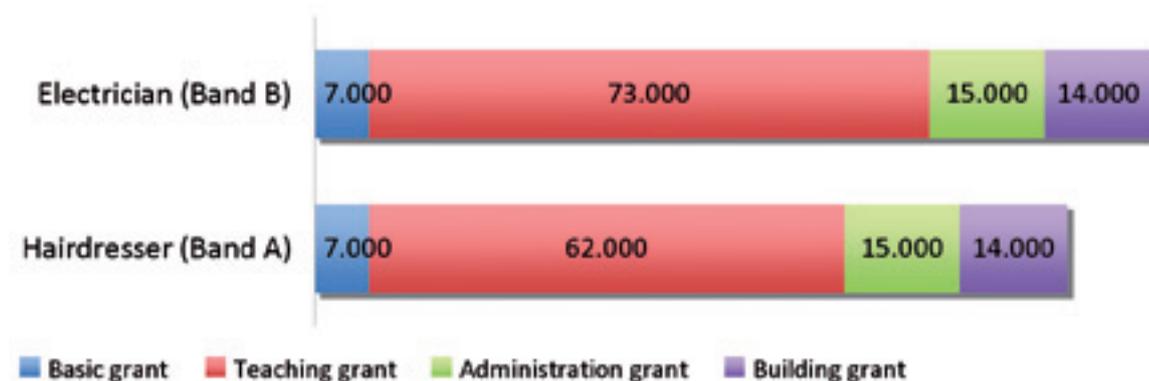
### C. Funding by qualifications

Another distinctive feature of English education is the current funding framework for post-16 education and training. It funds institutions (public and private) on a per-qualification rather than a per-student basis, unlike the 4-16 phase. (The exceptions are apprenticeship and HE.)

This approach is, to the best of my knowledge, unique to these islands: the normal pattern for 16-19 students, whether ‘vocational’ or ‘academic’, is to fund on a per-student level, with the amount varying to some extent by programme. Figure 4 contrasts the way that Denmark – typically for most European countries – provides a per-student allocation to its vocational colleges, with the way an English college might be funded for the particular qualifications that students are registered for and/or passed.<sup>100</sup> In Denmark, there is a single allocation per student, the teaching component of which varies somewhat according to the type of course followed (so that, for example, engineering is paid at a high rate than office work.) An allocation for capital funding is built into the grant.

In England, by contrast, funding is by individual qualification: or, to be specific, the funding formula is ‘applied to each learning aim taken by a learner.’ The amount paid is partly a function of the actual qualification/learning aim; and partly a function of a complex weighting factor (the ‘Provider Factor’), which includes ‘Disadvantage Uplift’, ‘Area Cost Uplift’, ‘Short Course Modifier’, and ‘Success Factor’.

Figure 4A An example of a per-student funding regime: Denmark 2010 (Figures in Danish Kroner. Source: Danish Ministry of Education)



**Figure 4B: Examples of programme funding for 16-18 education in England.**  
(See also **Appendix V** for further examples and details)

i. Excluding ‘provider factors’: 2009/10

	SLN g/h	SLN	Unweighted funding (Higher figures were given to school sixth forms)
BTEC Introductory Diploma	450	1	2920
Key skills: communication only	36	0.08	234
Entitlement	114	0.253	739
Total learner funding	600	1,333	3,892

ii. With sample ‘provider factors’: 2010/11

Element within programme	SLN GLH	SLN
BTEC L2 Diploma in Sport (QCF)	450	1
Functional Skills in Mathematics	36	0.08
Functional Skills in English	36	0.08
Entitlement	114	0.25
Total	636	1.41

$1.41 \text{ SLN} \times \pounds 2,290 \text{ NFR} \times 1.2003 \text{ PF} = \pounds 4,954$

The English approach had its origins in the incorporation of colleges in 1992. They had previously been funded by local authorities at very different rates, and the new national funding body, Further Education Funding Council (FEFC), introduced a completely new funding approach as a way of standardising what a given course, or teaching hour, cost. In later years this was adapted and constantly amended to reflect governments’ changing priorities. From 2001 until 2009, a single funding body, the Learning and Skills Council, dealt both with colleges (taking over from the FEFC) and with non-school provision offered through private training providers. These funding functions are now split between the YPLA, funding young people, and the SFA for adults.<sup>101</sup>

General FE colleges (and private training providers) deal with large numbers of adults (19+) as well as younger learners; and although qualification-based funding has been used for both groups, adult funding has been particularly complex. *Adults* (i.e. anyone of 19+) have, in the last decade, had varying ‘entitlements’ to free, or subsidised, education and training, depending on the nature and level of the qualifications taken as well as their own previous education and attainments. Over time, the money available for non-accredited courses shrank: funds are now overwhelmingly qualification-linked.<sup>102</sup> The level of subsidy and entitlement has also varied according to whether an adult learner was based in a college or workplace; different vocational areas have been

prioritised; and funding formulae and priorities have been heavily influenced by quantitative targets for numbers of qualifications.

For **young people**, the situation has been less complex, since they have an automatic entitlement to free education up to the age of 18. However, here too, institutions are paid by qualification, not by student (though with upper limits on how much they can earn per student). Payments are also ‘by results’: **if a student (or apprentice) does not gain their formal qualifications from an awarding body, the institution receives less money.** Finally, whether or not a qualification is actually eligible for public funding can be determined by the Secretary of State, who has statutory powers to decide this (currently under section 96 of the 2000 Learning and Skills Act.)

Since the Coalition Government took power, targets have been scaled back and the funding approach has been changed in some fundamental respects for 16-19 year old learners funded in schools and colleges through the YPLA. The current funding system offers rewards after the event for those who have recruited and retained students, and whose students have achieved qualifications successfully, rather than operating with individual advance contracts to colleges and providers under which they undertake to ‘deliver’ a given set of qualifications. It therefore gives incentives to recruit more and rewards recruitment success. In other respects, however, the system is unchanged – funding is based on individual qualifications and registered qualifications achieved. Qualifications which are classified as needing quite short amounts of teaching time attract small amounts of funding and vice versa.

This approach, combining payment-per-qualification with payment-by-results

- gives government enormous power to fine-tune the relative attraction – *to institutions* – of different qualifications
- has greatly increased completion rates, compared to the early 1990s.
- forces institutions to steer a high proportion of students into courses they are likely to pass easily, if they are to remain solvent;<sup>103</sup> and risks severe downward pressure on standards in teacher-assessed awards
- gives institutions strong incentives to choose qualifications which ‘pay well’ – i.e. are well-funded but require less teaching time in practice than their value implies<sup>104</sup>
- gives institutions no incentive to offer coherent programmes of study
- gives institutions no real powers or incentives to respond directly to the local labour market

One very visible result of current arrangements is the virtual disappearance of Maths and English GCSEs from post-16 provision. In the mid-90s, when GNVQs were becoming a substantial part of post-16 provision, the overwhelming majority of students entering Intermediate or Advanced GNVQ courses did so without maths and English at A-C. The main evaluation of the new awards noted that ‘Most GNVQ students combine their course with other qualifications. By far the most popular combination is a GNVQ with GCSE re-takes in Mathematics and/or English. While programmes devoted entirely to GCSE retakes have declined rapidly in recent years, the popularity of Maths and English re-takes is great and increasing.’<sup>105</sup> As discussed further below, the change since the mid-90s cannot be explained other than through changes in the funding mechanisms, which made high success rates very important, and the availability of ‘Key Skill’ qualifications in these areas in which success was very easy to secure compared to GCSEs.<sup>106</sup>

### Box 7

#### *Payment by qualification, payment by results, and standards*

The current payment system post-16 (like performance tables pre-16) gives institutions strong incentives to steer students into courses they can pass easily. In addition, **since most vocational courses are entirely teacher-assessed, pressures to reduce standards apply directly to a very high proportion of post-16 provision.** This does not mean that all qualifications should be awarded on the basis of written examinations. In the case of vocational courses, which are concerned with a very wide range of complex skills, many of them practical, this would be bizarre and counter-productive. But it makes quality assurance procedures critically important in maintaining high and consistent standards.

In every vocational system, teachers and administrators agree that the key source of quality assurance is the employer.<sup>107</sup> Employers need to provide direct input and feedback to teachers and trainers; but our current centralised, payment-by-results system erodes direct links with local employers. In addition, however, the assessment and oversight systems operated by awarding bodies are critical. Awarding bodies face two different incentives: to make things easy for their customers, but also to maintain a reputation for high quality and offering awards worth having. The current English system tends to strengthen the former at the expense of the latter.

Our current funding system is, overall, extraordinarily complex. Individual students do not have a standard, or indeed a weighted, funding allocation which could follow them. But at the same time, the total amount of money an institution receives depends on the details of each individual student's separate qualifications, characteristics and success rates. As a result, this is the only country, to the best of my knowledge, where institutions routinely spend money attending workshops which explain the latest wrinkles in the funding formula and how best to exploit these. The popular "Hands-on Guide to post-16 funding" written by an FE professional is a publication which sets out the basic rules and calculations underlying funding of post-16 learners, and is well over 100 pages long.<sup>108</sup> College principals and deputy principals spend days exploring the intricacies of 'success rate data anomalies' which will have a major impact on their annual budgets, and the 'Individual Learning Record' requires colleges – and their burgeoning administrative staff – to input hundreds of items of information for each learner before funding can be 'drawn down.'<sup>109</sup>

## ***5. The regulatory framework***

In education, as in other areas of public life, England operates as a centralised jurisdiction, in which the Secretary of State sets policy. Since the 1980s, there has been a steady tendency for English governments to centralise and micro-manage qualifications and curriculum, and also a commitment to active performance management and use of formal accountability mechanisms for schools and colleges. However, compared to most other countries, the central ministry currently has very little direct responsibility for setting curricula, designing qualifications, allocating funds, or inspecting provision. These functions have been vested in an array of national agencies and quangoes; although overall policy formulation remains the responsibility of the Secretary of State and Ministers, and of central government officials.

The institutions which contribute to the regulation of 14-19 education and training have grown rapidly in number over the last few years, while the relationships between them have become ever more complex. Figure 5 below shows the history of quango destruction and creation between 2006 and 2011, showing the short life of many agencies but also the increasing number in total, each with a formal role to play in directing and regulating provision; Box 8 provides an example of how they have been expected to interact. The current government is abolishing QCDA (though many functions relating to National Curriculum Testing will transfer to a new testing agency, and some others to Ofqual, discussed below).<sup>110</sup> The RDAs (which were not major players in this area) are also vanishing. So there has been some simplification, but not much.

**Box 8**

*Extract from the JACQA handbook for Awarding Bodies: JACQA (see Figure 4) was created in 2009 to determine exactly which qualifications should be approved for public funding and wound up at the end of 2010.*

§54 SSCs have been formally requested by DCSF to develop their Sector Qualification Strategies (SQS) and accompanying Action Plans to cover 14-19 provision. SQS and Action Plans should therefore provide a firm basis for SSCs to influence the development of 14-19 provision and if appropriate to inform JACQA recommendations on funding eligibility of stand alone vocational qualifications by supporting, or otherwise, AO submissions to JACQA.

In the context of 14-19 vocational education, two aspects of the current regulatory apparatus are critically important, and also contribute to a number of the issues and problems identified in the next section. They are

- the Sector Skills Councils (SSCs)
- Ofqual's regulatory activities, notably of individual qualifications

The **SSCs** – which are non-statutory – have become, in the last few years, **de facto designers, as well as de facto first-line accreditors, of almost all non-HE qualifications other than the academic ones.** In some cases, they play a very active part in deciding which awarding bodies will be allowed to offer a qualification in a given area. They were also central to the design of the Diploma.

SSCs exist to represent and articulate the view of employers. However, they do not develop organically, in the way that trade and professional bodies do, but are instead created by government, and largely funded by it. (The SSCs replaced National Training Organisations, which replaced Industry Lead Bodies, which replaced Industry Training Boards.) The number of SSCs is determined centrally, rather than evolving from and with the labour market; and SSCs can be, and are, closed down, or forcibly merged, if they are judged to be performing inadequately.

This structure is very unusual by international standards, as is the SSCs' formal role in accreditation (and, indeed, design) of formal qualifications. The usual pattern is for employer groups to *advise* government. SSCs also develop apprenticeship frameworks, and decide precisely which nationally-accredited qualifications may be used within a given framework.

Ofqual is the ‘Qualifications and Examinations Regulator’. While it has a number of different functions, a great deal of its effort is directed to accrediting individual qualifications; in its own submission to this Review, it states that ‘Ofqual’s role is to regulate qualifications.’ It is a relatively new body, which has absorbed a number of functions and activities from the QCA. Appendix IV discusses the rationale for such a regulator.

Ofqual has, to date, been accrediting individual qualifications in their thousands, as well as regulating awarding bodies. (Qualifications are not accredited unless they are awarded by an approved awarding body.) **Ofqual itself creates the criteria against which it regulates and accredits and cannot be over-ruled formally by the Secretary of State**, although it can be directed to take account of governmental policies (including those of other agencies and quangoes). However, the decision on whether or not a qualification (accredited or otherwise) can be funded for use in 14-19 education rests with the Secretary of State, the only exception being apprenticeships.

Ofqual is also charged with monitoring standards. Its remit in this respect will be modified under the current Education Bill, which requires it explicitly to take account of international qualifications.<sup>111</sup> However, to date, like its predecessor body QCA, it has confined itself overwhelmingly to **monitoring standards by comparing written documents**, rather than comparing standards in any direct way.<sup>112</sup>

As well as having changed constantly in recent years, the English regulatory system is very complex by international standards. This partly reflects recent history. In the 1990s central government took control of large parts of the English education system, which had previously been left to local education authorities and independent examining and awarding bodies, while at the same time giving some individual institutions (notably FE colleges) unprecedented independence. It had to create new arrangements, at speed, to deal with this and did so at a time of ‘agency fever’.<sup>113</sup> In the last decade, governments then continued with this agency-based approach, but re-organised and added to the numbers of bodies at an accelerating pace.<sup>114</sup> The complexity was compounded by the split of education responsibilities between two different departments of state (currently DfE and BIS.)

The most important arguments for having independent or arms-length agencies dealing with publicly-financed activities are that an agency can concentrate on carrying out an essentially administrative function efficiently, and that they ensure that decisions are made on ‘substantive’ rather than ‘political’ grounds.<sup>115</sup> However, the complexity, and the range of responsibilities delegated to current English agencies and bodies (some statutory, and some not) raises issues of:

- whether important policy decisions are being delegated to non-accountable bodies
- whether lines of authority are clear within government and between agencies
- cost. The more bodies are involved in a decision making, the greater the cost financially and in time. This is especially true when there are multiple connections between and among them
- transparency. A lack of transparency is itself a source of inefficiency and therefore costs
- responsiveness to bodies and individuals which are not part of the regulatory structure itself (including, in this case, individual employers, trade bodies, awarding bodies, universities as well as individual students and ‘learning providers’)

Finally, it is worth noting that DfE (DCSF/DfES) did, and does retain, one enormously powerful lever over how institutions behave: the performance measures which determine institutions’ position in league tables. At present, these apply most forcefully to primary schools and to 11-16 education, and their impact on how schools operate is demonstrably enormous, and discussed at length below.

**Figure 5 Official bodies and agencies responsible for the funding and content of vocational education and training programmes and qualifications in England: quasi-governmental bodies (quangos) 2006-11<sup>116</sup>**

	2006	2007	2008	2009	2010	2011
LEAs	Exists/active	Exists/active	Exists/active	Exists/active	Exists/active	Exists/active
HEFCE	Exists/active	Exists/active	Exists/active	Exists/active	Exists/active	Exists/active
QAA	Exists/active	Exists/active	Exists/active	Exists/active	Exists/active	Exists/active
RDAs	Exists/active	Exists/active	Exists/active	Exists/active	Exists/active	Exists/active
OFSTED	Exists/active	Exists/active	Exists/active	Exists/active	Exists/active	Exists/active
SSCs	Exists/active	Exists/active	Exists/active	Exists/active	Exists/active	Exists/active
LSC	Exists/active	Exists/active	Exists/active	Abolished/closing	Abolished/closing	Abolished/closing
QCA	Exists/active	Exists/active	Exists/active	Exists/active	Abolished/closing	Abolished/closing
SSDA	Exists/active	Exists/active	Abolished/closing	Abolished/closing	Abolished/closing	Abolished/closing
ALI	Exists/active	Exists/active	Abolished/closing	Abolished/closing	Abolished/closing	Abolished/closing
LSDA	Exists/active	Abolished/closing	Abolished/closing	Abolished/closing	Abolished/closing	Abolished/closing
ESBs	Not yet created	Exists/active	Exists/active	Exists/active	Exists/active	Exists/active
QIA	Not yet created	Exists/active	Exists/active	Exists/active	Exists/active	Exists/active
LSN	Not yet created	Exists/active	Exists/active	Exists/active	Exists/active	Exists/active
OFQUAL	Not yet created	Not yet created	interim	interim	Exists/active	Exists/active
UKCES	Not yet created	Not yet created	Exists/active	Exists/active	Exists/active	Exists/active
JACQA	Not yet created	Not yet created	Not yet created	Exists/active	Exists/active	Abolished/closing
SFA	Not yet created	Not yet created	Not yet created	Exists/active	Exists/active	Exists/active
NAS	Not yet created	Not yet created	Not yet created	Exists/active	Exists/active	Exists/active
YPLA	Not yet created	Not yet created	Not yet created	Exists/active	Exists/active	Exists/active
QCDA	Not yet created	Not yet created	Not yet created	Not yet created	Exists/active	Exists/active

Exists/active
  Abolished/closing
  Not yet created

# Part Four: An Audit of Current Provision

Any examination of English vocational education quickly highlights numerous examples of excellent practice, and of institutions and qualifications that are highly respected, and of high quality, and which provide students with new and valuable skills which are extremely well aligned with today's labour market, as well as generalisable to future jobs and opportunities. The evidence submitted to the Review provided a wealth of examples, and *those noted here are selected, more or less at random, from a large range of inspiring practice.*

**Colleges around the country offer specialist education with a national reputation.** At **Macclesfield College**, for example, the European Centre for **Aerospace Training** uses fully functional BAE aircraft to offer training, to international industry standards. It has direct and excellent links with industry; indeed, without centres like Macclesfield, aircraft maintenance would all have to move abroad. The reputation of outstanding colleges and departments attracts students from very large geographical areas. **City and Islington College** offers specialised provision in, for example, Environmental and Land-based Studies, Optics and Ophthalmics, and students are drawn, from across the 32 boroughs of Greater London, and beyond.

**Innovative organisations** have been developed to ensure that young people can access the specialist programmes they want, and that institutions can pool expertise and teach to their strengths. In **Luton**, for example, the **Barnfield Federation** involves a college, academies and a studio school. **Ashfield School** in **Nottinghamshire** has the RAC on site, running its national apprenticeships in a special training garage and therefore available to teach school-based students. In **Kent**, **25 Vocational Skills Centres** cater for 14 to 16 year olds across the county, some on school premises, but also including free-standing provision and centres which are integrated into an FE College campus.

**High quality apprenticeships** offer young people a demanding programme of work and study with excellent career prospects. For example, **Network Rail** offers intensive engineering training with the possibility of moving on to an HNC and Foundation degree. It has 50 young people registering for every one of the places it offers; and 90% of its apprentices stay with the company. **Airbus** is also heavily over-subscribed, for both its craft (Level 3) apprenticeships and its advanced engineering ones. Large amounts of

college study are a necessary part of an Airbus-specific programme that goes well beyond the national frameworks and offers apprentices the chance of further advanced university study.

**Large numbers of students progress directly from vocational courses to higher education.** In 2009, 11.4% of the UK domiciled applicants who were accepted for HE entry had a BTEC National Diploma and no A levels, and a further 1.7% a BTEC National plus A levels. This compared with 37.1% holding A levels alone. Ten years ago, only 4.9% of acceptances were on the strength of a BTEC National alone.<sup>117</sup>

**Vocational qualifications offered by English awarding bodies include awards with an international, as well as a national reputation.** One example is the awards offered by the **Association of Accounting Technicians**. AAT qualifications have high labour market value and recognition, and offer direct progress into professional-level accounting (with exam exemptions). They are taken within accounting apprenticeships, initial (largely part-time) and continuing training; and not just in England but in 13 other countries as well. The student population, in 2010, was 69,000 – up from 16,000 in the early 1980s.

#### **Box 9: Specialist training exemplified**

**Westminster Kingsway College** counts Escoffier and Ritz among the founders and patrons of its catering and hospitality departments.

For contemporary celebrity chef Ainsley Harriott, a former student:

“The College offered a perfect environment....The learning is second to none.”

For Brian Turner CBE, chef and restaurant entrepreneur:

“Westminster Kingsway College is a vital component of the Hospitality industry in the UK. The specially developed skills and motivation required to succeed in the high-pressured kitchen environment of a deluxe restaurant (have) never been more important.”

As these and many other examples testify, English education boasts a wealth of good practice, involving both innovation and the maintenance of excellence. But to a considerable extent these exist in spite of, not because of, the underlying structures – and quality is highly variable. In evidence submitted to the Review, most of the institutions highlighted above also emphasised major barriers to effective operation, and the way in which ever-changing rules had generated large, deadweight costs.<sup>118</sup> The over-arching problem was encapsulated for the Review by Professor Lorna Unwin:

**“England always has great examples of good practice. But we don’t have a good system.”**

Today, vocational education faces major challenges. Section Two of this report describes an economy that is characterised, throughout most of the developed world, by a shrinkage in traditional skilled manufacturing jobs, and a youth labour market which has imploded. High structural levels of youth unemployment have been further increased by recession; and we know, from research on previous generations, that early unemployment has long-term negative effects on people’s later careers. In England, our labour market is also characterised by frequent job changes among the young; and by employer demand for a specific sub-set of our many qualifications and indifference to others. There are clear signs that education is not serving some young people well; there are low returns to large groups of qualifications, and ‘churn’ into and out of the labour market.

Our education system is not responsible for the harsh labour market conditions that young people face.<sup>119</sup> But that does not make education irrelevant either. When English children are small, virtually every single one has parents with high aspirations for their futures. By the time they reach their teens, aspirations have shrunk for many; and it is the lower-achieving (who are also, disproportionately, from poorer backgrounds) who are most likely to end up on courses with negligible labour market returns, or unemployed.<sup>120</sup>

Yet it is not necessary for young people’s futures to be sealed by the age of 14, 16 or 18. Ours is a society in which people can and do progress within a changing labour market, and which rewards substantive (and identifiable) skills and experience. There may be low returns on many of the qualifications our 16-18 year olds obtain; but conversely, some qualifications bring very high returns, even when obtained in full adulthood by people who have been out of formal education for many years.<sup>121</sup>

What is crucial is that 14-19 education should equip young people to follow different routes successfully, and **not operate as a tracking system**. Vocational education needs to give all young participants the **skills they need for later progression**, including, if they wish, a return to education in later life; and it needs, critically, to address the diminishing opportunities for employment and genuine workplace experience that today’s young people face. As a system, it is not meeting today’s challenges successfully, in spite of its many pockets of excellence. This section explores further the evidence for failures and the reasons.

## ***1. The mis-match between labour market requirements and vocational education provision***

The 21st century labour market makes it far harder for today's young people to make a successful transition to stable employment than was the case for the generations immediately before them.<sup>122</sup> Nonetheless, structural labour market problems are no excuse for adopting policies which make things harder, not easier, for young people, teachers and employers.

### **Box 10**

Two of this country's big longitudinal studies, tracking those born in 1958, and those born in 1970, provide, fortuitously, information from either side of the period when traditional apprenticeships declined precipitously, and the government introduced its major NVQ reforms. For the 1958-born cohort, apprenticeship was the dominant mode of vocational education and training, often combined with a formal qualification (typically City and Guilds). For this generation, there are major positive returns to vocational qualifications, **including those at level 2**, through into middle age. For those born just 12 years later in 1970, and leaving school in the mid to late '80s, far fewer apprenticeships were available and lower level vocational qualifications had become, effectively, worthless.<sup>123</sup> See also Appendix III.

When we compare the histories of young people who entered apprenticeship or employment in the 1970s with more recent outcomes (Box 10, Appendix III), it is clear that a significant proportion of the 14-19 cohort is being offered **a less effective path into employment than their predecessors**. This is partly because we are not comparing like with like: between these two cohorts, higher education participation increased, and there were major changes in the occupational structure. But that is not the only reason. The value of lower-level vocational qualifications fell precipitously in the late 1980s, and has remained extremely low and even negative ever since, even though we know that there are many skills and qualifications that the labour market does value. **Things have got worse in part because of education and training policies which are at odds with labour market dynamics**. At present England's vocational education provision **is seriously ill-aligned in five key respects**, especially within post-16 provision.

**1.1** Formal qualifications are important in the English labour market; and those offered by schools and colleges therefore need to be clearly and demonstrably valuable to and valued by employers. Qualifications signal holders' skills and capacities; when these are

valuable in the labour market they are associated with higher wages, and with an easier passage into early employment, and vice versa.

As already discussed (see Table 5 above, and Appendix III) many level 1 and 2 qualifications, including NVQs which are supposed to reflect workplace requirements, do not appear to have any positive outcomes whatsoever in terms of earnings and career progression. In other words, **the content of many current vocational qualifications is not actually valued by employers and the labour market.** Yet these qualifications form a **major part of what is offered to 16-18 year olds.**

The problem is most notable among those who are not able to progress directly to A levels, BTEC Nationals or clear craft pathways. Many of these young people leave education at age 17 (at least temporarily), often after taking level 2 courses. The many young people in England who ‘churn’ in and out of education are overwhelmingly on lower-level programmes. This suggests very strongly that they are responding, rationally, to the low value attached to their qualifications, and to limited progression possibilities.

The qualifications offered to contemporary 14-19 year olds are to an overwhelming degree government-designed. In recent decades there have been repeated government initiatives which have increased central control over the design and delivery of qualifications.<sup>124</sup> In the vocational area, the development of ‘National Occupational Standards’, covering well over 90% of occupations, has been government policy (and government funded) since the early 1990s and qualifications have had to reflect the standards in more or less direct ways. The theory was that use of these standards would increase the labour-market relevance of qualifications and make them much more attractive and valuable to employers.<sup>125</sup> The focus of National Occupational Standards development, at the start and ever since, has always been on the competencies required of adults *in employment*, not on pre-employment or general vocational education.

## Box 11

**National Occupational Standards** (NOS) are ‘statements of the skills, knowledge and understanding needed in employment and clearly define the outcomes of competent performance’ (QCA definition). Creating them has been the responsibility of (in turn) “Lead Industry Bodies”, “National Training Organisations” and “Sector Skills Councils”, funded through (in turn ) the National Council for Vocational Qualifications; the Qualifications and Curriculum Authority; and the UK Commission for Employment and Skills. They are intended to reflect directly the requirements of employers and the workplace. Some qualifications must reflect them directly (NVQs, awards on the Qualifications and Credit Framework, discussed below). They may also be used to inform other qualifications and awards, and were originally expected to feed into and improve companies’ own training programmes.

More recently, policies have extended the degree to which programmes for very low-attaining young people (not able to undertake a ‘level 2’ programme) are also structured through and around national qualifications. **Foundation Learning** was designed to deliver a ‘personalised’ programme for large numbers of 14-19 year olds, including vocational or subject learning, based around formal awards which are intended to promote progression.<sup>126</sup>

There are currently almost 1300 qualifications in the “Foundation Learning catalogue” – which are particularly relevant post-16 because of the funding regime for this age group. Many are very small: 400 have a ‘credit value’ of 5 or less, meaning the expected amount of time it would take someone to complete them is less than 50 hours. Their development reflects the general move to make everything except GCSEs and A levels ‘credit-based’ (see the discussion of the QCF, Box 16) but the development of Foundation Learning was also intended to improve the quality of programmes which offered low attainers ‘engagement activities’ (sic) without any obvious progress towards either employment or higher-level study. (See Box 5 for an example of the problems that Foundation Learning is intended to address.)

However, from a labour market point of view, it seems extremely unlikely that Foundation Learning will be a success.<sup>127</sup> As discussed above, employers value either a few familiar qualifications or ‘real’ experience; and professionals and providers do not expect the new awards to command any value in the labour market. “These are qualifications that qualify you to do nothing but take another qualification”, in the opinion of the CEO of Rathbone, a voluntary sector organisation working extensively with young people at risk of exclusion.<sup>128</sup> Other experienced charities and providers are equally negative, and note that young people themselves are perfectly realistic about what is being offered. “The

qualifications don't have any currency with learners...and are manufactured just for the purposes of this programme.”<sup>129</sup>

In addition, any programme which involves large numbers of separate teacher-assessed qualifications is very unlikely to be cost-effective. The more qualifications you have, the higher the proportion of staff time that is spent carrying out assessments, chasing down missing 'evidence', dealing with paperwork, and liaising with awarding bodies. Time spent carrying out and managing assessments is problematic enough in the case of large, high-value qualifications such as A levels or BTEC Nationals. The current Foundation Learning approach inevitably means that staff will spend a great deal of time administering assessments and certificating rather than actually teaching anything.

In summary, English governments have centralised decision-making on the content of vocational qualifications, vesting control in national-level official bodies and using these to obtain and feed employer content into qualifications. In the past, *there were far more direct links between employers and awarding bodies, and also between employers and their local colleges*. The evidence from the labour market indicates that centralising the development of qualifications has been a very ineffective approach.

**1.2. The labour market recognises qualifications that are stable and familiar, but English vocational qualifications have been and remain subject to constant change.** As discussed in Part Three above, a preference for stability holds, very rationally, across the world. The English government has now, for decades, been introducing new types of vocational qualification, abolishing them, and introducing yet another new set. Academic qualifications have, by comparison, been fairly stable, at least in their titles.

This situation continues. Most attention has been given to the Diploma programme, as the latest completely new vocational secondary award launched by government. Less visible has been the impact of **the Qualifications and Credit Framework**. The QCF is discussed in more detail below, and is another example of a centrally-driven attempt to promote qualifications which are more closely aligned with the requirements of employers. It has involved **redesigning and comprehensively re-labelling more or less every vocational qualification in the country** at enormous cost to awarding bodies. These costs are, of course, passed on through fees.

## Box 12

One argument made for the QCF reform, as for the 1980s creation of NVQs, is that standardised qualification structures organised by governments will enable employers to make better-informed decisions about hiring, and so increase productivity. In practice, however, brands have remained important. For example, City and Guilds, dating back to the nineteenth century, remains valued and recognised, pre-dating and outliving ongoing government-directed policies which change the names (and structure) of its craft qualifications.<sup>130</sup> In a survey of employer use of Further Education carried out by UKCES for the Review,<sup>131</sup> the qualifications referred to by name were City & Guilds; HNCs and HNDs; and professional qualifications leading to chartered status. (NVQs, meanwhile, are supposed to disappear now that the QCF is in place<sup>132</sup>).

### **1.3 Young people’s employment patterns imply a need for fairly general, rather than highly specific, vocational qualifications. However, English young people are increasingly being offered only highly specific vocational qualifications.**<sup>133</sup>

As discussed in the previous section, young people change sectors and occupations, as well as specific jobs, very frequently during their first decade of employment. This means that a high proportion of those who take a given vocational qualification do not stay in the corresponding occupation; and the lower level the vocational qualification concerned, the more likely this is to be the case.

This argues strongly for quite general vocational programmes for any 14-19 year olds, as is, indeed, the case in almost all developed countries. (This is not just the case for school/college-based programmes. Apprenticeships in other European countries all involve a substantial amount of off-the-job general education). However, **English education policy currently tries to enforce a bifurcated system in which either narrow, specifically occupational qualifications, or traditional academic qualifications are offered to 16-19 year olds.**

All vocational qualifications, other than the traditional academic ones and the Diploma, currently must be approved by an SSC. The criteria for qualification approval which Ofqual (the qualifications regulator) has drawn up mean that, in practice, a vocational qualification has to have SSC approval if it is to be accredited. The expectation, when Ofqual was established, was that only accredited qualifications will be offered in publicly-funded provision, and this is the situation to which the government has largely moved.

To receive SSC approval, all units in a qualification must be *directly* related to specified National Occupational Standards, which are drawn up by the SSCs to reflect the current requirements for current jobs. This is a stronger requirement than in the recent past, when some vocational awards might instead ‘take account’ of Standards. Qualifications must also comply with the requirements of the Qualifications and Credit Framework if they are to be approved by an SSC, and, therefore, eligible for Ofqual accreditation.<sup>134</sup> As already mentioned, the overwhelming majority of vocational qualifications have therefore been comprehensively redesigned, to be ‘QCF-compliant’ and accredited.

The QCF creates a number of serious problems for young people who want to progress within education and training (see below). From a labour-market point of view, if vocational qualifications are QCF-compliant, and based directly and entirely on National Occupational Standards, then they will reflect current practice in a particular occupation. This may be an appropriate design principle for qualifications aimed at adults in specific employment; it is entirely inappropriate for young people who are likely to change jobs, and who are entering decades of employment in a rapidly changing economy.

The same issues arise in the case of apprenticeship frameworks, which are non-age-related (ie the same for young and adult apprentices), and which are highly specific in terms of their demands, including which qualifications may be used. Frameworks are developed by the Sector Skills Councils; an approach which makes England doubly unusual. Most countries have national-level advisory boards for apprenticeships, but do not give sole responsibility to employer organisations, because apprenticeships are seen as also part of the education system for young people.<sup>135</sup> And most countries allow for more adaptation to local circumstances.

Current policy also flies in the face of research evidence, which, as discussed earlier, demonstrates that narrow NVQs have on average very little labour-market value. The bodies which articulate employers’ views have consistently promoted very specific and narrow qualifications, even though employers have not, in practice, valued these. The situation underlines the failure of our 14-19 vocational education to engage effectively with the labour market.

**1.4** Our current system offers, as we have seen, highly specific qualifications; and government funds a network of organisations intended to articulate employer requirements. Nonetheless, **the English economy suffers from some important and clearly discernible skills shortages.** These apply in quite specific areas, and discussing individual shortages in detail is beyond the scope of this Review. But the existence of such problems, after two decades of ever more frenetic ‘skills policy’, further confirms that there are important mis-matches between vocational education and the labour market.

Two examples will illustrate the ways in which such shortages can and do endure. In most areas of the economy, skills shortages have not been a major concern of employers in recent years, and come well below other concerns in employer surveys. High levels of immigration have almost certainly reduced pressures. Moreover, as we have seen, skilled manual and intermediate non-manual occupations have been losing labour-market share. Nonetheless, there are genuine skill shortages in construction – even though it is unusual in retaining an employer training levy (and also has a number of jobs requiring a licence to practice.)

This cannot be because standards need to be re-specified yet again. Nor is it because young people are refusing to enter the sector: on the contrary, in many parts of the country, large numbers of young people are seeking construction apprenticeships without success. The problems must, instead, be institutional.

The second problem relates to technicians, where a number of institutions and commentators are predicting major shortages in the near future.<sup>136</sup> It is unclear whether this means that positions will actually be unfilled: many positions which were once filled by graduates of HNC and HND courses based in colleges are now taken by people with foundation or honours degrees.<sup>137</sup> But it reflects a more general problem, reflected not just in 16-19 education and transitions, but in the labour market as a whole, English education is not generating enough people with quantitative skills at various levels.

### Box 13

“The changes wrought over recent years have seen a systematic deskilling of the quality of provision with the emphasis on achievement of a qualification being primary and the dumbing down of the content, quality and rigour...*The removal of STEM activities which were present under the Guilds format has seen an invisible ceiling introduced as students do not have the skills to progress to higher levels.*” Ali Hadawi, Principal, Central Bedfordshire College (Emphasis added.)

The shortage of maths and science skills apparent in the wage premia attracted by Maths A levels, and by quantitative degrees. It is reflected in the fact that virtually every home student who applies for an engineering degree is offered a place,<sup>138</sup> at a time when more and more applicants, overall, do not secure entry to university. It is reflected in recurrent concerns over recruitment to STEM courses at all levels.<sup>139</sup> Among A level students, specialisation and pressures to obtain high UCAS point scores have tended to reduce the numbers taking maths and science subjects; although awareness of the ‘maths premium’ appears now to be increasing A level Maths take-up, there is no such trend for the hard sciences.<sup>140</sup>

If young people drop maths and science at 16 it effectively becomes impossible for them, in the future, to move to a quantitative or science-based course. Yet in vocational education government funding policies and targets have militated against the growth of qualifications and programmes with a significant maths and science ‘loading’. Providers have to achieve very high success rates if they are to remain solvent; in other words, anything which is difficult puts attainment of qualification targets and funding at risk, even though young people who succeed in STEM-based courses will have excellent progression opportunities. Routes into higher technician-level study are directly affected by these pressures.

#### Box 14

The construction industry is a major employer of skilled employees, and has grown significantly in recent years. The ability of our vocational education system to meet its needs is therefore an excellent test case of whether that system is working well. Unfortunately, what we find is very strong evidence that it is not. It is beyond the scope of this review to examine construction (or any other individual industry) in detail, but a combination of reductions in provision, strong demand from young people, and clear skill shortages in a major industry<sup>141</sup> should be a matter for very serious concern.

The Review was told by the British Association of Construction Heads that, in the past few years, there has been a 20% decline in the number of places for young people in colleges, although student demand for places is increasing. In some parts of the country there is an acute shortage of apprenticeship places.<sup>142</sup> British construction companies meanwhile employ large numbers of skilled immigrants (who have trained under different systems. See also Box 25).

These failures are occurring in an industry which has a training levy (most unusually for the UK) and so indicate systemic failures. Given the demand for training by young people, levels of youth unemployment, and the growing employment opportunities in construction, the reasons for continuing shortfalls in developing construction skills justify immediate attention.

**1.5** Finally, as we have seen, employers value ‘work history’ and experience – that is, having held a proper, paid job in a real workplace, as opposed to ‘work-related’ experience in an educational institution or government training scheme. This is reflected, very clearly, in employment and pay rates. **However, it is becoming ever harder for young people to obtain ordinary employment and too little is being done to assist them in obtaining genuine workplace experience and employment-based skills.**

Many 16 and 17 year olds ‘churn’ in and out of education and the workforce, looking for openings which will actually help them progress. It is therefore not surprising that there is enormous excess demand for apprenticeships, notably at advanced level (Level 3/craft level). Young people who want apprenticeships show an accurate understanding of employers’ priorities and requirements, and of the fact that there are very high returns to a successfully completed apprenticeship, especially at level 3.

However, our current system is ineffective in providing enough apprenticeships for 16-18 year olds. In 2009 only 6% of employers recruited any 16 year olds (including apprentices) and only 11% recruited any 17 or 18 year olds.<sup>143</sup> By contrast, a quarter of young people born in 1958 acquired a traditional apprenticeship, typically at age 15 – considerably more in the case of males.<sup>144</sup> Today, 16 and 17 year olds are faced with enormous excess demand for high-quality apprenticeships and employers who, as discussed above, prefer to recruit from older age-groups.

In 2009, the number of 16-18 year olds apprentices actually fell. Enormous efforts to increase numbers, including using ad-hoc payments to employers, appear to have reversed this; but as Table 6 and Figure 6 below demonstrates the trends are not encouraging (see also Appendix VII). Today’s economy is, of course, very different from that of 1958, where very few people went on to university. But we know, from other advanced economies, that it is possible to revitalise apprenticeship, and operate successful programmes that enrol far more widely than we do at present.<sup>145</sup>

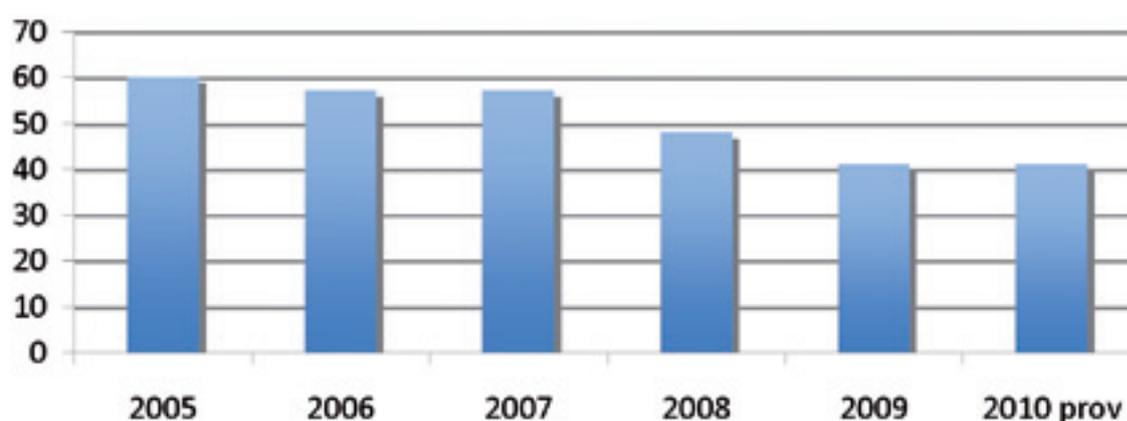
Government policy is committed to increasing the number of places for young people. But recent trends suggest that, unless policies are changed, current projections are likely to be highly over-optimistic. Growth, under the current model, is coming largely from apprenticeships for those aged over 18, or, indeed, over 24, both overall and for the advanced (level 3) apprenticeships which are so valuable in income and progression terms.

Visits made for the Review to a range of training providers (including major employers), and discussions with the National Apprenticeship Service, Association of Learning Providers, and a cross-section of SSCs all confirm that it is very much easier to create apprenticeship places for older apprentices than for 16 and 17, or even 18 year olds. This is partly because of concerns over employing young people, and partly because adult apprenticeship starts can include people who were already employed, and who are ‘converted’ into apprentices with the assistance of training providers.<sup>146</sup>

Table 6: Apprenticeship starts 2004-10 (Source: NAS)

	2004/5	2005/6	2006/7	2007/8	2008/9	2009/10 provisional
Age: 16	42,600	33,200	33,200	33,300	29,600	28,800
17	38,000	33,300	35,800	36,400	33,000	39,800
18	32,000	32,500	36,200	37,300	36,400	45,100
19-24	75,100	75,200	78,600	90,150	84,700	111,500
25+	400	300	300	27,200	55,900	49,500
16-18 as % total	60	57	57	48	41	41

Figure 6: Young people's apprenticeships as a proportion of total apprenticeship starts



Ministers' desire to increase the number of 'adult' apprenticeships is entirely reasonable, especially given the high unemployment rates currently afflicting those aged 18-24. But the result is that a declining proportion of our spending on apprenticeship is devoted to helping young school-leavers develop valuable skills – both specific and general – in the workplace. These are skills which employers value very highly and which explain the high returns to apprenticeship training. England also currently has no effective, let alone system-wide, policy to assist young people without a full apprenticeship to obtain genuine work placements.

**It is extremely unlikely that, under the current model of provision, apprenticeship for 16-18 year olds will expand much, let alone meet the demand generated by the virtual disappearance of the traditional youth labour market and the raising of the compulsory participation age.** In addition, the very unusual structure of English apprenticeship means that we are getting less training activity for the amount we spend than other systems. This may seem surprising, given that we offer employers no direct subsidy. But our system involves **three** types of institution instead of

the normal **two**.<sup>147</sup> Standard apprenticeship programmes, including those of the German-speaking countries, Denmark and France, involve *only* employers and off-the-job teaching institutions (with government and/or social partners laying down broad policy only at national level. See Appendix VII.) In England, however, a network of additional specialist ‘training providers’ has been created; and there are often three organisations involved with a given apprenticeship. This creates a level of administrative charge on apprenticeship which other countries do not incur or find necessary.

## ***2. The mis-match between progression requirements and vocational education provision***

We know from both opinion data and behaviour that the overwhelming majority of young people and their families have aspirations to progress within the education system. However, at present the English education system has a number of structural features which militate against such progression, particularly from within vocational programmes. These features are largely, once again, created by central government, with good intentions and perverse effects. At Key Stage 4, the main driver is performance measures; post-16 it is the current system of funding institutions for qualifications rather than students; and in apprenticeship it is the nature and governance of apprenticeship frameworks.

Six major areas of concern emerge, which interlock but require different remedies. They are the current performance indicators; the neglect of maths and English; the impact of the QCF; the nature of apprenticeship frameworks; the current funding system; and the highly uneven quality of vocational teaching and provision.

**2.1** First, the system of **performance indicators** which is currently being used to measure schools’ performance at the end of Key Stage 4, has resulted in an enormous rise in the number of ‘vocational’ awards taken by young people. The speed with which numbers have grown, and the absence of any other explanation, make it clear that the reason has been to promote schools’ league table performance: evidence to the Review confirms this. **Young people are being entered for ‘vocational’ awards at the end of KS4 for reasons which have nothing to do with their own long-term interests, within education or the labour market. They can and do find that they are unable, as a result, to progress to the courses they want and have been led to expect they will enter.**

As discussed earlier, from 2001, the government’s own curriculum agency (QCA, later QCDA) worked intensively on a large-scale programme to ensure that all qualifications could be used to contribute to performance on accountability measures. **This**

**programme reached fruition at the same time as the National Curriculum was relaxed, and the accountability regime was tightened.** The result has been a flight from standard academic subjects to ‘vocational’ ones, on a scale and at a speed which has not yet been understood or even noticed by the vast bulk of the population.

Much of the enthusiasm and drive came from within QCA, which was quite clear about the implications and purpose of its programme. An interim report published as early as October 2002<sup>148</sup> stated that the agency team

‘have met with almost unanimous support for the intentions behind this work, in particular the removal of a disincentive to the appropriate (sic) use of the full range of approved qualifications’ (p3)

and that

‘Contributors see it as inevitable in the context of ‘league tables’ that schools will seek to maximise performance outcomes although the advice is that in the majority of cases decisions will be made in students’ best interests’ (p3)

Evidence submissions offered concrete examples of harm to pupils as a result of the rapid changes in KS4 provision. The review has been told, in a number of submissions and interviews, that students are mostly very aware of the GCSE equivalences of the qualifications they take, but not of the fact that league table equivalence does not necessarily translate into real equivalence. As one assistant college principal explained

“the incentive for schools to provide qualifications for their pupils on the basis of the points they score is irresistible. It is not unusual for young people to have the ‘equivalent’ of 12-15 GCSEs but without a C or above in English or maths... (T)he young people themselves (and their parents) then expect to progress to a level 3 qualification in FE....but when they present at FE it is clear that their knowledge and understanding are poor. One sometimes wonders how much they have achieved...(and) there is little option but to repeat a level 2 qualification.”<sup>149</sup>

A 14-19 group concurs:

“Too many young people (are) gaining an equivalent of 5 A\*-C qualifications who find they do not have the necessary currency to progress to level three post-16.”<sup>150</sup>

Science is outside the specific remit of this review, but is of special concern, since BTEC and OCR science do not allow for progress to science A levels and many pupils (including some interviewed for this review) are unaware of this. Edexcel itself, it should be noted, makes absolutely clear in the specification that the BTEC First Certificate (and Diploma) are ‘specialist work-related qualifications’<sup>151</sup> and neither full science GCSEs nor

science A levels (other than Applied Science) are listed as progression routes. But many pupils are not aware of this: we and others have been informed by KS4 pupils, speaking in good faith, that they are taking BTEC or OCR science and that they intend to do science A levels.

However, this is not simply about academic progression. *Schools offering vocational options do not always meet the vocational standards required by colleges.* Young people wishing to progress from a level 2 to a level 3 may find they cannot do so because they have not reached the required level in their specific vocational skills as well as, or instead of, their more general ones. A college in the Tyne and Wear area informed us that:

“The expansion of vocational qualifications in the secondary sector particularly at level 2 has resulted in pupils progressing into further education at the age of 16 yrs with an overly optimistic view of their knowledge and skills. We have commonly found that pupils who have successfully completed vocational awards in the school settings have not developed the necessary skills to allow them to progress onto the next level.”

**What is happening here has nothing to do with respect for vocational qualifications and for a variety of skills. It involves young people who are being deceived, and placed on tracks without their full understanding or consent.**

We return to this issue below.

2.2 As discussed at a number of points above, **maths and English** are of critical importance in securing progression within education and the labour market. Yet funding incentives and government targets have conspired to **prevent many young people improving their maths and English skills**, even though these fall far short of what employers desire. It is shocking that English education should, in effect, deny rather than promote the acquisition of good English and maths qualifications for those who completed KS4 without English and maths GCSE A\*-C. But this is happening for students in educational institutions (schools and colleges) and also to apprentices, who are instead channelled into, or required to take, key or functional skills.

Students taking a full A level course of study (3+ A levels) will almost always have achieved at least a Grade C in both Maths and English, since this acts as an informal entry requirement for such programmes, parallel to its importance in the labour market. Conversely and almost by definition, most students on non-A-level, vocational courses will not. DfE analyses carried out for this review, looking at the cohort of young people who were 15 in 2005/6, established that:

- 37% of the cohort achieved neither Maths nor English GCSE A\*-C at 15. Of this group, only 2% – i.e. less than 1% of the cohort – achieve both by age 18
- 12% of the cohort achieved English GCSE A\*-C at 15, but not Maths. About 17%, or less than 1 in 5, of them achieves a Maths GCSE A\*-C by 18
- 7% of the cohort achieved Maths GCSE A\*-C at 15 but not English. About a quarter (24%) of this group achieves English GCSE A\*-C by 18
- Overall, **the percentage of the cohort with both maths and English GCSE A\*-C rises from 44.8% at 15 to 49% at 18 – still below half, and less than a five percentage point rise.** In absolute terms, for this cohort, 329,000 at age 15 did not have maths plus English A\*-C; and at age 18, 304,000 still did not

These are shocking figures. They come about not because young people do not recognise the importance of maths and English, but because funding incentives have deliberately steered institutions, and, therefore, their students, away from qualifications that might stretch (and reward) young people and towards qualifications that can be passed easily. They have done so in a general way, through the qualification-based funding regime (see 2.3 below) and also quite directly. Funding formulae driven from central government have given strong incentives for institutions to register young people for particular qualifications, which were supposedly equivalent to mainstream maths and English awards and contributed to high-profile targets.

No other developed country allows, let alone effectively encourages, its young people to neglect maths and their own language in this way. A recently published report from the Nuffield Foundation examines upper secondary maths provision, with particular attention to vocational programmes, and underlines how extraordinary our policy is and has been.<sup>152</sup> **The UK (including England) is effectively unique in not requiring continued mathematics and own-language study for all young people engaged in 16-19 pre-tertiary education.**

In England, unless students are taking maths AS/A level, or English AS/A level, the current norm is either to take no formal maths or English at all, or to be entered for Key Skills (until this year) or Functional Skills. Millions of key skills certificates have been awarded in ‘application of number’ and ‘communication’, as the key skill maths and English tests are known. These awards contributed directly to one of the previous government’s most important targets, and were very easy to pass, which is extremely important in a funding system which pays partly by results. **The funding for key skills was also intentionally generous**, and designed to encourage registrations.<sup>153</sup>

The few schools and colleges which have entered students for the small number of alternative, more demanding maths and English awards (Appendix 8) were taking a considered but expensive and risky course of action. Equally, given the clear policy and funding signals from central government, awarding bodies have not devoted many resources to developing substantial post-16, non-A level awards in English or maths. In the early 1990s, when GNVQs were introduced, GCSE re-sits were very common; they have become far less so, and confined largely to those following level 3 BTEC courses.<sup>154</sup>

The key skills qualifications which have been embraced with such enthusiasm have, as their external component, on-line, on-demand, multiple-choice tests, which can be taken repeatedly until a candidate passes. In the case of English these on-demand tests involve **no writing at all**. In the case of maths, the tests (again, multiple choice) only cover numeracy – i.e. arithmetic. They can be, and in many cases are delivered without any specialist instruction or further study by the student or apprentice.

In recognition of their limitations, key skills have, this year, been withdrawn from full-time educational institutions (but retained for apprenticeships: see below.) Their replacement, functional skills, so far have much lower pass rates than key skills, and schools and colleges are reported to be entering learners at a level lower than they would have been entered for key skills. This is entirely consistent with the commonly held view that **key skills are in no real sense equivalent** to the GCSE grades with which they enjoyed and enjoy formal equivalence.

Functional skill qualifications may settle into being useful qualifications for some post-16 learners: but there are serious conceptual problems with the whole approach, discussed in Appendix VIII. They are certainly not in themselves an adequate ‘maths and English’ diet for the 16-19 cohort. Moreover, it is clear that the **standard of the awards has been very different across awarding bodies** (see Appendix VII). Although every set of functional skills qualifications on offer was approved against very detailed written specifications, pass marks have been very different in ways that cannot be explained by systematic differences among candidates. There is no evidence that some awarding bodies

set out to provide ‘easier’ tests than others, so what the results indicate, *once again*, is that it is foolish to rely on written specifications as a way of conveying and maintaining standards: something which has been very common across vocational education.<sup>155</sup> Given the importance of maths and English in the labour market, as well as for educational progression, improving post-16 provision is a matter of urgency. Appendix VIII discusses mathematics options in some detail.

### **Box 15: Maths and English post-16**

Recent years have seen the near-elimination of maths and English GCSEs from post-15 study: most young people who fail both, or even one, at the end of KS4 are given no opportunity to re-take. The small number of GCSEs still taken in this age-group are overwhelmingly taken by those following 1, or in some cases 2, A levels: and are almost always taken in English and Maths. Science GCSEs barely figure as post-16 entries.<sup>156</sup>

It has for many years been received wisdom that, pedagogically, it is pointless to keep trying to teach the same course, in the same way, to people who have not succeeded at it earlier. There is, in fact, good evidence for varying teaching approaches as a route to success: but it does not mean that even a second attempt at a qualification is pointless.<sup>157</sup> In the 1990s, when GCSE re-sits remained common, data indicated that almost half of those doing a first maths re-sit passed. Second re-sits had much lower success rates, and almost no-one tried more than twice.<sup>158</sup>

In any case, the need for varied pedagogy is not an argument for abandoning content. Vocational education experts in countries as diverse in their approaches, as Denmark, France, Germany, Sweden and Canada all argue for a different approach to maths teaching for students in vocational and students in conventional academic programmes. But all of these countries include a substantial amount of mathematics teaching, and mathematics progression, in all their post-16 programmes.

*See also Appendix VIII*

Apprenticeships differ from other post-16 provision in having an overall ‘framework’ which includes compulsory key skills. They, too, were intended to move to functional skills this year, but this move has been delayed because of vociferous protests from training providers. This is because providers are paid partly on results (and completion requires key skills), and because many have not been teaching, or needed to teach, English and maths; nor are they equipped to. There is indeed no reason why an occupational training specialist, whether in hairdressing, construction, or hotel work, should be expected to teach these subjects. But there is every reason to demand that they

be taught, off the job, to young apprentices who are very likely to change occupations, and for whom progression routes matter. That is the rule elsewhere, and should be the rule in England too.

**2.3 The Qualifications and Credit Framework** has, since January 1st this year, incorporated (virtually) all vocational qualifications accredited by Ofqual;<sup>159</sup> or, to put it slightly differently, vocational qualifications which are accredited have also to be ‘QCF-compliant’. Academic qualifications (including the Diploma) come under different rules; but all BTEC awards have been re-designed to meet QCF requirements, as have a very large number of other awards, some designed largely for use in education and training institutions, and others which are aimed at employed adults as well as young people.<sup>160</sup>

The nature and impact of the QCF on 14-19 education have already been referred to in two contexts:

- **Employer understanding of qualifications.** As discussed above, the serial reform of qualifications in this country reduces their value in the labour market, because employers do not know what signals they provide. The introduction of the QCF has involved the most comprehensive re-labelling of vocational qualifications ever (in addition to comprehensive changes of substance)
- **Equivalencies.** The QCF is designed to place all qualifications on a common scale, using ‘credits’. These credit values allow one to treat qualifications as ‘equivalent’ if they have the same number of credits, and to add up credits from a wide range of different qualifications. As discussed above, QCA, from 2001 onwards, directed a programme to create such equivalencies among all qualifications in publicly-funded provision; and the QCF embodies these principles. However formal equivalencies of ‘level’ and ‘credit’ cannot and do not translate into substantive equivalence

QCF requirements were conceived and developed by QCA, and supported by BIS, whose concern is with adults (19+). However, **while QCF-based qualifications may be appropriate for adults** who are in employment or have made definitive decisions about their occupation and job of choice, **QCF qualifications should not be the main, let alone the only, type of vocational qualifications offered to 14-19 year olds in education and training.**

Box 16 below outlines some of the key characteristics of QCF-based awards. One fundamental problem for educational institutions is that they are competence-based awards which are meant to attest that someone has reached a particular threshold or level of workplace competence. (This follows from the fact that they are based on National Occupational Standards: see box 11 above.) It might seem that, with a qualification of a

very high standard, this would be relatively unimportant; and within the workplace, this may indeed be the case. However, any candidate for educational progression needs to demonstrate not only a specific level of competence, but relative performance, otherwise the qualification is of little use to selectors. While a considerable number of QCF awards do allow for grading, awarding bodies told the review that this had been very difficult to achieve.

Another problem is that the competency model requires candidates to pass every single component part.<sup>161</sup> Our funding regime already places enormous downward pressure on standards in teacher-assessed awards, which most vocational qualifications are, because payments are to a significant degree ‘by results’: if many students fail, the institution will be bankrupt (see below). The ‘100% pass mark’ approach of competency-based qualifications doubles this pressure.

Finally, for young people, the novelty of QCF nomenclature causes problems for progression in education as well as into the workforce. QCF rules have intentionally made it very difficult for awarding bodies to ‘own’ a qualification: their job is to put together and deliver units from the framework as a whole. Under it, as already noted, familiar names are disappearing. One irritated College Principal complained to the Review:

“We need to stop changing the names of vocational qualifications. It confuses employers, parents and young people .... BTEC National was a well established brand and in its place I now have students studying for BTEC Supplementary Diploma Level 3. Ugh!”

This is potentially a serious problem for university admissions officers, because they cannot judge whether or not a qualification is actually the same as/equivalent to one with which they are familiar. BTEC Diploma awards, as we have seen, are taken at level 3 by almost 1/5 of the age cohort, many of whom progress to higher education on the basis of their results. Under the QCF, the familiar ‘BTEC National Diploma’ label disappears. And Ofqual lays down detailed requirements for the size, lay-out and content of the actual paper certificates. This means that Edexcel, the awarding body, is not even allowed to add an explanatory note stating that the award in question was formerly known as, or replaces, the familiar ‘BTEC National’.

### Box 16: The QCF

Under the Qualifications and Credit Framework, all qualifications acquire a set number of credits plus a ‘level’. (These levels are similar to those used in the previously established English National Qualifications Framework. So for example, GCSE A\*-C is level 2, as is a BTEC First Diploma.) They must also all be based directly on National Occupational Standards. All QCF qualifications have one of three titles, irrespective of level and depending only on size (i.e. number of credits): Awards, Certificates and Diplomas, in ascending order of size.

The new and overarching concept behind the QCF is one of total credit equivalence: any 5 credits at a given level, from any qualification at all, are to be worth exactly the same as any other 5 credits at that level. These equivalencies have made it possible to add a huge number of new qualifications to calculations of ‘GCSE equivalents’ for KS4 performance measures.

In addition, QCF qualifications have a number of other characteristics which are ill-suited to delivery within education and training institutions.

1. All QCF qualifications are broken down into separately assessed units. This enables employers to use individual units if they wish, but in the context of 14-19 education it imposes large costs in time and money spent assessing, recording, re-assessing etc.
2. QCF units are ‘competence-based’ which means they are designed to be pass/fail and are intrinsically unsuited to grading. ‘Competence-based’ qualifications also require everyone to pass every single part of a unit. This may be reasonable in an on-job context, but in education and training environments it places serious downward pressure on standards.<sup>162</sup> The pass-mark is set by the hardest task or element, because if a candidate fails even one thing, they fail the award. This means, in practice, that no single element can be difficult since it is impossible to run an education system based on awards with this structure.
3. Units at a given level are all meant to be of the same difficulty so there is no room for progression within a course/qualification.
4. If an awarding body offers a qualification containing a unit which another awarding body also offers, and a candidate has credits from that second awarding body, the first one is *obliged* to accept those credits. It is assumed that the credits are indeed real and convertible, and the qualifications identical if they assess the ‘same’ thing. This is likely to further increase downward pressure in standards and reduce the incentives or ability of Awarding Bodies to create or protect a ‘quality’ brand.<sup>163</sup>

**2.4 Apprenticeship frameworks** are currently, as noted in the previous section, extremely rigid, allowing for very little responsiveness to local conditions and employer requirements. By international standards they also require very little by way of general education. This is especially obvious in the case of “Business as Usual” in apprenticeships, where large companies’ in-house training programmes are mapped to National Occupational Standards and ‘training is made available to all colleagues in the same job role, irrespective of individual learners’ funding eligibility’.<sup>164</sup>

This may be perfectly appropriate for adult apprenticeships, where apprentices were already, for the most part, either in employment before starting an apprenticeship, or extremely clear about their desired occupational route. However, as a general model, **the current content and nature of apprenticeship frameworks fails to promote progression within education for young people**, and is at odds with the desire of ministers to encourage progress from apprenticeship into higher studies (and not merely a higher level award in the same narrow occupational field). As a number of submissions reminded the Review, it has actually become harder to progress educationally in a work-based route than was the case twenty years ago (see Box 17).

As discussed earlier, many vocational education students move, quite quickly, into occupations different from those for which they studied. While this may be less true for apprentices, it is also, very often, true for them too, as we know from extensive German studies.<sup>165</sup> **The fact that an apprenticeship has high positive returns even when people move into a different occupation underlines the importance of the general skills acquired.** But the degree of occupational mobility among apprentices in ‘large-apprenticeship’ systems, as well as the nature of the English labour market, both underscore the importance of including general education in frameworks for young (16-19) apprentices.

### Box 17

In the past, many young people worked part-time and studied part-time on day release. BTEC National Certificates and Higher National Certificates were developed for this route. Evidence to the Review pointed out that NCs and HNCs had more of a general education component than most apprenticeship frameworks. As one college’s submission argued, “The many reorganisations of the vocational qualification system have led to this model becoming defunct. Interestingly many young people used to find jobs at 16 in business and commerce and go to college for one day a week to study for their BTEC... Today, young people might progress on to an apprenticeship in business and commerce and are then forced to study NVQs....cutting off the opportunities to progress.”<sup>166</sup>

2.5 The current funding structure gives all post-16 institutions a very strong incentive to steer young people into qualifications which they can pass easily. Just as the combination of ‘equivalencies’ and performance measures creates perverse incentives at KS4, so **our current qualification-based funding mechanisms create perverse incentives for 16-19 education and training, and tend to undermine both standards and efficiency.**<sup>167</sup>

Post-16, colleges, schools and training providers are paid by qualification rather than by programme, and, to varying degrees, the payment is contingent on whether or not the qualification is passed. Obviously, the easier the qualification, and the closer to passing it someone is when they are first enrolled, the lower the risk and the higher the probability of profit. The risks are well recognised,<sup>168</sup> but the only formal, official countervailing forces are the assessment, verification and oversight activities that awarding bodies use, and Ofsted inspections. Unfortunately, **the current system not only creates strong incentives for schools and colleges to steer students onto courses they can easily pass. It also creates strong incentives for awarding bodies to make passing easy.**

Box 18 quotes from a submission to the Review from one of the country’s most experienced observers of vocational qualifications and funding. It describes the results of this system as seen from inside the awarding body and regulatory system.

### **Box 18: The consequences of the current funding system: a submission to the review**

In recent years, public funding of vocational education in England has been primarily referenced to a list of approved vocational qualifications. Institutions have been able to claim funding at specified rates for provision leading to these qualifications, a proportion of which funding is contingent on the learners successfully passing the assessments and gaining the awards.

This arrangement has had many consequences [among which are ]...

....that all publicly funded courses have to lead to a qualification, *regardless of whether the qualification will have any value* to the learner or whether its administration will add (or, indeed, detract) from the course. For example, even courses run for entrepreneurs setting up small businesses have to lead to qualifications, regardless of the fact the learners will be self-employed... There will be many more such courses with no need for or benefit from qualifications, having qualifications foisted on them to qualify for funding...

...second.. that discussions with stakeholders, such as employers, have to focus not on learning provision, which interests them, but on qualifications, which often does not. Sector Skills Councils, which need to focus on the vocational education needs within their sectors, have been forced to do so at one remove by developing, not sector educational strategies, but sector qualifications strategies.

.... third is that the critical considerations for institutions deciding which courses to run have become the rates of public funding allocated to different qualifications, and the relative difficulties of ensuring that all of the learners in a cohort successfully achieve them. This has put pressure on awarding organisations to specify their qualifications in ways that will attract, at least, equivalent funding to their competitors, and to ensure that *their assessments will not discourage those institutions* that may be recruiting from less able populations of learners. The funding conventions have the effect of providing incentives to specify over-generous time for learning, which lessens the efficiency of publicly-funded vocational education, and *to limit the demands of assessment*, which lessens the effectiveness of the provision.

(Review submission from Dr Norman Gealy: emphases added. Dr Gealy has worked for major awarding bodies, government departments and agencies, and has been closely involved in vocational qualification design since the 1980s.)

Although the system is currently less dominated by specific qualification targets than it was until recently, it is even more qualification-focused and qualification-based than in the past. This is partly because of the nature of the QCF reforms, which have introduced unitised qualifications which demand constant assessment and paperwork. But it is also because of the introduction of Foundation Learning which, as discussed above, is designed for all young people whose standard of education does not allow them to start level 2 courses.

The number of young people ‘eligible’ for Foundation Learning programmes is estimated in DfE policy documents to be as much as 20% of the 16 year old population, which is extraordinarily high by international standards, and surely unacceptable. However, this review focuses on whether the programmes and qualifications encourage progression. In particular, are they suitable for those young people who do not have severe/physiologically based learning difficulties, but are severely disaffected, or have missed large amounts of school, or for other personal and social reasons have reached age 16 with few if any formal qualifications or academic skills?

“Foundation Learning” is still very new and was developed in response to well-documented failures with the previous approach for this group of learners. Under its immediate predecessor, the ‘E2E’ (Entry to Employment) programme, only around 1 in 2 learners progressed to any destination classed as ‘positive’ (and this was for destinations only 4 weeks after a learner’s E2E course ended and so highly likely to be even lower long term). But is the current approach actually a solution?

Some of the submissions to this review, from local authorities and evaluators, have been very positive. Some enthusiastic pilot sites report big increases in ‘positive outcomes’ and staying-on rates. And DfE report that early findings from the 2010/11 evaluation of FL, involving feedback from young people and providers/schools involved in the 2009/10 FL pilots)

‘suggests that they found the experience very positive. ...Schools and providers reported that the young people learnt new skills and that the programme had a positive impact on engagement, motivation and behaviour.’<sup>169</sup>

However, it is unfortunately the case that pilot sites are almost invariably enthusiastic and early evaluations positive. Against them, one must set the view that there are serious structural problems with the way FL is organised. These doubts were expressed by most senior staff in the Colleges visited for the Review; and (Section 1.2 above) by some of the largest and most respected providers of programmes for young people with ‘complex personal, social and learning support needs’. Part of the problem is that a ‘positive

outcome’, under FL, and one that secures funding for the provider, can be simply moving from one qualification-based experience to another; and critics question the value of this.

Rathbone’s Chief Executive, Dr Richard Williams, describes Foundation Learning qualifications as something “which fit you to do nothing but take more qualifications”. And “Foundation Learning is an offer constructed entirely upon the principle of achieving ‘qualifications’ without reference to any other underpinning educational purpose” according to Rathbone’s submission to the Review.

The ‘real world’ currency of these qualifications is.. questionable. Additionally the small size of the new FL qualifications ...means in Rathbone’s case we will need to deliver 14,000 qualifications to a cohort of less than 5,000 young people in order to draw down our contract value. This represents a 49% increase on the number of qualifications undertaken by our young people as compared with the 2009/10 year.

### **Box 19**

There is good reason to be sceptical about the labour market value of small, unknown unit qualifications, and of ‘personalised’ records. It is worth recalling that, in the 1980s and 1990s, major hopes were pinned on ‘Portfolios’ and ‘Records of Achievement’ which young people would take round to employers to show all they had achieved, and which were intended to make up for a lack of GCSE passes. The sort of activities recorded were very similar to those covered by the sort of ‘employability’ and ‘leadership’ qualifications current today, although without formal certification; but they did nothing to shift gatekeepers’ decision-making rules and focus on a limited number of (established) qualifications.

The original concept was that pupils’ attainments at school – in the round, including non-academic attainments – should be recorded, with supporting evidence. The concept was first developed in the 1970s as a result of dissatisfaction with the educational examination system and was strongly championed by reformers and academics as a way of widening the criteria used by educational and employment gatekeepers. It became a condition of the Technical and Vocational Education Initiative (TVEI, launched 1982) that participating schools provide pupils with records of achievement. The DES issued ‘Records of Achievement: A Statement of Policy’ in 1984 proposing that a national Record for Achievement should be in place by 1990. 20 pilot schemes were set up which were evaluated by a National Steering Group.<sup>170</sup> In 1996 ROAs were re-launched as “Progress Files’, and early trials apparently reported positively. Ten funded projects were still running in 2002 after which Records and Files seem to have vanished.

In this case, whatever the merits of individual FL units, a funding regime which demands the piling up of formal awards (each with a fee attached) is surely inimical to the development of appropriate *programmes* for young people. The point applies generally: as already noted (Box 18), current arrangements focus management attention on funding opportunities and hurdles, and away from the construction of learning programmes that actually help young people. The need to think in this holistic way is surely even more pressing with young people such as Rathbone caters for.

### **Assessment and standards**

While our current system of qualification-based and outcome-related funding places enormous pressure on standards and quality, it would be naïve (and incorrect) to believe that simply abolishing the current set of incentives would deliver improvements in quality and efficiency. Students and their families need to know whether an institution is performing well. Governments need to ensure that information is not only provided, but is accurate and appropriate, because one cannot depend on all institutions and individuals to do this voluntarily.

In a qualification-based system such as ours, this means that success rates are going to remain important and high-profile. Using substantial amounts of ‘outcome-related funding’, with providers paid if people pass, obviously increases the need for good quality control of assessments. But quality control is needed in any system. You need it in institutions which compete for students – as pretty well all post-16 institutions do, world wide – because the incentive to misinform is great. And you also need it when they do not compete, because then the incentive to take it easy is correspondingly large.

This poses special challenges for vocational awards because they have to use substantial amounts of on-site assessment. The alternative is to reward people for writing about doing something as opposed to actually doing it. In practice, this means that most assessment is done by teachers (although this need not be the case. Apprenticeship systems in Europe typically use employers and senior employees; and France has a ‘jury’ system in which an outside panel provides direct input and oversight.)

At present, quality control is in the hands of awarding bodies, who must also be regulated by Ofqual if involved in publicly-funded provision. The pressures on them are summarised by Norman Gealy in Box 18 above. **A good number of submissions to the Review suggested that Awarding Bodies have not always been willing to operate effective oversight of vocational assessment and awarding because of both the potential for sales, and the conviction that, if they prove ‘difficult’, they will lose custom to competitors. There is also widely-expressed concern that recent changes introduced by Awarding Bodies will reduce further the checks on assessment standards within a system that currently places them under enormous strain.**<sup>171</sup> For example, the verification of assessment standards for BTEC awards, which traditionally involved a large network of external ‘verifiers’, is increasingly devolved to schools and colleges themselves. Some respondents see this as a strengthening of the system, since it involves more internal activity than before; but others have questioned both the displacement of quality assurance costs to colleges, and the likely impact on standards.

**It is impossible for this Review to determine whether or not these concerns are justified.** However, the fact that they are widely voiced is itself likely to undermine the value attached to vocational awards. Doubts over quality assurance procedures are also likely to mean that it becomes increasingly important which school or college a young person attends, with the risk that institutional reputation becomes more important than a supposedly national award. Such a development would undermine opportunity and progression for large numbers of young people, through no fault of their own. For the same reason, direct checks on the consistency of standards are important. If (as may be happening with functional skills) there is visible inconsistency, a qualification risks losing credibility very fast.

**2.6** One result of the rapid spread of vocational awards into schools is that many courses have been taught by individuals who do not have professional training in the field and without adequate equipment. In some schools, quality of provision is excellent. But overall, the **quality of vocational provision suffers because expansion is strongly encouraged, without adequate quality control.** This is not a new phenomenon – it was also a major issue in the 1990s when GNVQs were first introduced into schools. (BTEC awards had until then been confined to colleges.) The solution is not to give every member of the geography department responsibility for one unit of a vocational award in tourism, or care: but the review found exactly that happening in some school-based provision.

In some cases, the awards concerned are not, in fact, very ‘vocational’ at all – and the problem correspondingly less. The Diploma (and especially its Principal Learning component) is a case in point. For some respondents to the Review, the ‘academic’ nature of the Diploma was a source of disappointment. For others, the exact opposite was true. One striking aspect of the level 2 Engineering Diploma was that, in a couple of high-performing institutions, its academic/non-practical qualities were the attraction. They wanted to strengthen pupils’ physics and maths in a way which would lead them on to A levels in these subjects and entry into engineering honours degrees; and found the Diploma much more helpful in this respect than the more ‘vocational’ BTECs.

However, if the purpose of a vocational option is to introduce young people to industry requirements and standards, then moving more and more of it into schools, with teaching by staff whose backgrounds are in ‘traditional’ school subjects, is the opposite of what is required. At the extreme, no school can begin to emulate the century-old expertise of a specialist catering college such as Westminster Kingsway. But more generally, is it appropriate to create a system which encourages and enables schools to offer large numbers of vocational awards in a very large number of areas?

### ***3. Inadequate quality assurance and regulatory arrangements***

As discussed earlier, vocational education for 14-19 year olds has been one of the most highly regulated parts of a highly regulated education system. It is also, as we have seen, mis-aligned with the job market in some key respects, and failing to offer clear progression routes within education to a sizeable number of students.

Some of this is the result of features of the economy which will be difficult to solve, and which recent policies have not really addressed head-on. But some of it is the result of the extraordinarily complex system mapped out above, which has resulted in confusion over where lines of authority lie, and in major substantive policy decision being made by unaccountable agencies rather than our elected governments.

At present, the most important and visible indication of regulatory failure is the way in which a number of high quality, respected and occupationally important qualifications have been denied accreditation. This illuminates the problem in a number of ways; because not only are (non-statutory) agencies effectively making significant policy decisions, but current structures make it impossible for ministers to take direct action in response. This situation does not appear to have been intended or expected by senior policymakers, no doubt because the current regulatory tangle, and its consequences are almost impossible for anyone fully to understand.

Box 20 below gives an example of the type of problem that has arisen, using as an example the case of electrical installation: *an occupation which is central to a major industry (construction) and to the safety of the country's citizenry, and where some of the most important, established vocational qualifications lost accreditation*. At a general level, three points are worth emphasising:

- a group of non-statutory bodies, the Sector Skill Councils, have become the de facto first-line accreditation agencies for all vocational qualifications without this ever being fully discussed or debated at policy level
- ministers have no direct capacity to countermand, or even demand reconsideration of a 'non-accreditation' decision for a particular qualification even when there is clear evidence of its harmful impact
- this is because, under current legislation, ministers can neither change accreditation criteria, nor demand that Ofqual reconsider them

The underlying problem is a lack of clarity over where policy is made; which should be by elected governments, not unaccountable agencies and other public bodies. In practice, since agencies live off the public purse, they will try to accommodate a direct demand from ministers. But the current situation means that ministers find themselves unable to implement clear policy decisions, that emerging problems have to be dealt with in labyrinthine and concealed ways, wasting large amounts of time and money, and that an invitation to agency mission creep is built into the system.

Arrangements for the accreditation of qualifications are causing serious problems within 14-19 vocational education, and are a particular manifestation of this general situation. In the course of the Review, it became clear that many people (including government officials) think that Ofqual's task is to regulate awarding bodies. The legislation, and the agency itself, emphasise that its role is to accredit qualifications (though it regulates awarding bodies as well). However, the nature and content of qualifications in a public (and compulsory) education system is a critical area of *policy*.

The structure and content of the qualifications offered to a country's young people embody its views on what education should be about and for, and are critical in promoting (or blocking) social mobility and opportunity. The way in which they are developed, their structure and content: these are fundamental policy decisions. This is why they are, everywhere in the world, taken within central ministries and departments of education; although individual countries' decisions and decision rules can incorporate very different levels of detailed prescription and control.

The outcomes of recent accreditation decisions, with their clear damage to a number of important qualifications, indicate that underlying structures are wrong. There is confusion over where policy should be made, and confusion over how to make, and implement, decisions. Ofqual's formal remit has left central government unable to respond rapidly or satisfactorily to emerging and serious problems (such as the example in Box 20 below).

The rationale for a regulator is, of course, that it should be independent of government. But a regulator also needs to have a clearly defined set of tasks which it is actually able to carry out, and which are regulatory in nature, not policy-making. It is very unusual for a regulator both to set its own criteria and to then regulate against them (as Ofqual does). It is also unreasonable to ask a regulator to carry out something it cannot, even in principle, hope to achieve.

Scrutiny of individual vocational qualifications requires sector and subject expertise. There is no way that a national regulator such as Ofqual can possess knowledge relevant to the thousands of qualifications, reflecting myriad occupations, which are currently being put across its desks.

## Box 20

One of the qualifications which has lost accreditation and is being withdrawn is the long-established City & Guilds 2330 electro technical certificate. This is the long-established occupational certificate for electrical installation, taught in college and which take 2 years up to the level 2 certificate and then a further 1 year (level 3).

On a visit to Macclesfield College, Keith Hegarty, Head of Engineering, explained:

“As yet there is no direct replacement at Level 2 and Level 3 for the C&G 2330 electro technical certificate for non-employed learners. For learners employed in the industry, there is a replacement. This means students who wish to take up a career in electrical installation cannot unless they are employed. Normally a level 2 programme attracts 16-18 learners, Level 3 19+.

The Sector Skills Council which has so far refused approval for non-employed learners is SummitSkills who work closely with another and different industry body Joint Training Limited (JTL). In the electrical apprenticeship framework and for completion of the NVQ at Level 3 and hence the apprenticeship, there is now a compulsory trade test termed Achievement Measurement 2 (AM2) which can cost learners personally an additional £561 (the cost for apprentices is provided for within the apprenticeship framework funding). Yet another barrier to achievement and an expensive one, that has not been necessary in the past”.

Because the C & G qualifications have not been given SSC approval they cannot be accredited by Ofqual: its current criteria for approving vocational qualifications require QCF-compliance including SSC approval.

Summit Skills’ rationale, shared in varying degrees by other SSCs, is that vocational awards must reflect workplace competence; and that in many cases, this cannot be achieved except through direct employment and experience throughout the training period. This causes enormous problems at a time of recession, when young people are losing their jobs and may therefore have to drop out of qualification preparation. It also, in this and a number of other cases, completely ignores the views of local employers who have been happy, for many years, to work with colleges, hire young people at the end of a full-time college course, and provide them with workplace experience at that point. Employer representations have been as ineffectual as those of colleges and Awarding Bodies, since the accreditation criteria are completely clear on the subject of SSC approval being necessary. Similarly, DfE officials have had no power to change the decision.

Box 20 provides a concrete illustration of how current structures generate intractable problems, involving endless discussion and back-and-forth negotiation (and, therefore, a high price tag). The example given arose (as did others) because of SSC decisions: in this case, requiring large amounts of direct workplace experience within all approved qualifications. This may be appropriate for adults but is highly problematic for the young. More generally, decisions about the general scope and content of programmes followed by 16-18 year olds are policy decisions; yet in the vocational field such decisions are in key respects being made by bodies outside the control of DfE.

Although a number of acute problems for 14-19 year olds have emerged because of substantive SSC decisions, this is not the only issue with current regulatory arrangements. The vast bulk of regulatory activity, whether for academic or vocational qualifications, concentrates on documents (mostly qualification specifications) and compliance with documentary requirements (down to the level of regulating the size and lay-out of certificates). This is at the expense of direct examination of standards and of the substantive quality of assessment activities and oversight. This is a pattern of behaviour which the current players have inherited from previous agencies, and endemic to our risk-averse audit culture.<sup>172</sup> It is, nonetheless, largely pointless.

Ofqual, for example, has recently carried out a desk audit of QCF units (from which vocational qualifications are assembled). This audit was carried out with reference to a 68 page guide (inherited from QCA) on how they should be written.<sup>173</sup> Box 21 below provides sample instructions; and, although all units had been approved by SSCs, Ofqual's desk-based exercise found failings in a very large number (approaching half) of those it inspected.

**Box 21**

Sample requirements for QCF units:

“All units must have a unit title....that does not include reference to the levels of the QCF or to any terms that may be taken to refer to a level of achievement”

“All units must contain learning outcomes that are expressed in a manner that refer to individual learners in the third person and that will make sense to a learner both before a unit is offered and after the learning outcomes have been achieved”

“Each individual learning outcome must follow on from the statement: ‘The learner who is awarded credit for this unit will...’ or the shortened form ‘The learner will...’”

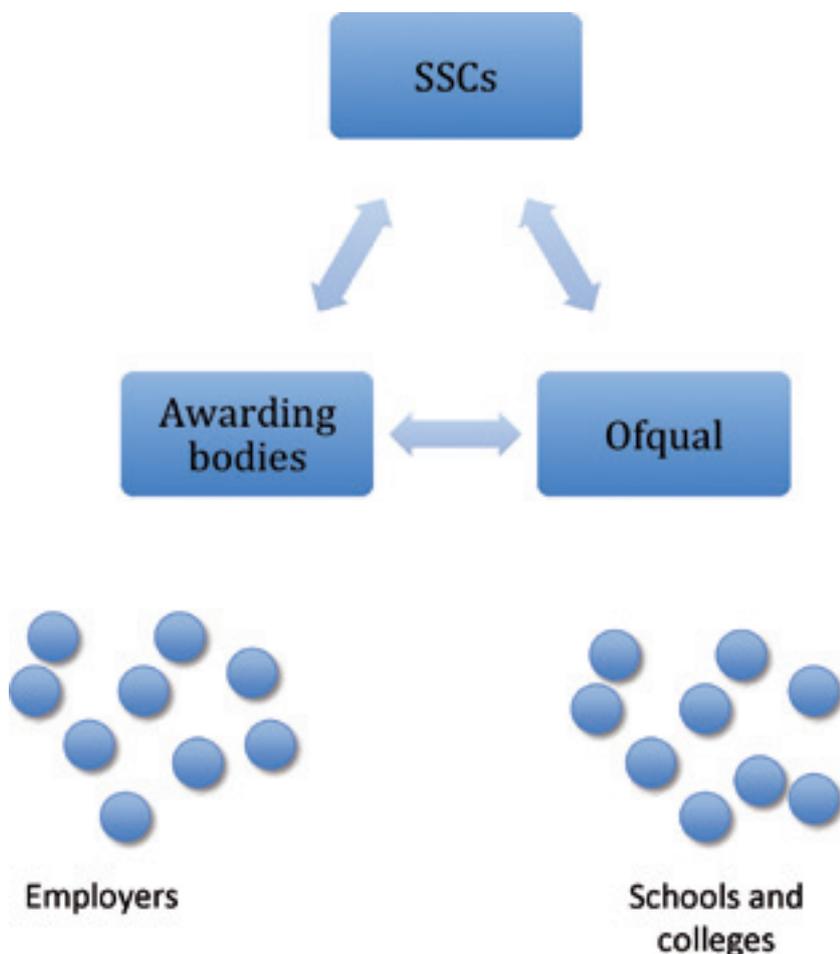
“Each learning outcome should begin with ‘know’, ‘understand’ or ‘be able to’”

When National Vocational Qualifications were first introduced in the early 1990s, there were similar ‘failures’ in the wording of qualification specifications, and repeated costly iterations involving the then regulator (NCVQ) and Awarding Bodies.<sup>174</sup> Then, as now, this exercise did virtually nothing for the substantive quality and uniformity of the actual assessment (or training) process, where empirical studies confirm that NVQ assessment standards are highly variable.<sup>175</sup>

Such outcomes are inevitable in a system which regulates on the basis of written specifications, because **a written specification plays only a small part in determining what is actually taught, let alone the standard and quality of the assessment.**<sup>176</sup>

The problems discussed in this section can be seen as manifestations of a deeper structural one. What has been created is a system in which the governmental organizations responsible for vocational qualifications talk to each other, and to the awarding bodies, to the exclusion of the groups that should be central: schools, colleges and training providers on the one hand, and employers on the other. Figure 7 below illustrates the situation. Awarding bodies spend their time talking to, and attempting to satisfy the requirements of, Ofqual and the SSCs. Ofqual interacts with awarding bodies, both regulating them and accrediting their individual qualifications. And because SSCs have effectively become both designers and approvers of qualifications, they too are focused to a very large degree on this regulatory triangle. Outside, in the cold, are the employers and teaching organisations that actually deal with young people in vocational education and training.

Figure 7: The current regulatory structure and its effects



Quality and standards depend on establishing networks among users and assessors, and, in the case of vocational awards, ensuring that employers – the ultimate creators and guardians of standards – are actively involved at the level of delivery and judgment. Employer representation on national panels is no substitute for their active involvement with vocational education at the level of delivery. The failures of our current structures are highlighted by the fact that, at the same time as the QCF was being finalised, and Ofqual was conducting its desk audit, major changes in the nature and intensity of some awarding bodies’ quality assurance procedures were barely investigated.

It is important to get a regulatory system right primarily because of its impact on quality; but regulators’ decisions can also be very expensive. Table 7 summarises the estimated costs – £1.5 million in total – incurred by just one specialist awarding body because of the most recent set of regulatory changes (requiring all vocational qualifications to be restructured for QCF compliance). Such costs need to be multiplied up not only for recent QCF changes, but also for the repeated reforms and restructurings that have marked the last few decades.

Table 7

<b>Association of Accounting Technicians: costs of QCF – required changes</b>					
<b>QCF compliance: Direct Costs £000s</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>Total (£000s)</b>
Additional Staff Costs			43		43
Direct Costs unit and assessment development	30		557	135	722
Communications and Marketing		14	77		91
Office Expenditure			68		68
Miscellaneous	3		36		39
<b>TOTAL</b>	<b>33</b>	<b>14</b>	<b>781</b>	<b>135</b>	<b>963</b>

<b>QCF Compliance: including all staff costs £000s</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>Total (£000s)</b>
Staff Costs	71	128	340	95	634
Direct Costs unit and assessment development	30		557	135	722
Communications and Marketing		14	77		91
Office Expenditure			68		68
Miscellaneous	3		36		39
<b>TOTAL</b>	<b>104</b>	<b>142</b>	<b>1,078</b>	<b>230</b>	<b>1,554</b>

Source: AAT

These costs are, inevitably, passed through by Awarding Bodies, so either the fees go up, or other activities (such as quality assurance) are cut back. The Association of Colleges<sup>177</sup> estimates that total expenditure on awarding body fees has risen from an average of 3.5% of core income in 2000/01 to just under 4.0% in 2009/10; and that many managers felt that this is in spite of the transfer of activities (and therefore costs) to college staff. Managers also estimate that internally-borne costs are roughly equal to the fees, which would imply that about 8% of current expenditure is committed.

In summary:

Time and again in recent years, England has experimented with unique and uniquely complex regulatory arrangements, None of our developed country peers operates with anything like our multiple, over-lapping agencies. The experiment has been a failure. Major changes are needed that will simplify the system, clarify decision-making and increase transparency, and which will replace a huge and ineffective regulatory system with a much smaller and more effective one concentrated on a number of key activities. Dissatisfaction with current arrangements was very clear in the majority of responses to the review. Unsurprisingly, given recent history, **there was no appetite for additional regulatory activity, whether in the form of ‘quality benchmarks’ or anything else involving new roles for national agencies.**

# Part Five: Recommendations

## *1. Introduction*

English young people are increasingly and overwhelmingly likely to remain in education, often full-time, until the age of 18. They are required to do so until the age of 16, and will shortly be required to do so until they are 18. This means that, as a society, we believe compulsory education to be in their and society's best interests; in which case we need to be clear about exactly what we are forcing them to stay in education for.

This has been done quite comprehensively in the past for the 14-16 age group, although, as we have seen, in recent years there has been an unexpected and dramatic increase in the number of 'vocational' awards offered to this age group. 16-19 education is very different. Outside A levels, it has operated with very little central guidance, let alone requirements that address the overall structure of students' programmes.

In the past, when participation levels were much lower, and many students were employed part-timers, this did not matter. Links with the labour market were direct and immediate and dictated content. Now that full-time participation is the default option, and in today's labour market, this is inadequate. For A level candidates there are well-understood principles of what a 'full' programme involves. Conversely, as discussed above, a lack of guiding principles has left hundreds of thousands of young people in provision which has serious defects in terms of progression and skills acquisition.

The problems are not merely conceptual. The past two decades have been a period of micro-management, driven by funding mechanisms and performance management systems which all too often create perverse incentives for schools, colleges, training providers and awarding bodies, and by detailed regulation of qualifications. All of these need simplification. At the same time, too little account has been taken of the need to ensure that vocational courses are delivered with genuine professional expertise and high quality facilities. In the meantime, and equally importantly, the labour market has changed in ways which make the transition to employment far harder for today's teenagers than for their parents' or grandparents' generations. Vocational education needs to take account of this, too, and take a far more active role in helping young people gain the workplace and employment-based skills and experience which are crucial to their futures.

The following pages set out a number of interlocking recommendations for reform. They relate to how we conceptualise 14-19 education; to the funding and institutional arrangements for vocational programmes; to the quality of provision; and to its regulation and quality assurance. Taken together they will, I believe, create a system which is far more flexible, innovative and cost-effective; which is far more closely aligned with local labour markets; which monitors and assures genuine quality rather than administrative procedures; and which consistently promotes good vocational education and progression for all young people across the country.

## ***2. Conceptualising 14-19 education***

Throughout the developed world, as discussed at length above, it has become normal for young people to remain in formal education until the end of their teenage years. This is only partly a direct result of changes in the demand for skills. While it is true that our economy demands and rewards the highly skilled, many of its jobs do not demand far greater levels of academic and school-based learning than in the past. Young people are also forced into education by the need to have formal and recognised credentials and by a shrinking youth labour market. The result is that most young people can and do expect to remain in some form of formal education and training until age 18 or 19, and ever more aspire to continue beyond.

In this new world, does it make sense to continue thinking in terms of 14-16 and 16-19 as quite distinct phases? I believe it does. Although England is unusual in its heavy use of public examinations, most countries – and especially those with a strong apprenticeship tradition – have a clear break between programmes for 14-16 year olds and programmes for older secondary-level students. The latter, everywhere, allow for considerable amounts of specialisation, and almost every country has programmes which are clearly ‘vocational’ in nature (though increasingly providing progression routes into higher educational levels).<sup>178</sup> The former (14-16) is increasingly treated as a ‘core’ education, shared by everyone, and providing everyone with the possibility of progression along varied later routes.

One of the most distinctive features of contemporary English education, in fact, is the amount of vocational education we provide within KS4 (European ‘lower secondary’) education, at a time of increasingly delayed specialisation and common ‘general’ or ‘academic’ provision elsewhere. So, taking **14-16 education** first, do we already have too much vocational education? should all 14-16 year olds follow an entirely traditional academic curriculum in future? Or should we be offering greater specialisation from age 14, allowing and encouraging young people to follow clear vocational routes leading to specific occupations and sectors? Or do we already, by pure luck, have the Goldilocks option<sup>179</sup> in place?

Among those responding to the Review, there was overwhelming consensus that all young people in lower secondary education (through KS4) should have access to some courses that were not part of the traditional academic curriculum, but rather ‘vocational’ or ‘practical’; and these should allow for options, rather than being the same for everybody. In other words there was no appetite for an entirely uniform and traditional academic curriculum in KS4, such as characterises most European provision.

This does not, of course, mean that the ‘generalists’ are wrong. Countries have moved away from any form of specialisation in response to parental pressure and concerns over progression as well as labour markets changes. But English education has always been unusual in its incorporation of a wide range of options: the inclusion of Design and Technology in the National Curriculum is one manifestation of this. The value of practical skills as part of a rounded education; the potential to sample different material as a form of orientation; and the opportunity for young people to excel on a variety of dimensions are all important and should be encouraged.

This is not, however, to imply that high levels of specialisation are desirable across the KS4 cohort, let alone that the recent explosion in vocational qualification entries was desirable. Indeed, **the overwhelming majority of respondents to the Review were in agreement that there should be no substantial degree of specialisation before the end of KS4.** This was true both among respondents from the education sector itself, and from outside. The CBI’s submission, for example, laid emphasis on general skills, notably literacy and numeracy and ‘employability skills’, and noted that “Business does not expect the system to churn out job-ready workers” and also that ‘employers would value more young people with a strong grounding in science and maths’. (See Box 22 for the TUC’s response on this point.)

## Box 22

“Many would say (including many employers) that the greatest failings of the 14-19 system are not so much failure to value practical education as a failure to ensure that the great majority of ...young people reach a reasonable standard (such as 5 A-C passes at GCSE including Maths and English) by 16... Broadly speaking the TUC believes the principles underpinning any approach should be to aim at ensuring all young person have both a broad general education and a practical education, up to the age of 16... Choices after 16 might involve a much greater degree of specialisation... The key point is to avoid making irrevocable decisions too early”.  
(TUC Submission to the Review)

Many education sector respondents also agreed that recent curriculum changes at KS4 had been made largely in response to performance table pressures, not students’ best interests. Of course, one result of expanding vocational options rapidly, in institutions without specialist facilities or teaching has been to further strengthen the view that vocational options are ‘easy’ and lower status.

In practical terms, the English heads, principals and other education professionals interviewed for the Review almost all believed that a common core curriculum throughout KS4 could be delivered in 80% (4 days a week) of students’ time. This pattern would not, and, if they had experienced it, did not, preclude important later choices and was consistent with government curriculum priorities. This left 20% for options including vocational courses. If more than 20% was given to specialist/vocational content, it would, in normal circumstances and with a conventional teaching week, be at the expense of core general education and maintaining wide progression opportunities.<sup>180</sup>

Claims are often made that vocational options motivate young people more and therefore lead to them achieving higher grades in their other subjects; and that such options also stop them from dropping out and ‘becoming NEET’. Indeed, a good number of submissions to the Review treated it as self-evident that this was the case. This might suggest that a larger share of time should routinely be allocated to vocational options for some students.

**But neither the existing research literature, nor analyses carried out for the Review by academics and DfE analysts, found any indication that KS4 students (whether generally, or more specifically those ‘at risk of disengagement’) made substantial improvements in their general attainment as a result of taking more vocational courses.** Box 23 below summarises the evidence for recent English cohorts, where we were able to compare the post-KS4 trajectories of students who were otherwise alike, but differed by whether they had large or small amounts of vocational content in their KS4 programmes. And there is also international evidence which suggests that young people drop out of vocational provision at much the same rate, and in much the same way, as they drop out of more uniformly academic provision.<sup>181</sup>

These findings are profoundly counter-intuitive for many people involved in high quality vocational provision. But here, as elsewhere, we tend to generalise too readily from exemplary practice. Dr Liz Atkins, who has carried out extensive research with students moving in and out of vocational provision, commented in her submission that:

“If young people are disaffected, perhaps schools could explore models of pedagogy rather than subjects – it is difficult to see how a person could be disengaged from the whole of a broad subject curriculum .. I am increasingly of the opinion that vocational education needs to be grounded in a broader, academic education so that young people have the necessary Basic Skills to progress freely.”

Excellent vocational provision can motivate and excite young people, and teaches them valuable skills. It does not follow that expanding the number of vocational courses at KS4 provides some sort of magic bullet for disaffection and low attainment. Moreover, courses with a very strong practical and vocational element tend to be costly when offered to small numbers of school-based pupils. Young Apprenticeships, for example, are extremely expensive, with work placement costs alone averaging £1500-£2000 per student.

Given the strong arguments for keeping young people’s options open, the inevitably limited resources available in most schools, and the research evidence summarised above, limited specialisation at KS4 is clearly the best option for young people. At this point in young people’s education, what is truly critical is to increase the number who master the basic academic skills needed for progression, immediately and in later life.

### Box 23

Does vocational study at Key Stage 4 have a positive impact on participation and general attainment?

The cohort for which the most detailed information is available (LSYPE) was in year 11 in 2005/6. This was before the huge rise in VQ entries, so very few took anything other than GCSEs. Conversely, a good number report taking ‘vocational’ qualifications, meaning, for the most part, GCSEs with vocational titles (eg business studies) or vocational GCSEs. An analysis by CAYT for the Review looked at whether taking such qualifications made a difference to the later trajectories of disengaged students (identified by poor attitudes to school, aspiring to leave education, playing truant). They found no statistically significant effects.

The 2007 year 11 cohort was one of the first to take large numbers of vocational qualifications. DfE analyses looked at participation rates post-16 to see whether large amounts of vocational learning in year 11 had any apparent impact. Participation rates were very high across the board (90% average in 2007 – and 88% in 2005, before the big increase in VQs). There are no major differences in staying on rates between students grouped by how much of their KS4 programme was vocational. Among the 21% who continued to a level 2 programme at 16, those whose studies at KS4 had a major vocational loading were much more likely to be following a highly vocational programme at 16. Among those proceeding to a level 3 programme there was no such clear or major effect.<sup>182</sup>

DfE has supported a number of programmes which allow KS4 pupils in selected schools to take courses in colleges. The Increased Flexibilities Programme was aimed at lower-achieving pupils. It was popular with participants but expensive, and participants’ GCSE outcomes were poor. Young Apprenticeships were similarly available to a limited number of schools and local authorities but were designed to give *able* KS4 pupils access to industry-specific learning (in colleges) and extended work experience. DfE evaluations show that participants increased the number achieving 5 GCSE A\*-C, compared to matched samples – but this was done through the ‘equivalent’ qualifications they took as part of their programme, rather than because of a positive wash-back on their school-based GCSEs. Moreover, YA participation had a significant negative impact on the likelihood of a YA passing maths and English GCSE at A\*-C.<sup>183</sup>

*This is not to imply that all schools, everywhere, should be following exactly the same curriculum, taught in the same way.* On the contrary: distinctive curricula and innovation are highly desirable and will be facilitated by the scaling back of the National Curriculum to which the government is committed. But the perverse incentives created by performance measures combined with indiscriminate ‘equivalencies’ have resulted in large amounts of sub-standard education, in which many young people took courses that were in no sense truly ‘vocational’ or useful.

Well-equipped and specialist schools such as studio schools and University Technical Colleges will and should offer programmes with a strong and distinctive vocational element. They have the extra dedicated resources, and, in the case of UTCs, expect to operate with longer teaching days and years, making extra time available for specialist options. *But it is important that the system as a whole does not push students into courses which are pseudo-academic and pseudo-vocational at one and the same time.* The experience of the last few years shows that this is a real and present danger; and, for that reason, we should expect that, in a normal comprehensive school setting, the vocational component of students’ programmes will not exceed around 20% of teaching time.

This can be achieved, without excessive centralised micro-management, by distinguishing clearly between tightly defined qualifications which are also approved as eligible for use in performance indicators, and all other qualifications which are not. Approved qualifications can and should include vocational as well as academic qualifications; and the vocational qualifications can and should meet the same overarching requirements as more academic ones. Schools also should be free to offer qualifications which are not included in performance indicators; equally, such qualifications will not need to meet the same criteria as those which are included.

Up to now, this report has consciously avoided discussing ‘parity of esteem’ for vocational and academic awards. The phrase has been a staple of political speeches, and policy initiatives for decades; testimony to the fact that academic and vocational education are *not* seen as enjoying such parity. It is also a completely misguided objective. Not all qualifications, can be seen as completely identical in prestige, or content: that is true *among* academic qualifications just as it true *among* vocational ones. And every country on earth has a status hierarchy for school and university level options. But there is no reason why vocational awards for 14-19 year olds should not figure among the sub-set which enjoy high esteem.

As discussed above, the move to universal credit-based GCSE ‘equivalences’ was part of a more general policy, in which **all** qualifications were to be treated, valued and in theory regarded in the same way. The result, at KS4, has been highly undesirable in many ways, and has not done anything positive for the status of vocational qualifications – probably the reverse. This Review’s proposal would clearly endorse a number of specific ‘vocational’ qualifications as high quality, *and suitable for Key Stage 4 students*, for whom future progression is critical.

If awards are to be used for national performance monitoring, it is vitally important that there be very strong safeguards against downward pressure on standards. It would be nice to think this is unnecessary, but the experience of the last few years tells us otherwise. All those which are used, vocational or academic, should make serious demands of students, develop and accredit distinctive skills and attainments, facilitate progression post-16 and incorporate *clearly established, and properly monitored, national standards*. They must, therefore, have a strong element of external assessment. *This need not, and indeed should not, mean assessment entirely on the basis of examinations*, which in the case of vocational awards will often be quite inappropriate. But we know that, without regular external referencing, assessment standards in any subject invariably diverge across institutions and assessors.<sup>184</sup>

Given these arrangements, the recommendations below **should give genuine currency and recognition to vocational options as valuable, distinctive and respected components of a secondary curriculum**, while still ensuring that lower-attaining pupils are not sidelined into large numbers of vocational and pseudo-vocational courses at the expense of their future progression. No KS4 student should be tracked irreversibly; and all KS4 programmes should therefore contain a large common core.

Recommendations 1-3 should also be viewed in conjunction with recommendations 24-28 for major changes in the general regulatory framework for 14-19 education.

**Recommendation 1: The DfE should distinguish clearly between those qualifications, both vocational and academic, which can contribute to performance indicators at Key Stage 4, and those which cannot. The decision criteria should be explicit and public. They will include considerations of depth and breadth (including consultation with/endorsement by relevant outside bodies), but also assessment and verification arrangements which ensure that national standards are applied to all candidates.**

**Recommendation 2: At Key Stage 4, schools should be free to offer any qualifications they wish from a regulated Awarding Body whether or not these**

**are approved for performance measurement purposes, subject to statutory and health and safety requirements.**

**Recommendation 3: Non-GCSE/iGCSE qualifications from the approved list (recommendation 1 above) should make a limited contribution to an individual student's score on any performance measures that use accumulated and averaged point scores. This will safeguard pupils' access to a common general core as a basis for progression. At the same time, any point-based measures should also be structured so that schools do not have a strong incentive to pile up huge numbers of qualifications per student, and therefore are free to offer all students practical and vocational courses as part of their programme. (See also Recommendation 26 below)**

Recommendation 3 is designed to ensure that all KS4 students are guaranteed a broad core curriculum, such that they can progress to a wide range of post-16 academic and vocational options; but also to ensure that academically successful pupils are given the chance to take practical courses. One possibility might be to set a maximum (eg 25%) to the number of points that can be contributed by non-GCSE awards, while at the same time limiting the number of formal examinations whose points can be averaged and used. There of course remains a risk that some schools will, as has happened in the past, effectively write off some of their least academically successful students, and park them in vocational courses irrespective of whether these 'count'. Recommendation 26 below is also offered for that reason. *Giving GCSE points to any and every vocational option is not, however, a way of helping such pupils* (as opposed to their schools).

As discussed above, this country has many young people who are classified as having 'special educational needs', without being severely disabled, and/or are highly disengaged, persistently truant, and, at the extreme, excluded from school. This is an international phenomenon; but England is towards the top end in its proportion of young people who are failing to achieve basic academic competences by the age of 16. The performance of both other countries, and of the best schools in this one, make it clear that our current levels of low attainment are in no way inevitable. Although Foundation Learning was and is a genuine attempt to develop a curriculum suited to these young people, in practice there is a risk that it will simply legitimise failure with a significant proportion of this low-attaining group.

A detailed examination of educational programmes designed for the most low-achieving was beyond the remit of this Review. *They are not necessarily or even predominantly vocational in any real sense of the word*; and concrete recommendations here would also pre-empt the Department's ongoing review of SEN provision. However it is clear from

international comparisons that the large proportion of English young people who reach the end of KS4 unable to progress directly on to level 2 programmes (and who are also extremely unlikely to obtain jobs or apprenticeships) is far larger than it needs to be.

**Recommendation 4: DfE should review current policies for the lowest-attaining quintile of pupils at Key Stage 4, with a view to increasing greatly the proportion who are able to progress directly onto Level 2 programmes at age 16.**

**Performance management indicators and systems should not give schools incentives to divert low-attaining pupils onto courses and qualifications which are not recognised by employers or accepted by colleges for progression purposes. (See also recommendation 28).**

And what of **16-19 year olds**? At present, far too many young people in this age group pursue courses and programmes which offer them little progress or even coherence, which are driven by funding considerations, and restricted by tight and universal design rules. This has resulted, in part, from entrepreneurial agencies and organisations pursuing their own agendas, encouraged by a lack of clarity over lines of authority. Central government, and more specifically the Secretary of State for Education and the DfE, need to re-establish their clear and direct responsibility for setting education policy, and for ensuring that educational institutions provide all young people with high quality and appropriate tuition.

As already noted, the statutory requirement that young people participate in education implies that there are important benefits to be gained, which justify this coercion from 5 to 16, and in the future to 18. The government needs to clarify what these benefits are for publicly-funded full-time education 16-19, as it already does for younger students, and translate them into general and overarching requirements for study programmes. Those programmes should take account of the dominant characteristics of the modern labour market and contemporary careers: an increasingly polarised occupational structure, high youth unemployment, longer working lives, returns to many qualifications but also to work experience, frequent occupational changes, and high aspirations among large parts (but not all) of the population.

Programme requirements should, however, be *general principles*. The degree of specialisation which occurs post-16, and the need to increase rather than further decrease responsiveness to *local* labour markets, mean that they should not involve detailed prescription comparable to Key Stage 4. Recent experience with the Diploma underlines the danger of trying to create new, highly detailed and very complex programmes on a national scale, especially in an environment which already has important and well-established qualifications and qualification pathways, known to employers and HE alike.

Instead, we need to build on the qualifications we already have – but also jettison a number of theoretical principles. It should be recognised that some qualifications may be appropriate for young people, others for adults, and others for both.<sup>185</sup> But beyond that, the learning *programme* for a young person can and should be different from occupationally specific training for adult workers. Indeed this is the case throughout the rest of the world. Government should recognise this, instead of expecting young people to be well-served by agglomerations of qualifications designed primarily for working adults.

**Recommendation 5: The overall study programmes of all 16-18 year olds in ‘vocational’ programmes (i.e. currently everything other than A levels, pre-U and IB, and including ‘Foundation Learning’) should be governed by a set of general principles relating primarily to content, general structure, assessment arrangements and contact time. Provided these are met (and see recommendation 6 below), institutions should be free to offer any qualifications they please from a recognised (i.e. regulated) awarding body, and encouraged to include non-qualifications-based activity.**

**Recommendation 6: 16-19 year old students pursuing *full time* courses of study should not follow a programme which is entirely ‘occupational’, or based solely on courses which directly reflect, and do not go beyond, the content of National Occupational Standards. Their programmes should also include at least one qualification of substantial size (in terms of teaching time) which offers clear potential for progression either in education or into skilled employment. Arrangements for part-time students and work-based 16-18 year olds will be different but the design of learning programmes for such students should also be considered.**

In moving towards a system that encourages the delivery of programmes, we also need to move away from detailed micro-management and regulation of individual qualifications. Taken as a whole, the recommendations made by this Review will make it much easier for Awarding Bodies to develop new qualifications, and do so in collaboration with employers and providers. (See especially sections 3A and 4 below). Schools and colleges, meanwhile, will have greater substantive freedom over the type of qualification they consider appropriate for their students, but also a clear responsibility to explain to students and their families how and why they have grouped awards together to create a programme of study.

### **Box 24: Freeing teachers**

Submissions to the review often referred directly to specific qualifications, especially the Diploma; and the variety of opinions helps to illustrate why detailed central specification of qualifications is such a bad idea. For example, the Head of the ICT Faculty at Cottenham Village College explained his preferred qualifications as follows:

“We were running the Diploma in IT. We have abandoned it for two reasons.

1. It is 90% business and only 10% IT.
2. It is 90% report writing and 10% doing IT.

There is a pretence that the Diploma in IT is hands on. But when one examines the mark schemes (which are, after all, the indicators of the value of each topic), one finds that less than 10% of the marks are given for doing IT work (building websites, creating databases, creating videos, etc.) and the vast majority of the rest of the marks are for writing reports on IT.

We are using the OCR Nationals in ICT which we have found are stimulating and interesting for the vast majority of our students from lowest ability up to the top levels. The reason I say that GCSE ICT is unsuitable is that the qualification requirements are woefully out of date, dull and inflexible. They require students to study topics which have little, if any, relevance to the real requirements of people’s use of ICT in their daily lives and the workplace.”

This offers a convincing argument for why a school or college might prefer the current OCR qualification to the Diploma... But before rushing into a recommendation to abolish the Diploma in IT, it is important to also take note of this submission, from an ICT Advanced Skills Teacher in Croydon, who also runs an ICT teaching website and writes:

“I’ve spent a year (as Line Lead for the Diploma in IT) developing a scheme of work for the Diploma in IT and this year implementing it. It has been a wonderful experience for the learners – life changing even – and I think the key is that it isn’t about it being either vocational or academic, but that more curriculum time is provided so that learners can go beyond the classroom and bring “learning to life”.”

What should one conclude? First, that we should take seriously the mass of evidence showing that what really matters is teachers, and stop over-estimating what can be achieved through a written qualification outline. Second, that if an excellent teacher has a strong preference for one qualification over another, that should be respected. And third, that no single centrally defined option is every likely to suit everyone.”

Of particular concern, among 16-18 year olds, are those young people referred to above, who leave KS4 education with few or no qualifications of value. At present, this group is expected to enter a 'Foundation Learning' programme (see above), and to take large numbers of small qualifications, many new and of dubious value. Moreover, policy documents expect Foundation Learning to encompass up to 20% of 16-18 year olds, which as already noted, is unacceptably high.

Hopefully, the size of this group will diminish in the next few years; but there is almost bound to be a sizeable number of young people who are not able to engage with a regular post-16 programme of the type outlined above. Some will have deep-seated learning difficulties; others will be academically able but have had very disrupted educational experiences (and lives). For these young people, the priorities are, first and foremost, reading skills and workplace experience. It is clearly important that programmes for this population have clear outcome measures; but what has happened recently is that we have replaced 'entering another educational programme'<sup>186</sup> with 'passing a (probably pointless) qualification'. This is not obviously an improvement.

**Recommendation 7: Programmes for the lowest attaining learners – including many with LDD as well as those highly disaffected with formal education – should concentrate on the core academic skills of English and maths, and on work experience. Funding and performance measures should be amended to promote a focus on these core areas and on employment outcomes rather than on the accrual of qualifications.**

Finally, apprenticeship frameworks need attention. They are currently non-age specific and, partly for that reason, are often inadequate to allow progression to higher levels of study, even though individual employers may choose to enhance them. A large amount of effort is spent drawing up frameworks with minimal or no take-up. Many frameworks allow training providers to offer very little, or even no, recognisable 'off the job' education. They also take inadequate account of the likelihood that many apprentices will change occupations in the future. This too requires attention. Finally, many submissions mentioned the impossibility of modifying frameworks to take account of local conditions. Professor Ed Sallis, Principal of Highlands College, Jersey, where apprenticeships are highly successful, and not governed by UK legislation, notes (Box 25) that this has major disadvantages.

## Box 25

Highlands College has a direct relationship with the Island's employers who have an important and direct role in specifying the training and qualifications they require. Employers use occupational standards as indicative but if they require a different level or type of qualification to the norm the College delivers it for them. For example, the hospitality industry does not believe NVQs are right for them, whilst the financial services industry and the College have built a new apprenticeship around an honours degree. In this way there is proper responsiveness to employer wants and needs.

There needs to be less prescription nationally on the types of qualifications that can be part of apprenticeships. In the past this led to the narrowing of experience through the requirement for NVQs. We need to let employers (not just Sector Skills Councils) decide what they need and what is relevant. In Jersey it is the employers who decide and I think this more properly aligns qualifications to employment.

**Recommendation 8: The DfE and BIS should evaluate the extent to which the current general education components of apprenticeship frameworks are adequate for 16-19 year old apprentices, many of whom may wish to progress to further and higher education. It does not appear appropriate, given this Government's commitment to progression through apprenticeship, that frameworks should, as at present, be drawn up entirely by SSCs, who conceive their role in relation to *current* employers, and current, occupationally-specific job requirements. The review of frameworks should also consider ways to increase flexibility and responsiveness to local labour markets and conditions.**

In the 16-19 context, maths and English are of particular importance. As discussed above (and see also Appendix VII) 16-18 year olds are extremely ill-served by our vocational education system, which neglects these subjects in spite of their crucial role in both the labour market and progression to higher education.

This is even more evident in the case of apprentices than for students in full-time education. Apprenticeships are, unlike other current 16-18 provision, programmatic: frameworks contain a number of different components. But the maths and English requirements are absolutely minimal. As noted earlier, a number of submissions to the Review argued that providers of specialised occupational training (eg in hair and beauty) should not and could not be expected to teach maths and English. This is absolutely true: but the answer is to ensure that apprentices receive the relevant teaching from qualified sources, not to continue with frameworks that require only the current key skills accreditation.

**Recommendation 9: Students who are under 19 and do not have GCSE A\*-C in English and/or maths should be required, as part of their programme, to pursue a course which either leads directly to these qualifications, or which provide significant progress towards future GCSE entry and success. The latter should be based around other maths and English qualifications which have demonstrated substantial content and coverage; and Key Skills should not be considered a suitable qualification in this context. DfE and BIS should consider how best to introduce a comparable requirement into apprenticeship frameworks.**

Appendix VIII discusses the current range of qualifications available for post-16 students, which includes a number (including the Free Standing qualifications) which have substantial maths content and where take-up could be increased rapidly. However, while qualifications are important, they are, as stressed repeatedly by this Review, only a small part of an education system. Teaching quality is of central importance, and if we are to increase good quality post-16 mathematics and English teaching rapidly, DfE and BIS need to pay direct attention to this. It is of particular importance in mathematics because we know that there are severe shortages of maths teachers.

**Recommendation 10: DfE should continue and if possible increase its current level of support for CPD for mathematics teachers, and give particular attention to staff who are teaching post-16 students in colleges and schools. DfE and BIS should discuss the possibility of joint funding for post-16 CPD activities in English and maths, especially as they relate to apprentices and to general FE colleges recruiting adults as well as young people.**

### ***3. Funding and Institutional Arrangements***

In addition to reconceptualising learning programmes for both KS4 and for 16-19 year olds, major changes are needed in the way institutions are funded and regulated. Without such changes, we will be left with confusing and expensive arrangements which undermine rather than promote quality, and are unresponsive to the labour market which vocational education is supposed to serve.

This section deals first with funding arrangements, and therefore with 16-19 arrangements. (Funding at KS4 is currently being changed, and the new system is perfectly compatible with the KS4 reforms proposed by this Review.)

## **A. Reforming 16-18 funding for educational institutions**

As discussed at length in the body of this report, the current funding regime for 16-19 year olds (and, indeed, post-19) is unique to this country in tying funding overwhelmingly to individual qualifications taken rather than the students who take them.<sup>187</sup> The system is complex and completely opaque to the vast majority of those working within the system, let alone the public at large. It imposes very large administrative costs on institutions; and, as basic economic or management theory would both confirm, opaque systems are also intrinsically inefficient and subject to extensive gaming.

There are a number of good (and some less good) reasons why the system has evolved as it has. However, as English 16-18 education becomes increasingly full-time, and thus increasingly similar to that of other developed countries, these historic factors become less and less relevant. It is hard to believe that we alone need to maintain a system of such complexity that senior college staff must attend annual fee-bearing courses to understand – partially – how they are being funded, and receive tips on how best to play the system.

**Many submissions called for funding to ‘follow the student’.** The current government’s changes have moved 16-19 funding some way in this direction, so that institutions are now less completely oriented to government, as their single all-important customer, than they were. But it needs to move much further. The system still creates perverse incentives by strongly encouraging institutions to put together bundles of qualifications on a ‘profit maximisation’ basis rather than by conceptualising programmes for students in a holistic way.

A change from per-qualification to per-student funding, which exists for other levels of education (pre-16, HE, apprenticeship), will not magically remove incentives to minimise effort and maximise revenue any more than it performs that miracle at university or school level. *But it will achieve something crucially important for the internal dynamics of an institution, by focusing management and staff attention on student programmes rather than the minutiae of individual qualifications’ fees. That is of critical importance. It will also, and equally critically, make it much easier for institutions to collaborate in offering different components of a programme, and in giving more students access to high-quality technical and vocational teaching expertise.*

Funding for the small remaining number of young part-time students must of course be treated differently, although apprentices are already funded on a programmatic, per-individual basis. Differences between full and part-time student funding will not be any more problematic than the current system which also involves different fee rates for different types of student (as, of course, does university funding).

**Recommendation 11: Funding for full-time students age 16-18 should be on a programme basis, with a given level of funding per student. (This can and should be adjusted for differences in the content-related cost of courses, and for particular groups of high-need student.) The funding should follow the student.**

**Recommendation 12: There should continue to be no restrictions placed on a young person's programme in terms of which level or type of qualification they can pursue. If it is appropriate for a student or apprentice to move sideways (or indeed 'downwards') in order to change subject or sector, that is their choice.**

Recommendation 12 should be read in the context of young people's and citizens' life-time claims to education. At the time of writing (2011) there are no direct restrictions on what 16-19 year olds can study, and they have a right to full-time participation. However, at age 19 differential entitlements and restrictions do come into play (eg levels of funding for 'first full level 3'). These may refer backwards, and have often done so in the past, and so be affected by previous fields and levels of study. This is unreasonable: people should be allowed to decide for themselves how to use education subsidies, and should certainly not find that they are disadvantaged by previous decisions made in good faith.

It is particularly important to ensure that entitlement rules do not bear unfairly on lower achievers. At present, as described above, many young people move in and out of education, while they try to find (or wait for places on) courses that will be of value to them. This group of young people is typically lower-achieving, and poorer, than their peers who progress directly onto two years of full-time A level (or BTEC) study and then, typically, on to higher education. The result is that the former group receive fewer educational services (money and teaching time) between the ages of 16 and 19 than the rest of their cohort: and at 19 lose their entitlement to free full-time study, This is clearly unfair.

**Recommendation 13: Young people who do not use up their time-based entitlement to education (including apprenticeship) by the time they are 19 should be entitled to a corresponding credit towards education at a later date. The existing system of unique student numbers plus the learning accounts being developed by BIS should make this straightforward.**

## **B. Reforming funding for apprenticeships**

Increasing young people's access to apprenticeship is a government priority and of the utmost importance to the future of 16-18 vocational education. However, as discussed at length in the main report and in Appendix VI, it is proving difficult to increase numbers for young people. Growth is occurring largely for older apprentices (19+) and also at level 2 rather than level 3. The Review was told, repeatedly, that persuading employers to take on younger apprentices is extremely hard, in part because of growing concerns over legislation, health and safety regulation, etc. Moreover, our apprenticeship wages are high (probably the highest in Europe) and this is also likely to be affecting numbers.<sup>188</sup>

High levels of excess demand for apprenticeships and stalled growth at level 3 are doubly regrettable given the collapse of ordinary employment opportunities for the young. Apprenticeship should be regarded as a fundamental part of the education system, from which young people should be able to progress to higher studies. Its value is demonstrated clearly by the high wage returns to completed apprenticeships, compared to those associated with the supposedly 'same' qualifications obtained elsewhere.

Apprenticeships also must take account of a labour market where people's occupations, and activities, change frequently. 16-19 year olds apprentices are legally full-time employees rather than students; but they should, nonetheless, be primarily engaged in learning – including, primarily, generalisable and transferrable skills. *The corollary is that their employers should be operating in part as educators as well as employers. They should therefore be recompensed for this part of their role, directly or indirectly.*

This is standard practice in other countries with large apprenticeship programmes, and we know, from research studies (and from a temporary payments system currently being used by NAS) that subsidies do indeed increase apprenticeship vacancies.<sup>189</sup> Box 26 sets out the underlying arguments in some detail. More prosaically, it is clear from our discussions with providers, as well as from numerical trends, that, without drastic reform of the funding mechanisms for apprenticeship, there is no chance of large scale growth in apprenticeships for 16 and 17 year olds.<sup>190</sup> If we want to increase apprenticeship openings for young people, we will have to pay for them.

This does not mean they should be paid for all the time the apprentice spends with them: *on the contrary*, since the young person also contributes to the employer's output. Equally, any apprentice for whom an employer receives funding should, indeed, be engaged in broad learning, and *not just on-the-job training or standard training* of the type received by regular employees other than apprentices. Although their age profile is not available, a considerable number of apprentices are on 'Business as Usual' apprenticeship schemes, in which some people on a company's normal training programme are apprentices, whereas others are not; but there are no differences in the training received. It is difficult to see why some employees should have their company-specific training paid for, simply because they are designated as apprentices.<sup>191</sup>

Employers who take on apprentices are obliged to pay them when they go to college or other off-the-job training – or rather, *if* they go. Significant periods of off-the-job training are central to all European apprenticeship schemes. By contrast, some English apprentices have not been receiving any off-the-job input (although peripatetic assessors come to their places of work); others receive very little. BIS does not monitor this fundamental aspect of apprenticeship, although it clearly should.

Payments to employers for some of the cost of apprenticeship make sense *to the degree that apprentices are genuinely engaged in broad learning*. "Business as Usual" apprenticeships and apprenticeships with no off-the-job component are unheard of in countries with large high quality apprenticeship schemes (and employer subsidies), and should cease to be funded here in the case of 16-18 year olds. Adult apprenticeships are outside the scope of this Review, but the degree to which funding is simply displacing employers' own expenditures, rather than creating more genuine new apprenticeship places and training, could also usefully be examined.

**Box 26: Paying for Apprenticeships (reproduced from chapter 5 of Wolf, A. An Adult Approach to Further Education (2010))**

Discussions of apprenticeship are often confused by the fact that apprentices may and often do contribute directly to output, especially later in their training. In Germany, there is a considerable body of evidence indicating that, towards the end of an apprenticeship, most employers profit from the apprentice's presence, although earlier on the employer is a net contributor. Moreover, employers may use apprenticeship as a way of recruiting, screening and appointing staff.<sup>192</sup> Some employers with long-standing apprenticeship programmes talk about their 'need' to recruit apprentices, independently of whatever government does.<sup>193</sup>

All this obscures the key fact for any discussion of post-compulsory funding. Apprenticeship involves, and has always involved, in varying degrees, employers offering training *not as part of the productive system, but as part of the education sector, and being recompensed for this*. Apprenticeships developed, independently and all over the world, as a way of training young people for highly skilled jobs... This training took place almost entirely in the workplace because this was the most efficient and cheapest place for it to happen in a world of small businesses and a tiny state... In the past, parents paid the employer a fee to take their child on as an apprentice.<sup>194</sup>

Apprenticeships are, by definition, designed to produce skilled workers in a particular occupational area. And for that very reason, apprenticeship systems must have surplus capacity and produce more graduates than the economy 'needs' (demands) at the time. This is obvious when one stops to think about it. Some people will decide they have made the wrong choice, will get sick, emigrate or drop out of the labour market. And even among those who do not, there needs to be some slack while people change jobs, while employers expand or contract or move.

So apprenticeships are essentially educational institutions and apprentices are essentially students: though they are not *just* students, which makes apprenticeship conceptually confusing and hard to develop or reform. And it is this educational function of apprenticeship that should dominate any discussion of government involvement, either as funder or as regulator. This makes apprenticeship fundamentally different from the training of employed, adult workers to be more productive in their current jobs, because it is expected and necessary that many apprentices will move on to other employers and, indeed, to different occupations.

**Recommendation 14: Employers who take on 16-18 year old apprentices should be eligible for payments (direct or indirect), because and when they bear some of the cost of education for an age-group with a right to free full-time participation. Such payments should be made only where 16-18 year old apprentices receive clearly identified off-the-job training and education, with broad transferable elements.**

Payments to employers imply additional funding. However, they are, as noted above, common in other systems, which do not obviously spend more on their apprenticeships than we do. Our system, however, incurs unusually large per head administrative expenses because of its unique institutional set-up.

Under current arrangements, heavy use is made of ‘training providers’ who operate as brokers and middlemen between employers and trainers or assessors.<sup>195</sup> Using a third set of institutions, with additional overheads, employees, etc, is inherently expensive and wasteful. It cannot make sense to run a system which involves large numbers of adults travelling constantly from place to place to interact with and complete paperwork for individual apprentices and their employers; and to talk to employers about how they might convert existing employees into apprentices. *Improving efficiency, and increasing the proportion of funding spent on first-line apprenticeship training are particularly important given that apprenticeship unit costs have been rising very fast in recent years.*

In other countries, *only employers and the actual training institutions, are involved* in apprenticeships. Overseas visits carried out for the Review also confirmed that established training institutions are able to assist young people effectively in locating apprenticeship places, and that the paperwork associated with an apprenticeship contract can be simple and concise. Major amounts would be saved if English apprenticeships could return to this pattern.

A number of English engineering employers were interviewed for this Review who were large enough to become their own ‘training providers’ – getting paid directly as well as gaining control and ownership. They were the most satisfied with their current apprenticeship arrangements; and those who had switched from working with another provider emphasised that current arrangements worked better, especially when dealing with colleges who provided off-the-job training. Such arrangements need to be encouraged and extended to groups of small and medium employers. The French system of apprenticeship centres, very diverse in size, often private and sectorally-specific, may be of particular relevance here, as may the organisation and governance of the Group Training Associations (associations of small and medium *employers*) which were once common in this country.

**Recommendation 15: DfE and BIS should review contracting arrangements for apprenticeships, drawing on best practice internationally, with a view to increasing efficiency, controlling unit costs and driving out any frictional expenditure associated with brokerage or middleman activities that do not add value.**

**Recommendation 16: DfE and BIS should discuss and consult urgently on alternative ways for groups of smaller employers to become direct providers of training and so receive ‘training provider’ payments, possibly through the encouragement of Group Training Associations (GTAs).**

**The previous two sections were concerned with post-16 funding only, since 14-16 funding is already on a per-pupil basis. Institutional changes, however, are desirable at both KS4 and at 16, if vocational education is to improve on a system-wide basis.**

### **C. Strengthening the system: improving access to high quality vocational instruction**

Many submissions to the Review described high-quality vocational provision in their schools, colleges and local authorities. Many others lamented the existence of sub-standard provision, in which vocational awards were delivered in the absence of either genuine professionals who could teach it, or appropriate equipment, and there were widespread concerns that current regulatory and verification procedures were not addressing the issue. For example, Wendy Wright, Principal of Macclesfield College told the Review that “Awarding Organisations should require that students are taught by properly qualified staff with industry experience, supported by appropriate and relevant industry resources, and that students are achieving proper standards”.

Both groups of submissions are correct. There are numerous examples of innovative good practice, including in schools. Sometimes this is made possible by specialist funding, which is unfortunately intrinsically short-term, and goes to only a few recipients, rather than creating or changing a national system. Others have been able to provide high quality without special funding. But the problems many young people have with progression, and the sheer explosion of provision in what should be specialist areas, indicate that much provision must indeed be sub-standard.

The problem lies not only with league table pressures at KS4 but also financial pressure on schools to retain pupils post-16. How might reforms increase the availability of high-quality professionally-led vocational courses, and reduce the incidence of the third-rate,

with its negative impact on young's people's futures? How might it do so without large new expenditures, at a time of severe financial constraint?

Improvements to our quality assurance system are discussed below. But simply driving out bad quality is not enough, even if we were confident that we knew how. The quality and availability of good provision needs to be increased by creating the right infrastructure of funding and incentives, as opposed to the one which has generated such problems.

This requires competition among institutions, plus good and reliable information, so that students can compare and select among providers of vocational courses (as they do, already, when they have the information with which to do so). It requires a **combination of tight quality assurance with financial flexibility, and freedom for vocational professionals to operate across the whole 14-19 sector.**

**Recommendation 17: At present teachers with QTS can teach in FE colleges; the FE equivalent – QTLS – should be recognised in schools, which is currently not the case. This will enable schools to recruit qualified professionals to teach courses at school level (rather than bussing pupils to colleges) with clear efficiency gains.**

**Recommendation 18: Clarify and evaluate rules relating to the teaching of vocational content by qualified professionals who are not primarily teachers/do not hold QTLS. Many schools believe that it is impossible to bring professionals in to demonstrate/teach even part of a course without requiring the presence of additional, salaried teaching staff. This further reduces the incidence of high quality vocational teaching, delivered to the standards that industries actually require.**

Although these changes will increase the quality of vocational provision that schools can offer, there are inevitably serious limitations on the ability of schools to provide vocational courses. You cannot run a full programme with a single part-time member of staff; sizeable and advanced vocational qualifications require a critical mass of staff and expertise, ongoing capital expenditure, and internal quality assurance systems. That is why colleges tend to be large – and even so, tend to specialise. **Vocational provision is expensive, and is one area of education where there are genuine economies of scale.**

Technical grammar schools had an excellent reputation because they were specialist institutions, with specialist staff and equipment. They were correspondingly very

expensive and few in number.<sup>196</sup> Academies with close links to major companies, such as the JCB Academy, and the suite of other similar University Technical Colleges which Lord Baker is working to develop, can expect to deliver technical excellence in a school setting. They can recruit from a wide area, offer a distinctive and high-quality education and attract more talented young people to technical and engineering careers.

But there are 600,000 young people, on average, in every year group, whom institutions across the system are competing to attract and retain. As we know from the last few years, many schools are not in the least reluctant to offer and enter young people for qualifications which they do not have the professional competence to teach to a high standard. And even if there were the money available for major equipment purchases, and specialised staff for small-group teaching – which there is not – most schools cannot possibly build up the large groups needed for genuinely high-quality, professionally directed vocational courses. The danger is that many will promise a curriculum that they cannot, in fact, provide.

It follows that colleges will generally be far better placed to provide vocational options for 14-16 year olds, and not just 16-18 year olds, than schools will. This has been the rationale behind special grant-bearing programmes such as Young Apprenticeship and Increased Flexibilities. But these are very expensive, benefit only a tiny, more or less random sub-set of the age group, and cannot, by virtue of their project funding and extra cost, become permanent and system-wide. They have also always involved students remaining school pupils, on the schools' rolls.

This should change. **If colleges enrol students under 16 then they can revive junior technical provision.** Junior technical colleges were once widespread, but vanished when legislation raised the school leaving age and 14 and 15 year olds all moved to school-based provision. Submissions to the review were of the opinion that colleges were legally barred from enrolling students under 16. This is apparently not the case: but they are uniformly enrolled in schools in practice.

The great advantage of colleges is that they can offer vocational programmes without needing large additional capacity, and have a critical mass of professional staff already available. If there is the demand, students will enrol: if not, nothing much is spent, or lost. **Colleges must, however, also offer students a full 14-16 programme – or arrange collaborative teaching with local schools.**

Evidence to the Review, and some of the visits made, showed how effective collaboration can be when it responds to local circumstances and when both sides feel they benefit. (It also indicated that this was easier to arrange when academies were involved than when

schools were subject to national terms and conditions.) Collaborations which develop largely under the pressure of ‘partnership’ funds and requirements to collaborate are inevitably less stable: and competition for students is the reality everywhere in the world, not just England.

But competing institutions *can* collaborate just as companies often will for a joint bid. Opening up student enrolments, and increasing teacher mobility between schools and colleges will promote this. So will changing to a per-student funding mechanism across the whole 14-19 age group. These measures will allow institutions to set their own mutually agreed prices for teaching that is outsourced, or bought in. In this situation, funding genuinely can ‘follow the student’ – or the student’s teacher.

**Recommendation 19: Make explicit the legal right of colleges to enrol students under 16 and ensure that funding procedures make this practically possible. Colleges enrolling students in this age group should be required to offer them a full KS4 programme, either alone or in collaboration with schools, and be subject to the same performance monitoring regime (including performance indicators) as schools.**

Colleges which enrol students in this age group must be subject to the same performance management regime as secondary schools, because there is no point making it easier for KS4 pupils to obtain high quality vocational courses if they then receive worse provision in other curriculum areas. The performance regime outlined in Recommendations 1, 3 and 28 should guard against this. However, government might also wish to adopt an approach taken for some groups of schools in the past; namely, require the full National Curriculum, as applied to the relevant age/year groups in maintained schools, until such time as the college in question has established the quality of its provision.

It is also critically important to ensure that students and their families have as much information as possible with which to assess the quality of provision when choosing specialist courses. This is one aspect of a more general and widely recognised need for good **Information, Advice and Guidance**, something which is being addressed in a number of ways across all levels of the education system. In the context of this review, I would wish simply to reiterate its importance, as did a very high proportion of submissions, and offer one additional suggestion.

A great deal of attention has been focused recently on the need for ‘destination data’, showing where students go when leaving an institution or graduating from a course. Such data are obviously very useful (though also very difficult to collect, other than for students progressing directly to university or another educational institution.) It would also be

directly relevant and useful to all potential applicants, to know the entry qualifications and grades of students *starting* a particular course. This is difficult for transfers or entry into specialist options at age 14, but easy for all post-16 courses, where institutions will have the data in their administrative systems.<sup>197</sup> So, for example, students and their families would be able to see at once whether or not any local A level science students were accepted on the basis of a BTEC or OCR level 2 science qualification; and how many entrants to a selective level 3 craft course (eg electrical, optics) had come from schools rather than college-based level 2.

**Recommendation 20: All institutions enrolling students age 16-18 (post-KS4), and those offering a dedicated entry route for 14-year old entrants, should be required to publish the previous institutions and, where relevant, the qualifications and average grades at the time of enrolment of previous entrants. (This should be done on a course-related rather than an institution-wide basis.)**

These recommendations address the quality of school and college-based vocational provision; but, as discussed above, employers also place great value on employment experience which teaches a range of skills in a way no simulated environment ever can. Yet the youth labour market has imploded, and, even with the reforms suggested above, apprenticeship cannot substitute entirely, even medium term.

**Helping young people to obtain genuine work experience – and, therefore, what the CBI calls ‘employability skills’ – should be one of the highest priorities for 16-18 education policy in the next few years. It is far more important than even a few years ago, because of labour market trends; and is made critical by the impact on youth unemployment of the most recent recession.**

Progress on this front is particularly important for students on vocational programmes who are not planning to enter higher education in the immediate future. Obviously, formal education matters – but the skills it develops are only a sub-set of those valued in the labour market (and life). Moreover, in an environment where success is measured on what is essentially a single scale -which schools and colleges are – half of those present will inevitably be in the bottom half. So a setting which uses different criteria offers young people an opportunity to do both absolutely well and relatively better.

Although credentials have become ever more important in recent years, it is still perfectly possible for people to succeed by acquiring, demonstrating and using skills outside formal education, and in the workplace. But they need to get a start. Research, summarised above, reassures us that academic qualifications are not the only currency of value, but also shows that employment breeds employment, and vice versa. Conversely, we know

that **being enrolled in a educational institution, and obtaining a credential is not necessarily worthwhile**. Too much recent policy has assumed that simply being in education or institution-based training was automatically a good thing. Research shows that this is far from true; and young people's behaviour indicates that they are well aware of this. Vocational education funds need to be used in ways which give young people valuable experiences: and substantive experience in the workplace comes high on the list.

Increasing apprenticeship numbers for 16-18 year olds is clearly a top priority; but it is unlikely to be enough, and it would be a very bad idea to dilute apprenticeship requirements and the apprenticeship brand in order simply to increase the availability of work placements. We need instead to address ways in which, post-16, institutions might use funds to subsidise employers to provide genuine work experience. These need not involve payment to the students – they remain students not employees. Conversely, if employers are going to continue hiring 16 and 17 year olds post-RPA, workable models for training release and for recognising (*but not necessarily accrediting*) workplace training need to be developed. A highly promising model for providing workplace experience is that developed by **Working Rite**<sup>198</sup> but submissions to the Review indicate that there are obstacles to introducing this easily in England.

Providing **16-18 year olds** with work opportunities is the top priority. Of course, helping younger pupils to understand and experience the workplace is valuable: but value-for-money and setting priorities are always important, and especially at a time of financial stringency. Fewer and fewer employers are willing to accommodate young people under 16 on their premises; and the paperwork associated with placements has increased exponentially.

For that reason the blanket requirement to give all KS4 pupils 'work experience' – or, as it has officially become, 'work-related learning' – has served its time. It is very expensive: typically, for a school, the equivalent of at least half a full-time senior teacher's salary a year plus substantial administrative support.<sup>199</sup> Too often, now, this does not even involve being in a workplace, as schools admit defeat and arrange something 'work-related' (and largely pointless) on school premises.

**Recommendation 21: DfE should evaluate models for supplying genuine work experience to 16-18 year olds who are enrolled as full-time students, not apprentices, and for reimbursing local employers in a flexible way, using core funds. Schools and colleges should be encouraged to prioritise longer internships for older students, reflecting the fact that almost no young people move into full-time employment at 16; and government should correspondingly remove**

**their statutory duty to provide every young person at KS4 with a standard amount of ‘work-related learning’.**

#### ***4. Reforming the Regulatory Framework***

The existing regulatory system is clearly unfit for purpose. It focuses almost entirely on individual qualifications, using a complex and overlapping system of agencies to do so. Far from improving their quality, it has undermined it.

Under current funding arrangements, the structure, quality and content of vocational qualifications drive everything in the system, since providers are funded on a qualification-by-qualification basis, with payment-by-results. But even if this were altered, as recommended by this Review, qualifications would remain of critical importance to the quality of English vocational education. Ours is a qualification-based education system, and they play a vital role in progression for young people.

If vocational qualifications (in the very broadest sense) are to promote successful progression by young people into the labour market, they need to be recognised and ‘owned’ by employers; and if they are to provide a successful route into higher levels of study, they need to be recognised by gatekeepers, and provide information that selective courses and institutions can use in making offers. Present arrangements fail on both counts.

The key regulatory bodies for vocational education are, today, the Sector Skills Councils and Ofqual. The former of these – the SSCs – have been given an impossible task. England has a population of well over 50 million people, and a highly complex economy. Given the nature of this country, it is inconceivable that a tiny number of central, government-sponsored organisations can reflect all the concerns and requirements of a fast-changing economy with strong local variations and of young people who will be in the labour market for another 50 years. Yet this is exactly what is being asked of Sector Skill Councils.<sup>200</sup>

The task becomes even more inconceivable when they are asked to create all-encompassing national occupational standards; when qualifications are expected to reflect these precisely, irrespective of where they are delivered; and when SSCs are invited to approve – or not approve – all vocational qualifications. In contrast, most other countries’ vocational education systems have national consultative bodies which contribute to very broad standards, but do not mandate the details of local programme content or of qualifications.

As discussed above, the Qualifications and Credit Framework, to which vocational qualifications must now adhere, has a competence-based approach which is unsuited to 14-19 education, with its progression requirements. Giving SSCs, which are oriented to the current workforce, control over young people's qualifications has compounded the regulatory problems.

Ofqual, in setting criteria for accreditation of qualifications, has aligned these with the previous government's skills strategy and required SSC approval for individual vocational qualifications. The result is to confirm SSCs' position as the de facto first-line national regulator for vocational awards. And, as we have seen, a number of important qualifications have lost accreditation in the process, Awarding Bodies have spent large sums re-specifying qualifications (with the costs passed on through fees), and gatekeepers determining young people's futures face a whole suite of unfamiliar and opaque new qualifications.

Ofqual's behaviour reflects its understanding of the previous government's policies, and the request, made by BIS ministers in both the current and the previous government, that it take account of SSCs. It is not itself prima facie evidence of regulatory confusion. However, confusion is demonstrated by three things. The *first* is the difficulty that the successor Coalition Government now faces in trying to correct unanticipated consequences of previous policies; an experience which has underlined the lack of clear lines of authority and accountability within the current system. The *second* is that current legislation empowers Ofqual to set the high-level criteria against which it regulates qualifications; something which is almost never appropriate in a regulator, and, in this case, bestows important education policy-making powers on a regulatory agency rather than the elected government. *Thirdly*, the relative importance attached to different activities reflects a confusion in the underlying legislation as well as in the way it has been applied.

The primary justification for Ofqual's existence is, according to its own account,<sup>201</sup> an 'asymmetric information' one – that, without regulatory checks, people cannot tell if a *qualification* is of good quality. It has therefore concentrated on, and expects to continue concentrating on, regulating individual qualifications. But this is not something that a regulator can do for a universe of vocational qualifications as diverse as ours.<sup>202</sup> **Ofqual cannot tell if a vocational qualification is of good quality – because that depends on specific sector and subject expertise which it does not and cannot have across the whole spectrum of awards.**

**A regulator can, conversely, regulate awarding bodies effectively** and monitor whether they are carrying out proper verification and checks on the quality of provision. Ofqual can regulate the way in which awarding bodies develop vocational awards – whether they are incorporating professional bodies’ advice, whether they are upholding standards of delivery in the institutions they allow to offer their qualifications.<sup>203</sup> **Ofqual can and should look directly at standards, comparing students’ performance and products, rather than focusing on written specifications.** Moving away from qualification-based funding, and from a system which uses qualification numbers as its main quality control measure, will involve **more effective and active regulation of awarding bodies.**

As discussed above, major changes in some Awarding Bodies’ assessment and verification arrangements for vocational awards have occurred in the recent past. Numerous submissions to the Review expressed concern about the impact of these changes on quality and uniformity of standards. The submissions may or may not be correct in their perceptions: but either way, these activities are a legitimate and important subject for regulatory oversight.

Overall, much greater clarity is needed concerning the role of a regulator, including but going beyond vocational education. Although crises in vocational delivery may be dealt with on an emergency basis, the underlying structures will remain dysfunctional without systemic reform. The recommendations below therefore deal both with the need to take emergency measures to restore provision short-term, and with longer-term developments.

To repeat: at present, *the regulatory framework fails to clarify the boundary between policy decisions (which should rest with the Secretary of State) and those appropriate to regulators.*

As argued earlier, in vocational education meaningful accreditation of individual qualifications is beyond any national regulator’s powers. However, this review is not concerned with academic qualifications, which interface with the National Curriculum, and where subject expertise could be developed if ministers wish.

Either way, clarification is urgently needed. *Ofqual should also be strongly encouraged to expand and improve the ways in which it regulates awarding bodies and examines standards in vocational education.* This will require major strengthening of its statistical expertise, which would be best achieved through a formal partnership with a university or with the Royal Statistical Society.

**Recommendation 22: DfE should encourage Ofqual to move as quickly as possible away from regulating individual vocational qualifications and concentrate on regulating awarding bodies. When there is reason for concern about a particular qualification, Ofqual should continue to intervene.**

**Recommendation 23: DfE should confirm and clarify that qualifications offered to 14-19 year olds and funded through YPLA will not in future need to be either QCF-compliant or belong to a specified group with additional approval criteria (GCSE, A Level, Diploma etc). They should, however, be offered by a regulated awarding body. As an immediate and temporary measure the Secretary of State should use his powers, under Section 96, to approve the funding of key established qualifications which have not been approved by SSCs, and have therefore not been accredited, but which are recognised by DfE as playing an important role in the country's vocational education system, and which are clearly valued by employers and/or higher education.**

This does not mean that young people should be prevented from taking an occupationally specific or QCF-based qualification. On the contrary, schools and colleges should be free to offer 14-19 year olds whatever qualifications they consider appropriate, subject to their contributing to an appropriate programme of study. (See recommendations 1 – 6 above.) However, given the problems that have arisen in connection with the QCF, and the importance of coherent progression routes between pre and post-19 provision, it would be desirable to evaluate current arrangements across the age range.

**Recommendation 24: DfE and BIS should discuss and consult on the appropriate future and role of National Occupational Standards in education and training for young people, and on whether and how both national employer bodies – including but not only SSCs – and local employers should contribute to qualification design.**

**Recommendation 25: The legislation governing Ofqual should be examined and where necessary amended, in order to clarify the respective responsibilities of the regulator and the Secretary of State.**

### **Quality assurance**

The regulatory apparatus just described is concerned, overwhelmingly, with the specification and assessment of qualifications. In a system such as ours, where qualifications play a central role, this process is clearly important; but should not be the only way in which the quality of vocational education is secured.

Performance management systems, especially league tables, have proven to be extremely powerful tools for controlling institutions' behaviour, used widely by successive governments. This is for good and bad: performance tables have created perverse incentives, as we have seen, although we also have evidence that such external measurement systems raise performance.<sup>204</sup>

The recommendations above, made in response to the explosion in KS4 vocational entries, will also remove many – *though not all* – vocational qualifications from KS4 performance indicators. Some vocational qualifications will be clearly endorsed as high quality and included in the performance measurement system.

However, *there remains a serious risk that schools will simply ignore their less academically successful pupils*. This was a risk with the old 5 GCSEs measure; a risk with the English Baccalaureate; and will be a risk with a measure based on selected qualifications. It needs to be pre-empted.

This consideration reinforces a more general one. If a single measure is dominant, it invites gaming or worse: Goodhart's Law states that, if a single measure is used for control, it will become corrupted. As the Royal Statistical Society concluded in its report on performance indicators, good practice therefore requires the use of **several measures** to indicate performance on an underlying construct<sup>205</sup> – in this case, successful teaching and learning by a school's pupils.

It is not just lower-achieving students at issue. The '5 GCSEs' measure incentivises schools to neglect those at the top of the attainment range, because like any measure with a threshold it focuses attention on students just on one or other side of it. It is important that schools be given a strong incentive to pay attention to their least academically successful *and* their most academically successful pupils. And recent research suggests that the most effective supplementary measures will look at average point scores. (See Box 27)<sup>206</sup>

**Box 27: Key findings on the relative effectiveness of performance measures: which data on KS4 performance now are good predictors of high performance in 5 years' time?<sup>207</sup>**

1. Raw outcome data work better than complicated conditional outcome measures, such as contextualised value-added. (This confirms earlier research showing that contextualised value-added measures are very unstable.)
2. Using the '5 A\*-C including maths and English' rule is definitely worthwhile.
3. Using the school's capped average GCSE point scores is an even better idea/more effective decision rule than using the '5 A\*-C including maths and English' threshold. (This takes the average of each pupil's best 8 GCSEs.)
4. Using evidence on Maths GCSE performance to choose a school gives a very high probability of a particular, specific student getting a better score in Maths, when their turn comes, than would a random choice among available schools; on average three times as high. English is almost the same.

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**Recommendation 26: DfE should introduce a performance indicator which focuses on the whole distribution of performance within a school, including those at the top and bottom ends of the distribution.**

One possible approach might be to look at average performance of pupils at the 50th, 25th, and 75th percentiles of the school's GCSE points distribution, but calculated on a limited number of results: schools should also be discouraged from piling up qualifications and points simply in order to amass high point scores. However, DfE should examine a number of possible measures of this type.

Finally, but by no means least, quality assurance requirements, like other aspects of vocational provision, need to pay far more attention to the labour market environment within which young people are learning, which is a local one. The Review's recommendations with respect to qualifications for 14-19 year olds should break open the bureaucratic triangle currently formed by SSCs, Ofqual and Awarding Bodies, in which awarding bodies give all their attention to the regulatory authorities, and to satisfying their requirements. If current demands for SSC approval and individual accreditation of qualifications are lifted, links between Awarding Bodies and employers can re-strengthen. It is worth remembering and emphasising that, before vocational qualifications were effectively nationalised in the late 1980s, awarding bodies had such links, and were highly dependent on employer-paid fees and employer approval.

However, when it comes to quality assurance for vocational qualifications, it is the links between schools and colleges, and employers, which are truly vital; far more so than between awarding bodies and either group. In every example of excellent provision visited for this review – whether in England or abroad – staff have been quite clear that quality assurance comes from employers. If they are not involved, then standards suffer.

National bodies consistently report that it is very difficult to get employers involved. This is hardly surprising. Meetings and consultations involve officials and awarding body personnel who are paid explicitly to be there, whereas any employers will be taking time off from keeping their businesses functioning and solvent, with no direct benefit from attendance.

Local involvement is potentially far less problematic, because local institutions are the places from which employers actually hire staff. And as other European countries demonstrate, it is perfectly possible to involve employers directly in assessment and moderation *locally* without a vast bureaucracy and enormous cost. The final recommendation of this Review therefore focuses on the employers who ultimately determine the quality and value of vocational education.

**Recommendation 27: At college and school level the assessment and awarding processes used for vocational awards should involve local employers on a regular basis. Awarding bodies should demonstrate, when seeking recognition, how employers are involved directly in development and specification of qualifications.**

## ***5. In conclusion***

The recommendations for reform, which, taken together, should remove many of the worst obstacles to quality, and make it much easier for our vocational education programmes to serve the interests of young people and, as a result, those of the labour market. Most of these recommendations concern the organisation, oversight and funding of programmes and provision, rather than detailed qualification reform, the dominant theme of previous vocational reviews. This is deliberate. *Using government-driven qualification design as the main policy and reform instrument in vocational education is a serious mistake.*

Educational reform of the last thirty years is littered with qualification reforms, of which perhaps two have been genuinely successful, and many others an expensive failure. And the two that succeeded – the introduction of GCSE, and the development of BTEC awards, created by the Technician and Business Education Councils – were successful because they responded to a broad and irreversible change in aspirations, for progress to further and higher education, and therefore for delayed specialisation and selection. It was not because of the wonders of their internal design.

Given the enormous importance of formal qualifications in the English labour market, and given that governments, across the world, typically play a major role in the design and award of school-leaving certificates, it is not surprising that reforms have focused on them. (If the Tomlinson Report had been implemented in full, it would have created the largest qualification upheaval yet.) Nor was it obvious a priori that qualification design was an ineffective policy, and quality, lever. In retrospect, however, it is clear that:

- Micro-management of qualifications destroys the major arguments in favour of awarding bodies' existence – their ability to respond directly and effectively to specialised markets (including employment ones) and their ability and motivation to innovate.

- At the same time, concentrating government intervention on qualification design leads repeatedly to officials and agencies concentrating on paperwork rather than on direct safeguards of quality and standards in assessment, which cannot be checked by sitting at a desk and reading submissions. This is always a major risk in bureaucracies, made even stronger by the current ‘audit’ culture which demands a paper trail, and is by no means confined to education. But it has been very strongly evident in the qualifications field, where hundreds of thousands, if not millions, of hours have been (and are) spent poring over the written specifications for qualifications, and scrutinising terminology, and even syntax. This occurs even **though the written specification for a qualification plays only a small part in the quality of the assessment, and in determining the standard of the award**, let alone in the quality of teaching and training of candidates.

There is a constant complaint that there are ‘too many qualifications’; and every reform leads, in practice, to yet more. This is because, on the one hand, there are good reasons to have many vocational qualifications in a large complex labour market; and on the other, because qualifications in schools and colleges reflect, and do not drive, the organisation of provision. Get that right and the number of qualifications will take care of itself.

# Part Six: Conclusions and Destinations

This review was charged with considering

how we can improve vocational education for 14-19 year olds and thereby promote successful progression into the labour market and into higher level education and training routes.

In the previous pages, I have discussed at length the economic, social and educational context within which English vocational education currently operates and whether it responds effectively to individual aspirations and labour market realities. An ‘audit of current provision’ identified a number of ways in which current arrangements create perverse incentives that serve young people ill, are unnecessarily expensive and bureaucratic, and fail to recognise the specific needs of 14-19 year olds compared to adults. In response to these, the review makes 27 specific recommendations, some wide-ranging and some highly specific.

More broadly, what we should be trying to achieve for young people participating in vocational courses? And how will the recommendations promote these ends?

**First**, all young people should receive a high quality core education which equips them to progress, whether immediately or later, to a very wide range of further study, training and employment. As a society, we are committed to equality of opportunity for all, and families, as we have seen, have very high aspirations for their children. The period from 14-19 should be one when those remain alive, and not, as is so often the case at present, a time when options close and aspirations shrink. *We have no business, as a society, placing 16 year olds, let alone 14 year olds, in tracks which they cannot leave.*

The recommendations here are designed to deliver the most important skills which every young person needs for progression, and to make them central to every vocational programme. That means that 14-16 year olds all need to follow a broad education and avoid premature specialisation. It means that any young people who reach the end of Key Stage 4 with weak maths and English should continue with them. It means that the vocational qualifications which we encourage schools to offer, and which give them credit within performance management systems, must be of a quality and rigour which develop

new skills and encourage progression, whether in engineering or accountancy, IT or design. Achieving this will do far more for the status and respect accorded to vocational qualifications, and the prospects of those who take them, than several thousand speeches proclaiming the importance of ‘parity of esteem’, or the current discredited system of equivalences.

It is for the same reasons that the review has emphasised the importance of developing *programmes* for young people, conceptualised as such. It is in large part for this reason that it proposes moving away from the current and peculiarly English regime of funding on the basis of aggregated individual qualifications towards per-student funding post-16 as well as pre-16. This changed emphasis demands and expects that schools and colleges will think hard about what they should offer. The changes should make it far easier for them to do so. Meanwhile, government needs to ensure that awarding bodies are regulated properly, and that good and accurate information is available to young people about what they are being offered.

**Second**, the system should enable and encourage variety, innovation, and flexibility, including different opportunities for specialisation: limited pre-16, much greater thereafter. That means moving away from highly detailed prescription of the content and format of qualifications, which inevitably creates delays and rigidities, and does little for the quality of provision. If the Review’s recommendations on this point are accepted, it should be easier for specialised provision to develop which is of very high and distinctive quality.

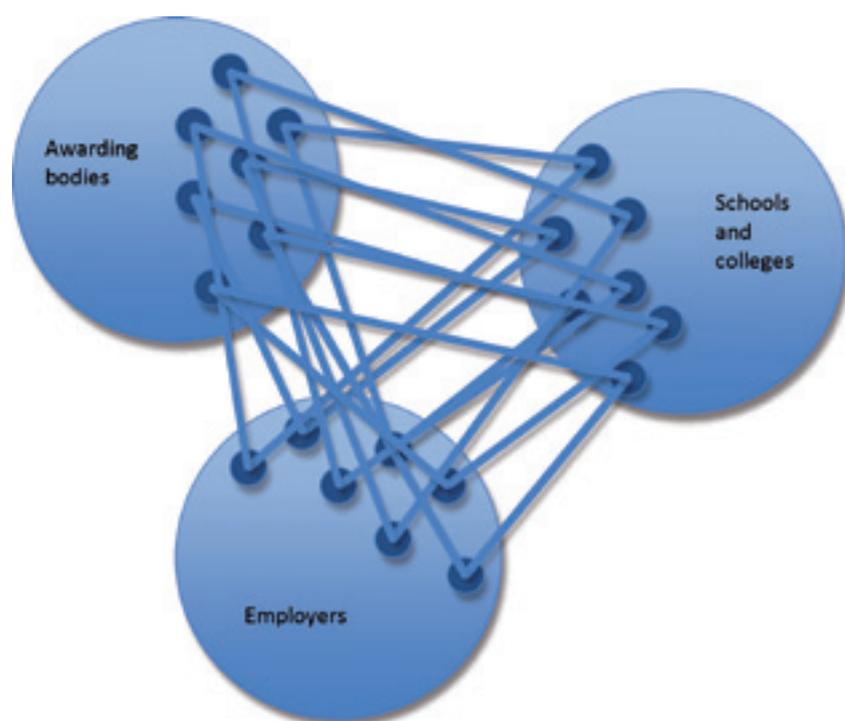
Alongside today’s specialist music schools and the emerging group of UTCs, it should become *easier* to create institutions with specialist strengths, whether in creative arts (like London’s successful BRIT school), IT, commerce or catering. The proposal to facilitate enrolment of under-16s in colleges has the same objective, since it will make specialist facilities available to a far larger group of young people, and indeed should encourage the critical mass of provision which high quality specialist institutions require. What is necessary is that, alongside specialisation, the commitment to maths, English and the pre-16 common core be maintained; and that awarding bodies’ assessment practices – not their qualification content – be carefully regulated and monitored.

Innovation and flexibility should also apply to the institutional structures within which vocational education is offered. Schools, colleges and providers demonstrate their amazing speed of adaptation every time that accountability and financial incentives change. They have done so multiple times in the last three decades, and I am confident that changes in the funding regime, and in recognition of teacher qualifications, should

encourage many more locally-based developments and partnerships, that match the best practice that has developed in spite of our over-regulated regime.

It is also critical that institutions – whether highly specialised or general in their vocational orientation – maintain close links with local employers. Indeed our **third** major objective should be to recreate and strengthen genuine links between vocational education and the labour market; and especially, in the case of young people, the local labour market. Employers are the only really reliable source of quality assurance in vocational areas, and, in spite of lip service, have been progressively frozen out of the way vocational education operates. Figure 7 above represented the way that players in vocational education have operated and interacted in recent years. Figure 8, below, shows the close links that we need to create and re-create if we are to have a genuinely high quality, up-to-date vocational education system linked to an ever-changing economy. The recommendations of this review should do a great deal to move us from one to the other.

Figure 8: The interconnections that promote high quality



**Fourth** and finally we need to do far more, far more actively, to help young people to enter the labour market and obtain genuine employment experience. This will be the hardest task of all. Whereas the school-leavers of the 1960s and 1970s entered a labour market which was happy to offer young people a job, today's job market is very different. Some of this is beyond the power of any education policy to alter. It is a direct result of the ever-larger numbers who stay in fulltime programmes to 18, or 21, and of labour market regulations and policies which are beyond an education department's remit.

But there are things we can do, and they offer enormous benefits to young people in a world which values and rewards the skills learned in ‘real’ employment. The review therefore makes recommendations to prioritise and develop not only the growth of full apprenticeships, but also other forms of supported and subsidised workplace experience or employment. Increasing genuine employer involvement in local colleges should also have important positive effects.

Would implementing this review end disaffection and under-achievement, raise the economic growth rate dramatically, abolish skill shortages, and ensure that every single vocational qualification had a positive labour market return? No, of course not. But implementing its recommendations should raise the quality of provision, increase the time spent teaching and thinking about students, reduce the money and time spent on pointless bureaucracy, increase young people’s skills in critically important areas, and make a real difference to young people’s ability to obtain employment. All of which are, surely, well worth the attempt.

# Appendix I: Growth in Vocational Qualifications

## Most popular Vocational Qualifications at Key Stage 4: 2009-10

Qualification Title	No of Results
OCR Level 2 National First Award in ICT	106,283
EDEXCEL Level 2 Certificate in Adult Literacy	71,950
EDEXCEL Level 2 Certificate in Adult Numeracy	70,560
Sports Leaders UK Level 1 Award in Sports Leadership	55,323
EDEXCEL Level 2 BTEC First Certificate in Applied Science	49,172
EDEXCEL Level 2 BTEC First Certificate in Sport	39,961
AQA Level 2 Certificate in Preparation for Working Life	29,689
EDEXCEL Level 1 Certificate in Adult Numeracy	27,558
EDEXCEL Level 1 Certificate in Adult Literacy	25,374
AQA Level 1 Certificate in Preparation for Working Life	20,873
EDEXCEL Level 2 BTEC First Certificate in Business	18,218
EDEXCEL Level 2 BTEC First Diploma in Sport	17,243
OCR Level 2 National First Certificate in ICT	17,122
EDEXCEL Level 2 BTEC First Certificate in Performing Arts	14,392
ASDAN Level 2 Key Skills in Improving Own Performance	14,091
ASDAN Level 2 Key Skills in Working with Others	13,394
EDEXCEL Level 2 BTEC First Diploma in Applied Science	13,161
EDEXCEL Level 2 BTEC First Certificate for ICT Practitioners	13,126
ASDAN Level 2 Key Skills in Problem Solving	11,806
EDEXCEL Level 2 BTEC First Certificate in Art and Design	10,923
ASDAN Level 2 Certificate in Personal Effectiveness	10,843
EDEXCEL Level 2 BTEC First Diploma in Business	7,985
OCR Advanced Level Free Standing Maths	7,820
BCS Level 2 Certificate for IT Users (ECDL Part 2)	7,378
EDEXCEL Level 2 BTEC First Diploma in Health and Social Care	7,285
EDEXCEL Level 2 BTEC First Diploma in Performing Arts	7,173
ASDAN Level 1 Certificate in Personal Effectiveness	6,683
EDEXCEL Level 2 BTEC First Diploma in Art and Design	6,343
EDEXCEL Level 2 BTEC First Certificate in Media	6,247
EDEXCEL Level 2 BTEC First Certificate in Health and Social Care	6,175

Source: DfE

BTEC qualifications originated with the ‘Technician Education Council’ and ‘Business Education Council’ (which then merged), and were originally developed as technician level awards, and offered in further education only (and not schools, which were not considered to have adequate facilities.) The BTEC National Diplomas and National Certificates are ‘level 3’ awards (like A levels) and date back to the 1970s. By contrast, BTEC Firsts were introduced later to provide an alternative qualification and, ideally, a progression route to National level, for the increasing number of 16 year olds staying in full time education.

# Appendix II: Changes in the English Labour Market

Fastest growing and fastest declining occupations in England 2001-2009: **percentage terms** Source: UKCES Skills for Jobs: Today & Tomorrow (Key Findings of the 2010 National Strategic Skills Audit. (All data from Labour Force Survey/ONS)

	Numbers 2001	Numbers 2009	Numerical change	% change
<b>FASTEST GROWING</b>				
Conservation & environmental protection officers	11,797	26,470	14,673	124
Paramedics	11,101	23,798	12,673	114
Legal associate professionals	24,509	51,250	26,741	109
Refuse & salvage occupations	21,750	44,393	22,643	104
Leisure & theme park attendants	11,101	22,471	11,370	102
Town planners	13,886	26,931	13,045	94
Educational assistants	252,358	482,979	230,621	91
Driving instructors	23,265	44,494	21,229	91
Senior educational administrators	25,195	44,210	19,015	75
Purchasing managers	24,415	41,457	17,042	70
<b>FASTEST DECLINING</b>				
Assemblers (electrical products)	108,076	33,885	74,191	-69
Credit agents	26,735	9,794	16,941	-63
Assemblers (Vehicles, metal goods)	68,745	26,556	42,189	-61
Typists	36,682	15,189	21,493	-59
Bookbinders & print finishers	36,266	15,385	20,881	-58
Metal making process operatives	27,732	11,910	15,822	-57
Metal machine setters and setter-operatives	94,580	40,708	53,872	-57
Telephonists	49,581	22,090	27,491	-55
Precious instruments makers and repairers	35,907	16,348	19,559	-54
Sewing machinists	74,480	35,757	38,723	-52

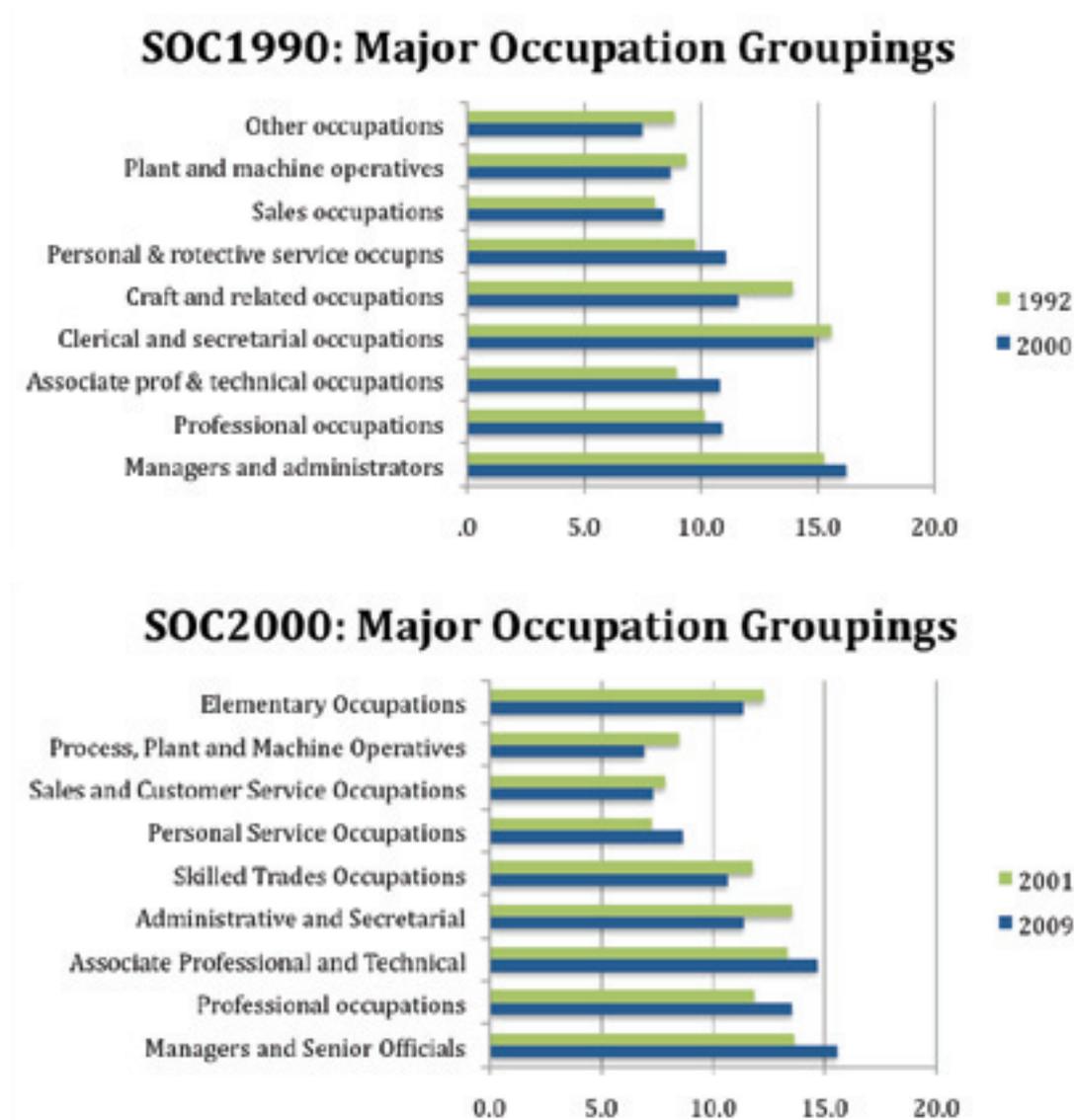
Source: LFS data analysed and supplied by UKCES

Fastest growing and fastest declining occupations in England 2001-2009: **absolute terms** Source: UKCES (as above)

<b>FASTEST GROWING</b>	<b>2001</b>	<b>2009</b>	<b>Numerical change</b>	<b>(% change)</b>
6124 Educational assistants	252,358	482,979	230,621	(91)
6115 Care assistants and home carers	563,112	719,453	156,341	(28)
1132 Marketing and sales managers	436,153	547,206	111,053	(25)
1136 Info & communication technol managers	202,899	297,123	94,224	(46)
1131 Financial managers & chartered secs	184,315	276,385	92,070	(50)
2314 Secondary education teaching professionals	340,795	417,444	76,649	(22)
5319 Construction trades n.e.c.	167,954	236,727	68,773	(41)
2211 Medical practitioners	148,221	216,276	68,055	(46)
3232 Housing and welfare officers	110,357	176,173	65,816	(60)
1122 Managers in construction	178,507	244,316	65,809	(37)

<b>FASTEST DECLINING</b>	<b>2001</b>	<b>2009</b>	<b>Change (absolute)</b>
8125 Metal working machine operatives	110,029	67,626	-42,403
9134 Packers bottlers canners fillers	156,624	105,899	-50,725
5223 Metal working prod & maintenance fitter	255,713	203,150	-52,563
9211 Post wrkr mail sort msngr courir	235,071	181,298	-53,773
5221 Metal mach setter & setter-operator	94,580	40,708	-53,872
4122 Acnts wages clerk bookkeeper	566,021	503,324	-62,697
9149 Oth good hndlng & storage occup nec4	422,233	351,513	-70,720
8131 Assemblers (electrical products)	108,076	33,885	-74,191
1234 Shopkeepers wholesale & retail dealers	204,638	123,516	-81,122
4215 Personal assists & other secretaries	421,586	315,971	-105,615

Changes in major occupation groupings: 1992-2000 and 2001-2009



(Source: Labour Force Survey. Occupational codings were changed in 2000.)

Analysis by the Institute for Employment Studies shows that the UK has 11.4% of its total employment in manufacturing compared to an EU average of 17.3. Other comparisons for UK (EU 27) include education 8.9 (6.8); financial and insurance 4.4(3.0); information and communication 4.1 (2.9); health and social work 12.2 (9.6)

Source: Table 6.1 in Jagger, N, Sigala, M and Sumption, F (2010) *SET Based Technicians: Lessons from the UK and European Labour Force Surveys* Institute for Employment Studies report 475

# Appendix III: Returns to Low-level Vocational Qualifications<sup>208</sup>

Over the last fifteen years, a body of work has built up which looks at the economic returns to qualifications in the UK: that is, how much more, on average, is earned by people with a given qualification compared to those who are without that qualification but in other respects similar. They paint a consistent picture. *Low-level vocational qualifications, notably NVQs, have, on average, absolutely no significant economic value to their holders unless they are gained as part of a completed apprenticeship. This is especially true if they were gained on a government-financed scheme.*

It is important to understand the strengths and limitations of these studies. They use large data sets and econometric techniques which allow the researchers to control for the effects of some other variables. Suppose, for example, that the higher average lifetime earnings which graduates enjoy are actually, in whole or in part, because they had better writing and maths skills at age 7, 11 or 14. These skills helped them get into university and then also, later, made them more valuable employees. An econometric analysis can control for this *if* the analyst has the data on individuals' attainment at these ages. Researchers are very aware that effects which appear to be the result of one variable (such as a qualification) may actually be the result of some other 'unobserved' variable. Hence, the depth and power of these analyses depend on the data available.

The results of an econometric analysis are also sensitive to the way it is specified. An alternative specification of a model using the same data – that is, a specification that is different, but not obviously better or worse – may result in a very different coefficients for a given variable, such as the impact of A levels on earnings. That, in turn, creates considerably higher or lower estimates of lifetime effects; and may result in variables shifting from statistically significant to insignificant (or vice versa.)

Finally, researchers are very aware that, by definition, their data sets deal with historical experiences. The impact of qualifications in the years 1977-2007 will not necessarily carry over to the very different world of 2007-37; but it is the past we know about. So when governments calculate and announce the productivity gains to be expected from, for example, more graduates, or more qualified 18 year olds, based on historical data, they are in fact assuming that the world will not change.

The research results for low-level vocational qualifications are highly consistent over a whole range of studies and data sets, and for that reason deserve to be taken very seriously. The best data sets are longitudinal; i.e. they cover the same individuals over a prolonged period of time, so that you can look at the effects of education on the individuals who actually received it. Data sets from longitudinal studies also have fewer problems with the quality of data because they do not rely on people remembering things (such as their exam results) from decades ago. The relevant studies in the UK are the Youth Cohort Study, which follows repeated groups of young people, but only for a few years post-16; and the National Child Development Study (NCDS) and the 1970 British Cohort Study (BCS70) which follow individuals born in 1958 and 1970 respectively, throughout their lives.

Early analyses of the Youth Cohort Study all found that spending time on a government training scheme (typically YTS) actually reduced young people's earnings relative to those who were otherwise like them, for example with respect to prior educational attainment.<sup>209</sup> These effects were found for the early post-training years. A later YCS cohort was followed to the age of 23. Here, Dolton and colleagues were able to look at wage effects using a battery of controls, and found that YTS appeared to have no significant effects of any sort on earnings. They remark that “the present evidence is reassuring to the extent that there is no earnings penalty following a spell on YTS”; but found no positive benefits either.<sup>210</sup> What were clearly and highly valuable were degrees; apprenticeships served entirely in the private sector (i.e. without any government involvement or funding) and O level (GCSE C or above) in English and Maths, especially for women.

The large cohort studies (NCDS and BCS70) have been used to look at the value of qualifications acquired both when young and in adult life. Dearden et al used the NCDS and also data from the (non-longitudinal) Labour Force Survey and the one-off International Adult Literacy Survey in a detailed analysis for the Skills Task Force. The NCDS analysis found low level vocational qualifications (level 1 and 2 in the National Qualifications Framework) to have no significant effects on wages in either direction. However, there were positive returns to higher level vocational awards (eg nursing, professional qualifications) and to academic awards from O level upwards. The large but more limited LFS data set found statistically significant *negative* returns to low-level NVQs and low-level City and Guilds qualifications; holding these seemed to be associated with having low-paid employment, even as compared to holding no qualifications at all. (See main report Table 2). Higher level RSA, BTEC and City and Guilds awards, and academic qualifications showed positive returns.<sup>211</sup> Jenkins et al also used NCDS data to look at the returns to qualifications attained in adult life. Lower-level

vocational awards either had no significant effects on earnings or, in the case of both men and women acquiring NVQ2, had a significant negative effect on earnings compared to not acquiring any additional qualifications at all.<sup>212</sup>

In 2004, Dearden et al used the BCS70 data (for people born in 1970) to carry out an in-depth analysis of returns to NVQ2. The researchers again found that obtaining an NVQ2 was associated with significantly *lower* earnings (and academic qualifications with significantly higher ones than holding no qualifications.) They were able to control for multiple other variables, including establishing that this effect is not because of a failure to control for ability. They also looked in further detail at LFS data, and concluded that “returns are positive for those who procure their NVQ2 at their place of employment. This is in sharp contrast to NVQ2 holders who received government training who experience large negative returns.”<sup>213</sup>

Some recent studies have used LFS data alone to re-visit the issue. McIntosh (2004) used the LFS to create a quasi-longitudinal analysis by taking first, a group of school-leaving-age interviewees from the 1996 sample; a different group in 1999 who were the same age as the original group would have been in that year; and a final group in 2002, who were, again, the age the 1996 group would have been in 2002. Comparing these groups, he concludes that acquiring level 2 or level 3 vocational qualifications post-16 can have significant earnings benefits for those who, at age 16, had some, but poor, GCSEs, but not for any other group; and, more encouragingly, that acquiring such qualifications significantly increases the likelihood that individuals with few or poor qualifications at age 16 will be in employment in their mid-20s.<sup>214</sup>

The methodology and data set mean that the individuals concerned are not the same at age 16 and 23, and that only limited controls are available; but the more serious limitation is that everything except A levels is grouped together as ‘vocational’. As noted above some post-GCSE, non-A level options have consistently shown highly positive outcomes: for example, company-sponsored apprenticeships or BTEC National Diplomas (see below). Indeed, more than a quarter of first-year, full-time English undergraduates under 21 currently enter their degrees by a non-A level route. McIntosh’s analyses do not indicate how far the favourable employment outcomes noted are associated with sub-sets of his ‘vocational’ category and how far they are generalised across all options.

Jenkins et al created a large pooled data set from the LFS for 1997 through to 2006. In line with much of the previous research, the authors note that “we confirm the non-existent average returns to NVQ2”.<sup>215</sup> Specifically, they find negative average wage returns to NVQ2 qualifications, while for those who have no previous qualification at this level

the marginal wage return is nil for men and small but positive for women. Some other level 2 vocational qualifications yield zero returns, but a good number, notably level 3 BTEC awards do generate a substantial wage premium. For those who leave school with level 2 or less, returns to NVQ3 are again small (3 to 5%) though positive; returns to level 3 BTEC and RSA are far higher.

Recent work by London Economics used a data set from the LFS 1996-2009 to look in detail at the returns to BTEC qualifications and other established vocational awards.<sup>216</sup> Many of the young people who take level 2 craft awards already have good GCSEs, and this has to be taken into account when interpreting returns. Compared to people with no qualifications those with level 2 BTEC or City & Guilds show wage increments of 13% and 16%, but these fall to between 3% and 6% when controls for GCSEs are introduced. RSA level 2 awards have very high returns; but these awards have now vanished.<sup>217</sup> At level 3, BTEC National Diplomas and certificates have very high positive returns, even after controlling for GCSEs. (34% with no controls, 13% with.) Negative returns to NVQ levels 1 and 2 are again confirmed in this analysis.

As already noted, company-based apprenticeships are highly valued. Qualifications gained within apprenticeships have very high positive returns, when the same qualifications gained elsewhere do not. This may be partly because the actual training and skill levels are different, but is also likely to reflect, to a considerable degree, the fact that the return to the qualification is, in this case, actually measuring/capturing returns to apprenticeship and work experience directly. Recent work by Steven McIntosh confirms the very high returns that are found to apprenticeships in contemporary England.<sup>218</sup> LFS data suggest returns to contemporary apprenticeships of 18% at level 3 and 16% at level 2 compared to individuals with level 2/level 1 qualifications, although McIntosh does note that, given high (2004) excess demand for apprenticeship places, employers may be able to select for unobserved and important qualities.

Current analyses of the major cohort studies further confirm the role of institutional factors in determining, and explaining, changing returns to qualifications. De Coulon et al (2010) have examined the impact, into middle age, of initial vocational qualifications gained after the end of compulsory schooling.<sup>219</sup> People born in 1958, who gained initial vocational qualifications between 1974 and 1981, benefitted from them greatly. Major positive returns are still apparent at ages 33 and 42, not just for higher level awards but for those which today would be classified as 'level 1' or 'level 2'. This is true even when controlled for also acquiring higher level awards.

For those born just 12 years later, in 1970, no such benefits are apparent; and returns to levels 1 and 2 have turned negative. The difference is dramatic, in so short a time; and it seems very likely that it was largely institutionally driven. In the intervening 12 years, there was a collapse in traditional apprenticeships, and an increase in the numbers graduating from higher education. These changes were only partly driven by education policy: the former also reflected economic change and recession. But the findings underline the failures of education and skill policies based overwhelmingly on qualification reform, and incentivising the accumulation of formal certificates.

In summary:

- the returns to NVQ1 and NVQ2 awards are effectively non-existent. Spending a year or two taking one on a government training scheme is likely to reduce someone's lifetime earnings, not raise them.
- The “vocational” qualifications which have clear labour market benefits even when obtained in an educational institutions, are C&G, BTEC and RSA awards (the latter now abolished.) Level 3 awards still show strong positive rewards after controlling for GCSE results.
- Apprenticeships have very high positive returns. NVQs which have negative returns when taken outside employer-based apprenticeship have positive returns within it, although it is impossible to separate out the precise ‘qualification’ effects from the other positive benefits of apprenticeship.

# Appendix IV: Regulation and Inspection of Vocational Education

Most countries use inspection rather than formal regulation in order to quality-assure their vocational education systems, and Ofsted – an inspection agency – plays an important role in England’s current and highly complex performance management and accountability system. However, as discussed at some length in the main report, England has a highly distinctive system of awarding bodies which offer formal qualifications. Ever since the 1980s these have been increasingly tightly regulated and indeed quasi-nationalised.

The most important regulator of qualifications and awarding bodies is Ofqual, although (see main report) the Sector Skill Councils also operate, in the vocational area, as regulatory bodies. Ofqual is a statutory agency established in 2009, with a range of duties which apply to academic as well as vocational awards.

Regulators are typically conceived as a response to ‘market failure’, and especially to market failure of two types: the likelihood that, without intervention, monopolists will arise, and the existence of very high levels of ‘asymmetric information’.

The underlying model for Ofqual seems to derive to a surprising degree from the regulatory approach established for natural monopolies such as electricity, water and other utilities. These offer goods which are very homogeneous and where price competition is therefore a major concern; and the companies are also not only private, but selling directly to a large number of self-financing individuals.

It is not clear that this is a useful way to think about qualifications. First of all, there are many players who offer products to all consumers, across the country, and entry is reasonably easy, as the recent growth in ABs shows. Especially in the vocational context, the content of qualifications, and the nature and size of their potential market, are enormously diverse. Moreover, although awarding bodies may be able to make large profits if they cut back on the quality of their assessment and verification, it is also true that very reliable, valid and standardised assessment is expensive (but may not always be

necessary ); and also that there are major economies of scale. The profits which ABs make from GCSE Maths and English pay for all the other loss-making GCSEs, since the GCSE assessment regime is extremely expensive. So it is not clear what cost comparisons can actually tell one.

Steedman and West argue that:

‘We have been far too easily sidetracked by the notion that competition between awarding bodies is essential. This precept has led to the government being unable to...support an awarding body’s proprietary qualification....(and) its agencies...have had to treat awarding bodies on a ‘level playing field’, preventing them from holding detailed discussions with the most important players...but rather drawing up a ‘specification’ in isolation (or with ill-equipped industry bodies) to present as a fait accompli to the ranks of awarding bodies assembled at the starting gate.’<sup>220</sup>

The other major argument for regulation is that there are severe ‘asymmetric information’ problems in a market. Asymmetric information is always present in a transaction- that is, one side knows things which the other does not, and has no way of finding out. But sometimes, the degree of asymmetry is seen to justify government action. Regulation of who can practice medicine is the classic example.

In the case of qualifications, there are two areas in which the current legislation and arrangements assume serious ‘asymmetry’. The first is the quality and appropriateness of individual qualifications, and the second is the quality of awarding bodies’ development and assessment/verification activities.

In the case of vocational qualifications, the first of these justifications for regulatory activity seems seriously misconceived. A regulator can only reduce asymmetry if it is highly informed itself. (Hence, doctors regulate doctors.) But no centralised administrative body can possibly possess expertise in the hundreds and indeed thousands of specialist areas which vocational qualifications examine. There is also a more general issue. With qualifications, not only is government in practice paying for the vast majority of qualifications, while young people are compelled to ‘consume’ them, but it has a major and legitimate policy interest in their content. This is not something which can be delegated to a regulator.

In contrast, the quality of awarding bodies' activities can be monitored, without the regulator needing to be an expert on each individual curriculum subject. Indeed, if we are interested in standards across time, and between awarding bodies offering similar subjects, then reliable and credible information more or less depends on the existence of an objective, outside observer. (Government has too much interest in convincing itself and others that all is well.) A regulator of qualifications can also operate as a qualifications ombudsman, investigating individual cases of possible malpractice.

# Appendix V: Further examples of how English 16-18 education is funded

Using a combination of qualification ‘values’ and ‘provider factors’ which are used to weight the calculation

(Source: YPLA)

2009/10						unweighted	
	SLN glh	SLN	Programme weighting factor	SSF	16-18 LR	SSF	16-18 LR
		(SLN glh/450)		£3,007	£2,920	£3,007	£2,920
BTEC Introductory Diploma	450	1.000	1	£3,007.00	£2,920.00	£3,007.00	£2,920.00
Key skills (communication)	36	0.080	1.4	£336.78	£327.04	£240.56	£233.60
Entitlement	114	0.253	1	£760.77	£738.76	£760.77	£738.76
<b>Total</b>	<b>600</b>	<b>1.333</b>	<b>-</b>	<b>£4,104.56</b>	<b>£3,985.80</b>	<b>£4,008.33</b>	<b>£3,892.36</b>

2010/11						unweighted	
	SLN glh	SLN	Programme weighting factor	SSF	16-18 LR	SSF	16-18 LR
		(SLN glh/450)		£3,007	£2,920	£3,007	£2,920
BTEC L2 Diploma in Sport	450	1.000	1.12	£3,367.84	£3,270.40	£3,007.00	£2,920.00
Functional skills – Maths	36	0.080	1.4	£336.78	£327.04	£240.56	£233.60
Functional skills – English	36	0.080	1.4	£336.78	£327.04	£240.56	£233.60
Entitlement	114	0.253	1	£760.77	£738.76	£760.77	£738.76
<b>Total</b>	<b>636</b>	<b>1.413</b>	<b>-</b>	<b>£4,802.18</b>	<b>£4,663.24</b>	<b>£4,248.89</b>	<b>£4,125.96</b>

The following example is costed with a range of 2010/11 provider factors providing weightings:

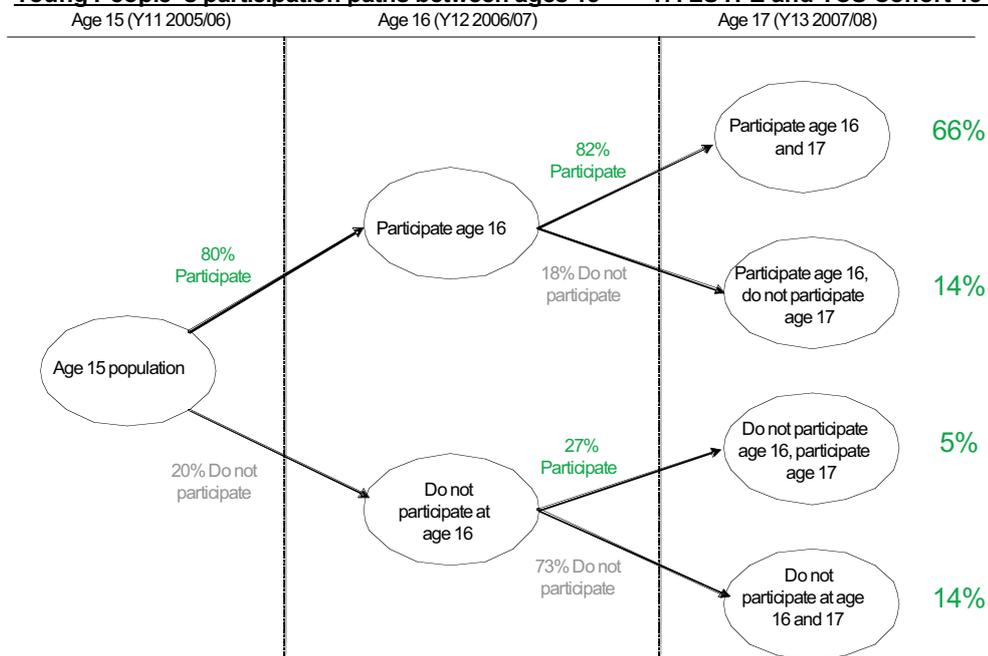
	SLN glh	SLN (SLN glh/450)	Programme weighting factor	SSF £3,007	16-18 LR £2,920
<b>L2 Certificate in Child Care and Education (CACHE)</b>	300	0.667	1.12	£2,246.35	£2,181.36
<b>Functional skills in ICT</b>	36	0.080	1.12	£269.43	£261.63
<b>Entitlement</b>	114	0.253	1	£760.77	£738.76
<b>Diploma in Health, Safety, Security and Employment Standards</b>	20	0.044	1.12	£148.18	£143.90
<b>Total</b>	<b>470</b>	<b>1.044</b>	<b>-</b>	<b>£3,424.73</b>	<b>£3,325.65</b>

SLN glh	SLN (SLN glh/450)	Programme weighting factor	SSF £3,007	16-18 LR £2,920	
470	1.044	1.211	-	£3,691.71	mean average 16-18 LR provider factor
470	1.044	0.96	-	£2,926.54	lowest 16-18 LR provider factor
470	1.044	1.764	-	£5,377.52	highest 16-18 LR provider factor
470	1.044	1.272	-	£3,877.67	modal average 16-18 LR provider factor
470	1.044	1.21	-	£3,688.66	median average 16-18 LR provider factor
470	1.044	1.029	£3,230.35	-	mean average SSF provider factor
470	1.044	0.568	£1,783.13	-	lowest SSF LR provider factor
470	1.044	1.48	£4,646.18	-	highest SSF provider factor
470	1.044	1.014	£3,183.26	-	modal average SSF provider factor
470	1.044	1.014	£3,183.26	-	median average SSF provider factor

# Appendix VI: Youth Pathways/ LSYPE Charts in Full

Longitudinal Study of Young People in England (LSYPE) and Youth Cohort Study (YCS) Cohort 13 (Academic Age 15 in 2005/06):

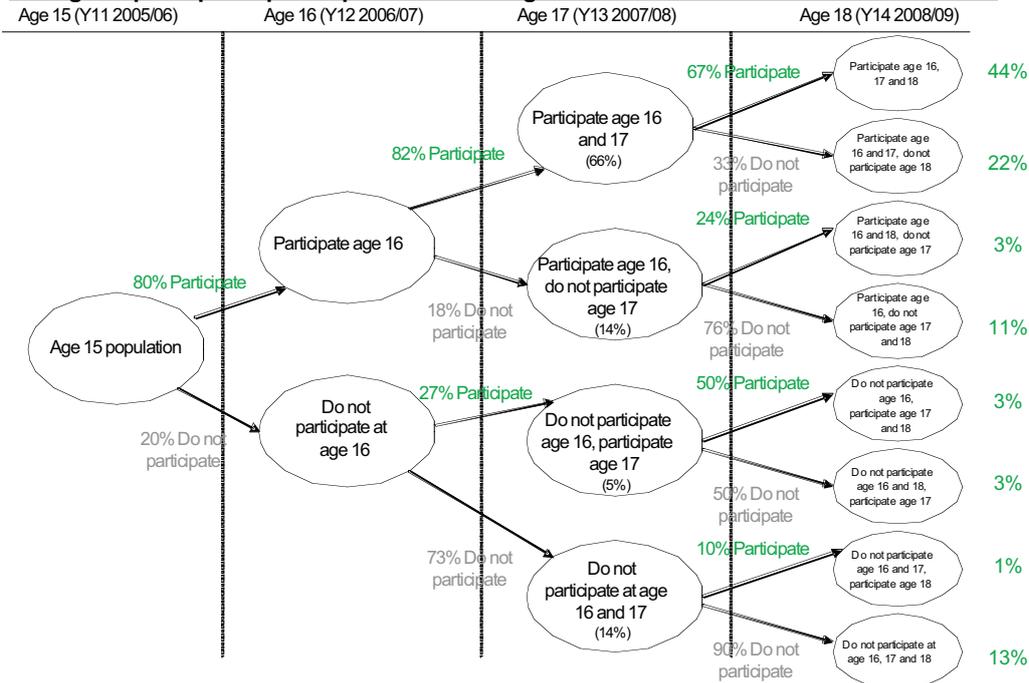
## Young People's participation paths between ages 15 - 17: LSYPE and YCS Cohort 13



<b>Activity Definitions</b>	Participation: In Full Time Education or Government Supported Training	<b>Source:</b> LSYPE, Waves 4 & 5 YCS Cohort 13, Sweeps 1 & 2 (2007 and 2008)
	Non-participation: Job With Training, Job Without Training or NEET	

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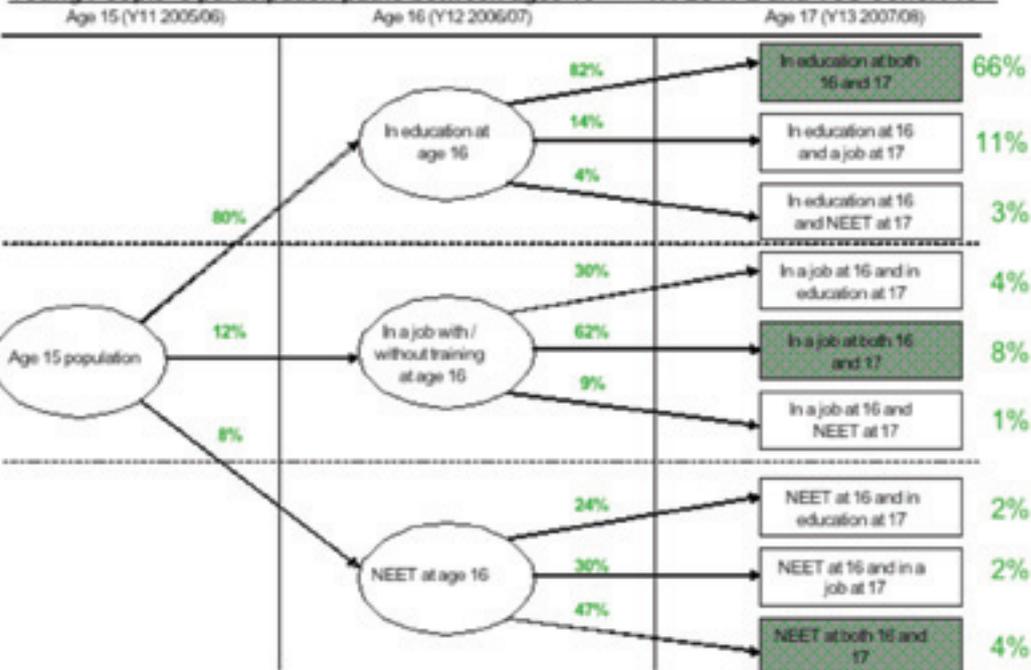
**Young People 's participation paths between ages 15 - 18: LSYPE and YCS Cohort 13**



<b>Activity Definitions</b>	<b>Participation:</b> In Full Time Education or Government Supported Training	<b>Source:</b> LSYPE, Waves 4, 5 & 6 YCS Cohort 13, Sweeps 1, 2 & 3 (2007, 2008 and 2009)
	<b>Non-participation:</b> Job With Training, Job Without Training or NEET	

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**Young People 's participation paths between ages 15 - 17: LSYPE and YCS Cohort 13**

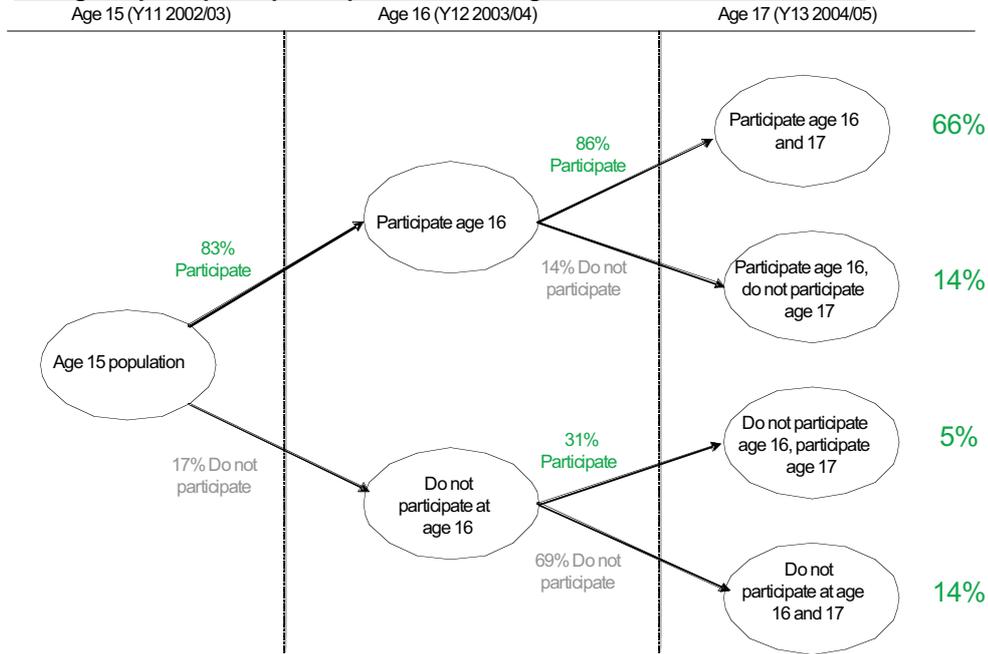


<b>Activity Definitions</b>	<b>Participation 1:</b> In Full Time Education or Government Supported Training	<b>Source:</b> LSYPE, Waves 4 & 5 YCS Cohort 13, Sweeps 1 & 2 (2007 and 2008)
	<b>Participation 2:</b> Job With Training, Job Without Training	
	<b>Non-participation:</b> Not in Education, Employment or Training (NEET)	

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Youth Cohort Study (YCS) Cohort 12 (Academic Age 15 in 2002/03):

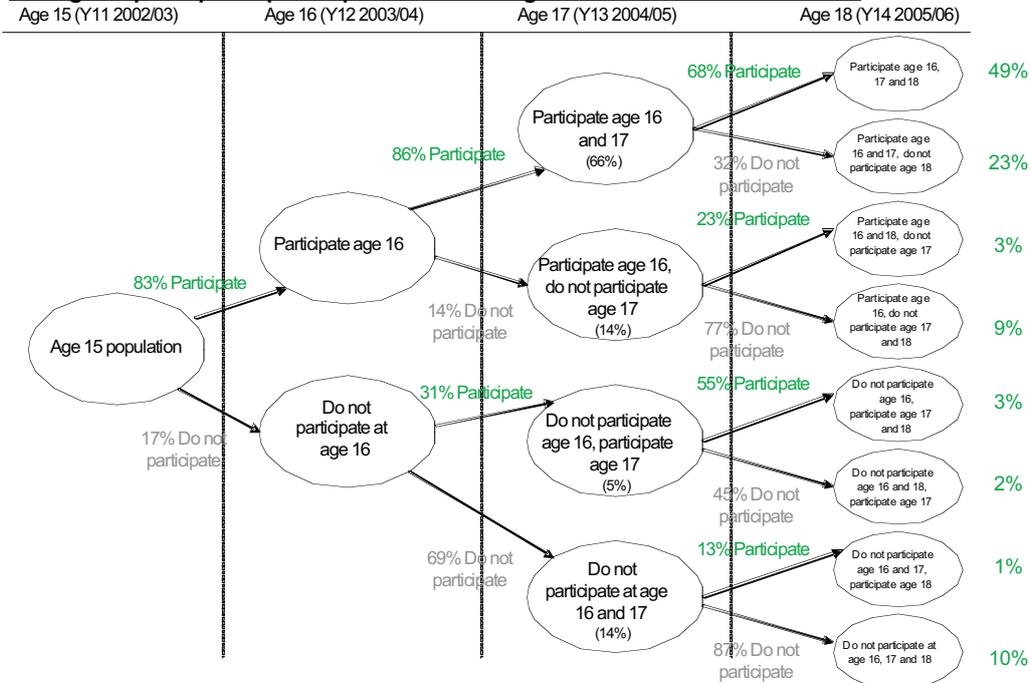
**Young People's participation paths between ages 15 - 17: YCS Cohort 12**



<b>Activity Definitions</b>	Participation: In Full Time Education or Government Supported Training	<b>Source:</b> YCS Cohort 12, Sweeps 1 & 2 (2004 and 2005)
	Non-participation: Job With Training, Job Without Training or NEET	

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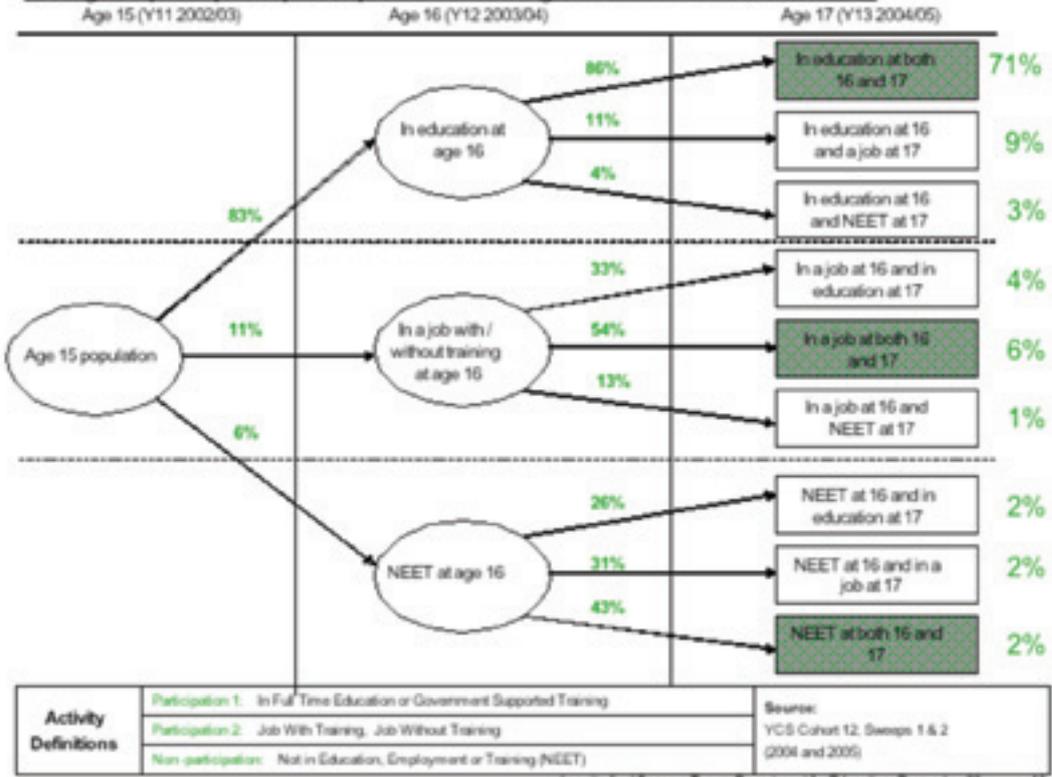
**Young People's participation paths between ages 15 - 18: YCS Cohort 12**



<b>Activity Definitions</b>	Participation: In Full Time Education or Government Supported Training	<b>Source:</b> YCS Cohort 12, Sweeps 1, 2 & 3 (2004, 2005 and 2006).
	Non-participation: Job With Training, Job Without Training or NEET	

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**Young People 's participation paths between ages 15 - 17: YCS Cohort 12**



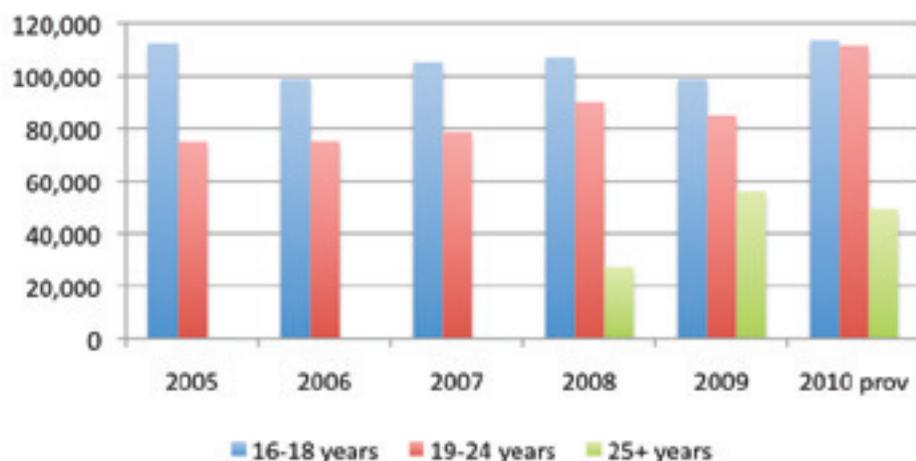
# Appendix VII: Apprenticeship figures and trends

As noted in the main report, apprenticeship can offer a highly valuable and valued pathway into employment. Major efforts have been made to increase numbers in recent years, after a steep decline in the 1980s. Numbers have grown, but it is proving much more difficult to find openings for young people than for older apprentices.

Most people's picture of apprenticeship is the traditional one, involving young people (16-18). This is decreasingly true of English apprenticeships – though still true of most other countries'. In, for example, Germany, France, Denmark or Switzerland, apprenticeship is primarily entered directly from secondary education. It involves an employer giving a new contract to a new employee. In England, however, recent policy has increasingly targeted 18-24 year olds, and, more recently, those of 25+. The figures below summarise recent trends, using data on full apprenticeship starts from the National Apprenticeship Service (NAS).

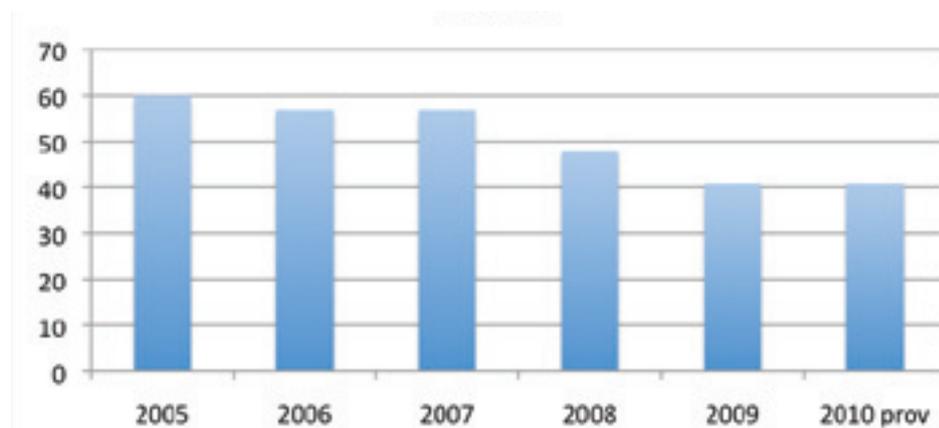
(Note: these numbers represent starts. Many apprentices will follow a two year programme.)

Figure VII.A Apprenticeship starts by age groupings



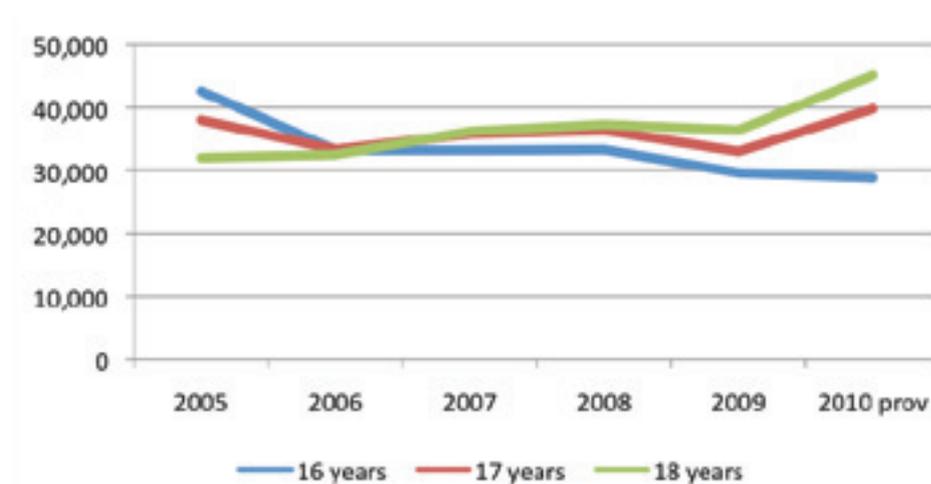
Source: NAS

Figure VII.B 16-18 starts as a percentage of the total



Source: NAS

Figure VII.C Trends for 16, 17 and 18 year olds



Many older apprentices are not new employees but existing employees who have been ‘converted’ into apprentices. The trend towards adult apprenticeships, is very problematic at a time of high youth unemployment and when the statutory participation age is about to rise. In 2007/8 there were 225,000 apprenticeship starts; and in 2008/9 there were 240,000. However, **well under half were 16-18 year olds**. 2008/9 figures were especially worrying since the figure for 16-18 year old apprentices was 99,000 and this represented a 7% fall from the previous year. Since then, major recruitment efforts have reversed the fall overall, although in some sectors (notably construction) the number of 16-18 year olds starting apprenticeships has continued to fall.

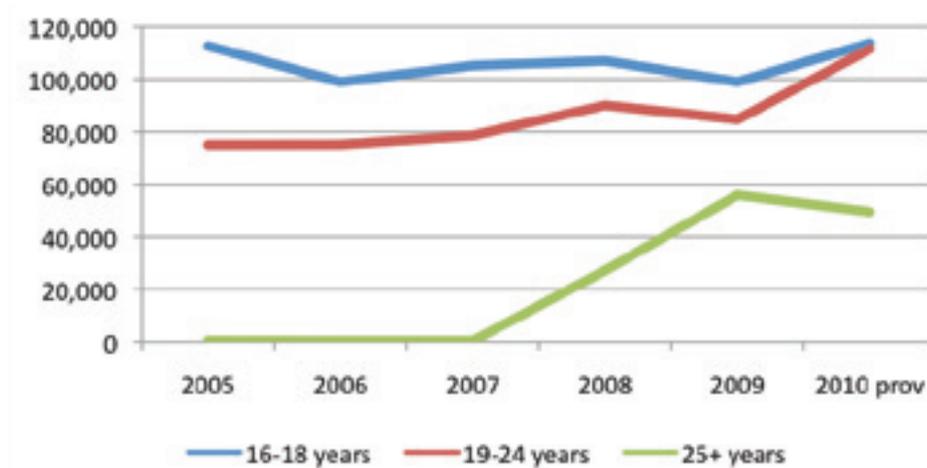
**16-18 year olds apprenticeship starts: Construction Skills (Source: NAS)**

	2005/6	2006/7	2007/8	2008/9	2009/10 (provisional)
Level 2	9,370	13,210	12,400	9,230	7,700
Level 3	1,740	2,020	1,980	1,860	1,300
Total	11,110	15,230	14,380	11,090	8,990

Figures for Summit Skills (dealing with building services) show a similar pattern, with a total of 5,940 16-18 year old starts in 2009/10 compared to 8,810 in 2007/8.

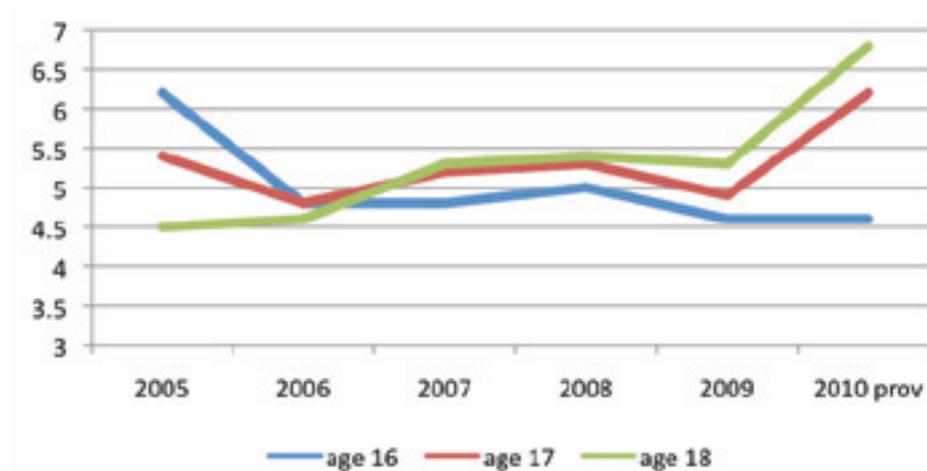
The figures underline the difficulty facing any attempt to increase 16-18 apprenticeship rapidly; those for older age groups conversely indicate the relative ease with which numbers can be raised.

**Figure VII.D Apprenticeship starts: trends by broad age group**



Source: NAS

**Figure VII.E Apprenticeship starts as a proportion of the cohort.**

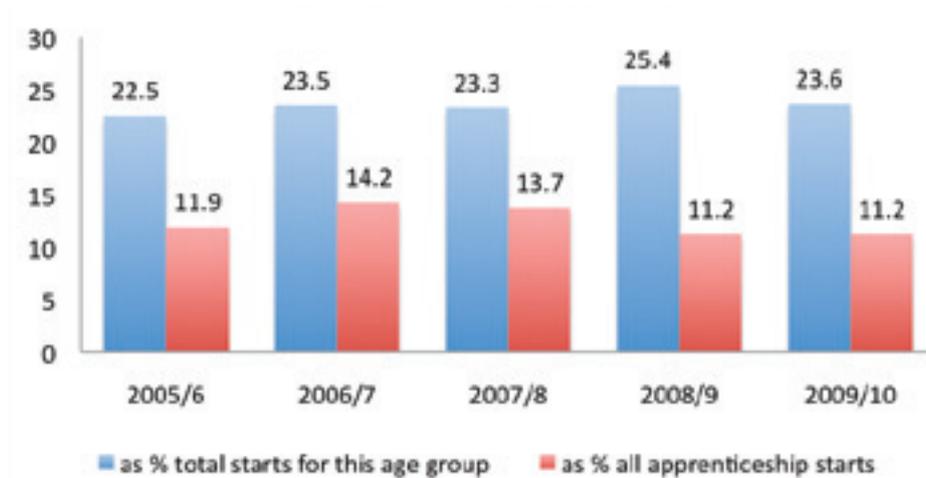


For the country as a whole there is a clear under-supply of apprenticeship places, although the degree of shortfall differs by sector and by region. There are also very large differences between regions in the proportion of 16-18 year olds entering apprenticeship. The Apprenticeship Vacancies Online Service provides one indication of supply shortages, although many openings will never appear here, and it is not, according to provider interviews, a major route into finding an apprenticeship. In its submission to the Review, UKCES reported 'strong demand from learners', and noted that, in the vacancy matching service, availability of applicants 'exceeds the supply of all Apprenticeship places by more than 15:1'. NAS figures are provisional but also suggest that demand registered on the on-line service outstrips supply by a very high margin. All the evidence we received is consistent with the picture of very high excess demand.

Apprenticeships are organised around 'apprenticeship frameworks' drawn up by Sector Skills Councils, and currently are non-age-specific. It was expected, following previous reforms, that all apprentices would take a separate technical certificate, providing more theoretical and underpinning knowledge separately from certification of specific occupational competences. Current NAS figures provided to the Review show that 64% of Apprenticeship starts in 2008/9 included a separate technical certificate, although some may have delayed starting one. For level 3 the figure is 74%.

A major difference between current UK/English apprenticeships and those offered in other European countries is the small proportion offered at Level 3 (and the correspondingly large number at level 2.)<sup>221</sup> Ours also require much less general education; and permit all training to take place on employers' premises, whereas in other countries attendance at college or apprenticeship centres is the rule. The small number of level 3 apprenticeships, and the very limited general education component in apprenticeship frameworks severely constrain the numbers who can plausibly progress from apprenticeship to higher education. As shown below, level 3 starts have been stagnating (at best) as a proportion of the whole.

Figure VII.F Level 3 starts for 16-18 year olds



Source: NAS

The sectors with the highest ratios of level 3 to level 2 starts are, as one might expect, engineering and IT-related. (The relevant SSCs are Summit Skills, e-skills UK and SEMTA.) A number of major engineering companies run very demanding and enormously over-subscribed apprenticeship schemes which, as noted in the main report, allow apprentices the possibility of continuing to Higher National, foundation degree and, in some cases, Honours Degree level.

Discussions with companies (including, for example, Airbus and Network Rail) confirmed that the age at which apprentices start has steadily increased. Airbus Advanced Apprentices will typically have A levels; at Network Rail, the average age is now well over 19, having risen fast since the scheme started in 2005, and around a third come in with A levels. (The manager of the apprenticeship scheme notes that local managers are not asked or required to take age into account when doing first round selection. It would be in the immediate financial interest of the company to take younger apprentices, because of current age-related funding rates. )

Under current apprenticeship arrangements, the government pays for formal training and accreditation of apprentices, at variable rates depending on the apprentices' age. Unit costs have been rising fast for the last few years.<sup>222</sup> Employers pay an hourly wage whether or not the apprentice is at work or training off-the-job/off-site. Since October 1 2010, apprentices age 16-18 have been covered by a National Minimum Wage.<sup>223</sup> It is unclear whether this will raise wages much on average; researchers estimate that wage costs for UK apprentices are extremely high by European standards.<sup>224</sup>

Apprenticeship starts are very unevenly distributed across sectors. In 2008/9 there were 152 Apprenticeship frameworks in total. (There are now close to 200). The top 15 frameworks accounted for 80% of all starts; 68 had no starts at all; and 29 had 200 or fewer starts. The bottom 100 frameworks (2/3 of the total) accounted for only 2% of all starts.<sup>225</sup>

# Appendix VIII: Mathematics and English Post-16

As discussed in the main report, mathematics and own language skills are central to vocational success and educational progression. In England, Maths and English GCSEs (A\*-C) have become the key indicators of acceptable levels of attainment, used by gatekeepers to sift, select, and determine access. The importance of these subjects has been recognised for decades; and yet English education continues to be unique in the most dysfunctional of ways.

**The UK (including England) is effectively unique in not requiring continued mathematics and own-language study for all young people engaged in 16-19 pre-tertiary education.** A recently published report from the Nuffield Foundation examines upper secondary mathematics provision, with particular attention to vocational programmes, and underlines how extraordinary our policy is and has been.<sup>226</sup> No other developed country allows, let alone effectively encourages, its young people to neglect mathematics and their own language in this way.

In recent years we have actually reduced the numbers and proportions of 16-19 year olds sitting for and achieving GCSE re-sits post-16. Instead, they have been steered into courses (or simply into tests) of ‘key skills’, which are simple and, in progression terms, valueless. More recently, the previous government moved to replace key skills with ‘functional skills’. However, these suffer from major and fundamental flaws.

First of all, functional skills, as developed and delivered, are conceptually incoherent. The idea is that English and mathematics (and IT) should be ‘embedded’ in real life examples that are related to the vocational course that someone is studying and to ‘real life’. This is actually very difficult to do, because it demands that the teacher of the subject knows a great deal about a wide range of contexts, and can develop high quality materials for each.

Some of the best pedagogy achieves it, but as a recipe for a mass system it is highly ambitious and demanding. The alternative to having specialist teachers grapple with multiple contexts is to ‘embed’ the teaching in the vocational classes. That way, as we have discovered in a number of previous occasions, they embed to the point of vanishing.<sup>227</sup>

Vocational teachers know about vocational subjects. They are not maths or English teachers. And if teaching maths and English were so easy that they could just be slipped into other lessons as an extra, why would so many young people be struggling with the subjects and failing their GCSEs?

If teachers do succeed in using a wide range of realistic contexts and making lessons relevant to students' other courses they will, in any case, then hit a major problem. They may be delivering large numbers of different contexts in different styles. Their students are taking a central examination, with one set of questions, the same for every candidate. This is not a soluble problem. If functional skills are to have any currency, they have to involve some form of external, standardised assessment. And if they do that, then they cannot be true to the original concept. They become a set of qualifications with a centrally set syllabus, like any other, to be judged as good or bad on the basis of coverage, and the quality and credibility of assessments. This is not a circle which can be squared.

The second problem with functional skills is that, at present, they are characterised by low pass-rates and evidence of highly variable standards. The former may simply reflect unfamiliarity. The second underlines the inadequacy of written specifications as a way of establishing standards. Action by DfE and Ofqual to ensure comparability is necessary if schools and colleges continue to use the qualifications.

Not all 16 year olds without A\*-C are ready for or suited to retaking GCSEs again immediately. If the Review's recommendations are accepted, then schools and colleges may often want to use other qualifications, as a pathway to and sometimes instead of GCSE. There seems no reason to bar use of functional skills, but it should not be required or formally endorsed in this context. Instead, barriers to the uptake of other qualifications should be removed; while making standards in post-16 mathematics and English one of the top priorities for standards monitoring

In mathematics, a suite of **free-standing mathematics** qualifications has been available for some years, following previous attempts in the 1990s to extend post-16 mathematics. They were very positively evaluated by QCA, and praised by Professor Adrian Smith in his major 2004 report on Post-14 Mathematics Education. A number of institutions have used them with success ever since they were introduced and are highly committed. However, their growth has been restricted by funding policies and incentives that steered schools and colleges towards key skills, and, more recently, functional skills (and apprenticeship requires key skills.) Such restrictions should be ended. In addition, following the 'pathways' projects, commissioned on Smith's recommendations, a range of innovate certificates and GCSEs has been piloted, and these could also be made available rapidly for 16-19 use.

There is no comparable set of qualifications in English, although at the time that Free-standing Units were introduced for mathematics there was interest from the English teaching community in creating equivalents. However, there is a large range of existing English qualifications, partly because of the enormous popularity of English as a second/foreign language. Provided that it is clear that English GCSE should be the standard eventual destination post-16 for all students, schools and colleges should be able to identify suitable intermediary qualifications where needed. The crucial thing is to recognise the central place of English and Mathematics GCSEs in English life, and the duty of post-16 education to prioritise them. If this is clear, teachers will be best placed to choose intermediate qualifications for use.

# Appendix IX: Extending the common core: the trend to delayed specialisation

Over the last quarter-century there has been a marked increase, throughout the developed world, in the proportions of young people completing a full secondary education (up to the point of tertiary education entry. This is normally referred to as completing ‘upper secondary’ education, but in England, the term upper secondary is sometimes used to refer to KS4).

The increase has been strongly encouraged by governments, many of whom have aimed to have the overwhelming majority of a cohort graduate with an upper secondary (age 18) certificate which gives access to tertiary studies. (Examples include Sweden and France.) As discussed in the main report, it has also been a response to families’ own desire for extended opportunities and growing aspirations for higher education.

The result has been to delay specialisation in the secondary curricula of almost all developed countries. In those where there is no formal selection at 11 or 14, this is apparent in the growing number of young people in what Americans refer to as ‘college tracks’: i.e. following a combination of courses which will allow them, if they succeed, to continue on directly to tertiary/higher education on leaving school. In countries which track young people early in secondary school, there have been cumulative moves to offer pathways out of lower-status schools and out of specialised vocational programmes; and enrolments in low-status tracks have plummeted.

In 1998-99, a comprehensive review of European educational trends was carried out for the European Commission, covering all 15 states which were then members of the EU. One of the authors examined common trends in compulsory education (most often up to 16), and concluded that, although countries’ structures and institutions remained varied, at this level some clear common trends were apparent. These included “Delaying the moment of specialisation into tracks, lines etc’ and offering “A broad and balanced curriculum as an entitlement’.<sup>228</sup> He wrote that:

A clear though complex trend of convergence has emerged in the organization of this phase...Convergence is best expressed as a determination on the part of the responsible authorities to develop the legislative framework that delays the moment at which young people choose or are identified for specialization into tracks or lines...Whatever the age or stage at which specialization traditionally used to take place, reforms have tended to mean....that the moment at which the pupil specializes now tends to occur at an older age than was previously the case....A range of examples is sufficient to demonstrate the case. The reform of the Spanish system...(means that) differentiation into different streams for the *bachillerato* is delayed until the age of 16. In France....young people who were considered less academic no longer transferred to the *lycée professionnel* at an earlier stage than their contemporaries transferred to the *lycée*....In Finland...specialization now occurs at the end of compulsory schooling, not at the point when the final phase of compulsory schooling ends.<sup>229</sup>

The minority of EU countries where there is very clear selection into tracks, such as Germany or the Netherlands, have retained these, although even here the curriculum in the first cycle of secondary education has become undifferentiated, and there have been changes made to allow movement between tracks more easily. As noted above, parents are increasingly unwilling to see their children allocated to the lowest track at 11 or 12. The German *Hochschulen*, which traditionally lead directly to apprenticeship at age 16 or 17, have lost enrolment share very rapidly. Dutch vocational schools have also lost share (as well as having their curriculum reformed), though less rapidly than in Germany. The proportion of the cohort who leave school with the lower VBO-track diploma (from the vocational schools) fell from 41% in the mid-80s to 27% in 2007.<sup>230</sup>

In North America, there is far less of a tradition of vocational education of any sort, as made clear in the quotation below from evidence to the Review.

I am a Canadian by birth and taught three years in Africa before settling in Southwest England.

In Canada you have to wait until you are over 18 before you can access any vocational training of professional level quality. Canadian high schools (14-18 year olds) only offers 'shop' classes to the less able and focus upon an academic curriculum.

Zimbabwean students, parents and schools had been affected by 100 years of racial discrimination which consigned Africans to vocational learning only if any at all. While I taught there, the emphasis was solely upon academic success and rejected vocational training. Because my background was the teaching of history to A Level, I actually agreed with this emphasis until I came to England.

In England I was first employed at Bridgwater College, a tertiary college in Somerset I came to learn that both vocational and academic learning were of equal worth IF delivered equally well in an equally high quality environment. Further I personally taught A Level History to vocational students supplementing their vocational programme. These young people were often among my better students.

Michael O'Brien, Principal of South Worcestershire FE College.

Although some Canadian states (notably Ontario) are experimenting with 16-18 programmes which incorporate workplace experience and vocationally related options, recent decades have generally seen an increased emphasis on common academic programmes. Matthew Crawford, for examples, has written eloquently of the value of practical, manual activities, while pointing out how the number of 'shop class' programmes in US high schools has plummeted.<sup>231</sup> One major incentive is saving money; 'shop' (and good vocational education generally) tend to be expensive. But the change has been easy to achieve because students are increasingly unwilling to follow any programme which is not very clearly 'college track', providing not just a high school diploma but also college entrance prerequisites.<sup>232</sup>

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# Endnotes

- 1 Box 4 Page 52
- 2 Hansen, K, Jones, E, Joshi, H and Budge, D (2010) *Millennium Cohort Study Fourth Survey: A User's Guide to Initial Findings* 2nd edition: pp 139-141: see especially Table 6.8 (London: Centre for Longitudinal Studies, Institute of Education, University of London)
- 3 See e.g. Ryan and Unwin (NIESR); Fuller & Unwin op cit; Steedman, H (2010) See also Appendix VII for further details
- 4 Ebbinghaus, M and Loter, K (2010)
- 5 Source: DfE. The figure for 17 year olds is provisional.
- 6 OECD (2010) Gregg, P and Wadsworth, J; Scarpetta, Sonnet and Manfredi (2010)
- 7 Schoon and Duckworth (2010)
- 8 Labour Force Survey data analysed and reported in Centre for Economic Performance (2010)
- 9 The ILO defines the unemployed as those 'actively seeking and available for work'. This may include, in the case of young people, individuals who are enrolled in education; and cover both those who want a part-time job but are committed to their studies, and those who would leave education at once if they could secure employment.
- 10 DfE Participation in Education, Training and Employment by 16-18 Year Olds in England, June 2010
- 11 Petrongolo, Van Reenan and Vaitilingam (2010)
- 12 Ibid: 11
- 13 Centre for Economic Performance (2010)
- 14 Banks, Blundell, Bozio and Emmerson (2008)
- 15 Personal communication
- 16 Expressed by, for example, the Leitch Report (2006). Keep, Mayhew and Payne (2006) describe the degree to which recent policies to increase productivity have relied on increasing the supply of skills.
- 17 There is a long-standing but cumulative tendency for employers to demand formal certificates as a way of screening and ranking candidates, without any requirement for the substantive skills/level of formal attainment involved. The more qualification levels rise, the more employers raise their demands. the phenomenon is commonly referred to as 'credentialism' or the 'credentials spiral'. See eg Keats 1965; Wolf 2002; Grubb and Lazerson 2004; Dore 2000

- 18 See Chevalier, A (2009) for a discussion of over-employment in the UK labour market. Other countries show similar levels of ‘over-education’: see eg Karakaya et al 2007
- 19 Felstead et al
- 20 See eg Wolf and Evans 2010
- 21 See eg Bratti, Naylor and Smith (2008)
- 22 CEREQ 2004, 2007
- 23 Tomlinson 2011
- 24 Brown and Hesketh (2004); Wolf, A. (2002)
- 25 Blaug 1972
- 26 Hansen et al op cit
- 27 Wolf, A 1997.
- 28 Blundell et al 2005
- 29 Equally, one would not expect large classes of qualification to carry negative returns, indicating that the holders would have been significantly better off if they had not taken them – the well-known exception being the PhD. It carries negative returns because it is taken in order to become an academic or researcher, and PhD students could (on average) have opted for more highly paid alternative careers.
- 30 OECD 2010
- 31 For example, returns to degrees are unusually low in Scandinavia, not because university education is poor but because of their very equal/compressed income distribution.
- 32 See eg Nickell, S
- 33 Bynner and Parsons 2006; De Coulon et al 2007
- 34 STEM: Science, Technology, Engineering and Mathematics
- 35 UKCE 2010
- 36 Goldthorpe 2007, 2008, 2010; see also the CBI’s evidence to the Review.
- 37 There is a large literature on this use of ‘signals’ by employers, for whom qualifications are one but by no means the only important signal. As discussed below, steady employment is also a very important signal.
- 38 Jenkins and Wolf 2005; Thomson and Russell 2007
- 39 Dolton & Vignoles 2002; Conlon, G and Patrignani, P (2010)
- 40 Technically, RSA lives on with OCR qualifications, since OCR stands for Oxford, Cambridge and RSA Examinations. But they are marketed and known simply as ‘OCR’.
- 41 Robinson (1996)
- 42 See eg Gerfin et al 2005; OECD 2002
- 43 Becker, 1993
- 44 See especially the work of John Goldthorpe and colleagues (2007, 2008)

- 45 For UK data, see eg Berthoud & Iacovou 2000
- 46 Scarpetta et al op cit: 18
- 47 Ibid. See also Bell and Blanchflower. For UK analyses see especially Gregg 2001
- 48 CAYT; Evidence for Wolf Review November 2010. The sample was drawn from sweeps of the British Household Panel Survey, using individuals who turned 16 between 1991 and 1998, and for whom at least ten years' worth of data was available. Both CAYT and DfE analysts also looked at the effects of doing a part-time job while in full-time education using LSYPE and YCS data. This is more common for middle-income students, reflecting both financial pressures (lower for high-income families) but also the relative availability of jobs. The analysts concluded that this had a moderately positive effect on later outcomes: slightly positive effects on attainment, and a slightly lower chance of being 'NEET' in the next 5 years than those studying full-time but not working. In other words, it appeared to provide some indirect 'protective' effect against the likelihood of being NEET, with its clearly worse outcomes. However, none of the effects was large.
- 49 Coffield 2002, 2004; Robinson 1996; Wolf et al 2005
- 50 Felstead et al 2002, drawing on LFS and Skills Survey data; 1999, 2002. See Box 3 above
- 51 Michaels, G, Natraj, A and Van Reenan, J (2010)
- 52 P Dicken 2003
- 53 Quoted by Tomlinson, 2011
- 54 Goos, M, Manning, A and Salomans, A (2009)
- 55 and tried repeatedly to persuade young people, and especially girls, to follow 'manufacturing' courses. Wolf (2002)
- 56 We have detailed information on this cohort who are the subject of the Longitudinal Study of Young People in England
- 57 Occupations are grouped by ONS into 9 broad categories: an occupational change might be from a 'skilled trade' occupation to 'sales and customer service', or vice versa.)
- 58 9% never change their job, 23% change their job 1-2 times, 37% change jobs 3-4 times, 22% change jobs 5-6 times, 8% change jobs more than 7 times. BHPS data. CAYT analysis
- 59 See appendix III for a more in-depth discussion of these findings
- 60 Soskice 1994
- 61 Dougherty 1996
- 62 Nuffield Foundation and FEDA (1998)
- 63 Youth Cohort Study and Longitudinal Study of Young People in England: The Activities and Experiences of 18 year olds: England 2009 (<http://www.education.gov.uk/rsgateway/DB/SBU/b000937/index.shtml> – Chapter 5)
- 64 Atkins, L, Flint, K and Oldfield, B (2010)
- 65 See Part Four and Appendices III and VII

- 66 See eg Green et al 2000
- 67 Although the dramatic differences between Germany and England in institutional structures means that it is actually very difficult to derive direct lessons from one for the other. See eg Wolf 1998, Soskice 1994
- 68 Germany is a federal country and education is a state (Land) responsibility
- 69 Harbourne, D (2010); Tomlinson, S (2010) especially chapter 5
- 70 Dronkers 1993
- 71 Büchner and van der Velden 2011
- 72 Collège is the school between primary and lycée, covering the equivalent of our years 7-10.
- 73 England has had a National Curriculum only since 1988, which is unusual. Countries vary in whether education is a central government or (in federal nations) a state one; but formal curriculum requirements are the rule. The English National Curriculum has been unusually detailed by international standards. (See eg Aldrich ed 2001) Until recently, delivery also demanded the vast bulk of a ‘normal’ teaching week; but in the last few years, and especially at Key Stage 4, the compulsory elements have been substantially reduced.
- 74 eg technical drawing, cookery
- 75 Notably through TVEI – the Technical and Vocational Education Initiative. See eg Williams and Yeomans 1993, Gleeson ed 1987
- 76 Nuffield Foundation and Further Education Development Agency (1997)
- 77 QCA (2002) p. 3
- 78 There are also over-arching levels/categories used by international organisations such as the OECD and EU, which encourage (or indeed mandate) the development of ‘qualification frameworks’ for statistical purposes. See eg Rauhvargers (2009)
- 79 This is obviously easier in metropolitan areas such as London and the South East, Greater Manchester, or the West Midlands, where colleges typically enrol from a very large number of LEAs – over 30 in the case of several colleges visited for the Review. See also Part Four.
- 80 As discussed in depth below, recent regulatory changes have resulted in an increasingly specific vocational orientation.
- 81 Fuller, A and Unwin, L 2010
- 82 McIntosh, 2004, 2007
- 83 Some level 2 courses do form part of a clear progression pathway.
- 84 Dolton 2001
- 85 Source: DfE. Results are for the cohort who turned 19 in 2008/09 (i.e. were year 11 in 2005/06, maintained schools only). Definitions of L2 and L3 were those used for attainment at 19 SFR measures, so vocational qualifications only include those defined as ‘full’.

- 86 Evaluations of previous provision (most recently E2E – Entry to Employment) led the previous government to develop a new ‘Foundation Learning’ pathway, launched this year although with fewer formal requirements than envisaged under the original policy. As discussed below, this is also likely to have major shortcomings.
- 87 DfE evaluations of E2E
- 88 Thomson, P and Russell, L (2007)
- 89 Ibid: 24
- 90 See Aldrich op cit; Petch 1953, 1963. The Boards were originally created to set university matriculation examinations. In recent years, English governments more or less forcibly merged these old university-linked examination boards into the current ‘big three’ GCSE/A level awarders.
- 91 Nuffield and FEDA Foundation op cit.
- 92 Source: YPLA
- 93 As discussed further below, the growing number of vocational qualifications into which Key Stage 4 students are steered are presented to students (and parents) in terms of ‘GCSE equivalents’.
- 94 Aldrich, R (2001) A
- 95 Academic qualifications are outwith the scope of this review; but here too there has been a government-directed consolidation of awarding bodies,
- 96 Ofqual Annual Market Report 2010.
- 97 See e.g. Roe et al 2006; Oates 2010; Jenkins & Wolf 2005, Wolf & Jenkins 2006
- 98 See Box 12
- 99 Jessup 1991; Wolf 1997, 2002; Torrance 1994
- 100 Since the large majority of students on vocational programmes are in colleges, the examples are for colleges. The funding formulae for school sixth forms and colleges have been different but are now converging.
- 101 Apprenticeship money is disbursed through the SFA.
- 102 Linford, N (2008, 2010); Keep, Mayhew & Payne (2006); Wolf, Jenkins & Vignoles (2006)
- 103 The pressures are greatest in the case of smaller, private providers, where risks cannot be spread, and where the output-related element of funding is greatest. For fuller discussion of these issues see Stanton, G. (1996), Eraut et al, 1996; Colley & Jarvis 2007.
- 104 Equally, as discussed below (Box 16), awarding bodies have a strong incentive to over-state the amount of time a particular qualification takes to teach. If it receives a generous allocation of ‘guided learning hours’ – i.e required teaching and supervised time – then it will be financially very attractive to institutions, though much less good value to the student. At present, interestingly, YPLA does not always accept the guided learning hours (and financial value) ascribed to qualifications by other parts of the regulatory system, but carries out its own audits.
- 105 Nuffield Foundation/FEDA (1997): 9

- 106 The funding of Key Skills was also very generous at various times, to secure high take-up.
- 107 Personal communications from senior personnel during visits to Denmark and France, carried out for the Review; Steedman 2010; Crouch, Finegold & Sako (1999)
- 108 Linford (2010)
- 109 The current post-2010 system relates allocations to the previous year's enrolments and success, and thus gives institutions an incentive to recruit, but includes an 'SLN per learner ratio. SLN Entitlement cuts, large average SLN programme reductions, additional funding for DU and ALS and...transitional protection' Linford 2011; evidence on funding complexity prepared for the review.
- 110 These involve key stage tests and not vocational qualifications so the agency does not appear in Figure 4
- 111 It also gives it the ability to concern itself with raising standards, not merely keeping them constant over time.
- 112 National tests do involve direct comparisons of standards; qualification monitoring has not. For discussions of why paper-based documentation is unable to reveal examining and assessment standards see e.g Koretz ed 1998, Cresswell 2003, Goldstein and Lewis 1996, Sadler 2007.
- 113 Pollitt, C., Bathgate, K., Caulfield, J., Smuller, A. and Talbot, C. (2001)
- 114 Wolf, A. (2009)
- 115 Pollitt, C. and Bouckaert, G. (2004)
- 116 Adapted and updated from Wolf, A (2009) An adult approach to further education (London: IEA)
- 117 In 1999, 0.6% held a BTEC + A level; 67.6% held A levels only; and 27% held other qualifications. In 2009, 49.8% of home-domiciled acceptances were classified as having 'other qualifications.' Source: YPLA Briefing Paper 9 for the review, drawing on data and publications from BIS, HEFCE and UCAS.
- 118 For example, in Luton, we were told that the federation between the college and schools would have been very difficult, if not impossible, were it not that the schools are academies, with much greater freedom as a result. The AAT has had major problems in getting its qualifications retained as 'approved' at all, because they did not fit the precise requirements of the previous government's 'four pathways'; and Table 7 provides details of the enormous costs involved in re-engineering AAT qualifications to fit regulatory rules. Macclesfield has been able to fund aircraft maintenance courses within current funding rules, unlike some other providers interviewed for the Review: but see Box 20 for the problems it has encountered with funding for its well-established, demanding and employer-responsive electrical installations courses. Advanced apprenticeship numbers for under-18s, as discussed below and in Appendix VII have been stagnating.
- 119 See above Part Two
- 120 Tomlinson op cit; Nuffield studies; DfE analyses including YCS/LSYPE 2010
- 121 Jenkins et al 2003

- 122 Tomlinson op cit
- 123 De Coulon, A, Greenwood, C and Vignoles, A (2010)
- 124 Aldrich 2001
- 125 Jessup 1991. As discussed above, this was the argument for the de facto nationalisation of vocational qualifications. See also Aldrich 2001; Wolf 2002; Robinson 1996
- 126 The previous government envisaged four mutually exclusive ‘pathways’ for young people, of which one was Foundation Learning. This approach has been abandoned by the current Coalition government, but the basic principles of Foundation Learning still apply to programmes for low achievers.
- 127 See below for its educational potential
- 128 Personal communication from Dr Richard Williams. See also Rathbone Policy Paper, December 2010.
- 129 Denise Wilson, Trust Secretary, Springboard Sunderland
- 130 Roe 2006
- 131 UKCES (2011)
- 132 In theory, all qualifications will become ‘awards’, ‘certificates’ and ‘diplomas’. However, some SSCs have preserved particular NVQs.
- 133 This is not the first time this has happened. When NVQs were first introduced, reformers believed that they would quickly become the only, and highly desired, alternative to A level. Instead, colleges continued to offer the BTEC Nationals and GCSE re-sits which students demanded. GNVQs were introduced in response. Nuffield Foundation op cit.
- 134 As already noted, only a limited number of academic qualifications, including GCSEs and A levels, are exempt from the QCF requirement.
- 135 This again is unusual. In Germany, for example, the federal agency, the BIBB, gives the whole range of ‘social partners’ plus educational institutions a role in apprenticeship design.)
- 136 Submissions from, among others, the Gatsby Foundation, the Academy of Engineering, and the Baker-Dearing Educational Trust address this issue
- 137 The SSC for the health industries believe this is likely to continue to be the case for their specialised technician positions. Personal communication during expert meetings convened by the Review
- 138 Figures from Academy for Engineering
- 139 Bynner 2006; House of Lords 2007
- 140 ACME submission to the Review
- 141 UKCES (2010)
- 142 The importance of very small companies and independent sub-contractors means that effective construction training must – as it has for decades – involve ‘over-provision’ by large companies; but the review has also been informed by Carillion (on of the largest providers) that it will probably have to scale back provision greatly because of new funding rules.

- 143 UKCES 2010
- 144 National Child Development Study (NCDS) data: see De Coulon et al 2010
- 145 Ryan and Unwin 2001; Fuller and Unwin 2001
- 146 Apprenticeship retains targets unlike other parts of post-16 education. Many private providers specialise in identifying possible apprentices, and securing apprenticeship ‘starts’
- 147 The majority of companies with contracts to train apprentices are companies whose business is training
- 148 QCA (2002)
- 149 Submission from Nick Brewster, Assistant Principal Bishop Auckland College.
- 150 Submission from Tees Valley 14-19 sub-regional group
- 151 In line with current regulatory requirements for vocational qualifications to be “Qualifications and Credit Framework-compliant” each BTEC unit identifies relevant aspects of the National Occupational Standards that are addressed by the outcomes and content of the unit. So for example, the Edexcel Level 2 BTEC First Diploma in Applied Science provides underpinning knowledge towards the Level 2 Laboratory and Associated Technical Activities National Occupational Standards (Industrial and Educational pathways). See below Box 16 for a full discussion of the impact of the QCF on qualifications
- 152 Hodgen, J, Pepper, D, Sturman, L and Ruddock, G (2010)
- 153 See Linford, N (2008, 2010) and Wolf et al (2010) for analysis of the relative generosity of key skills funding compared to funding for other post-16 options.
- 154 Nuffield Foundation op cit; data from DfE and YPLA
- 155 As noted elsewhere in this report, there is a wealth of evidence on this point, which the regulatory system effectively ignores. See eg Koretz et al (1998), Eraut et al (1996)
- 156 Source: YPLA
- 157 Repeating a year is also conventionally regarded as a waste of time. It is certainly expensive, but the evidence from countries where repeat years are quite common suggests that, for the individual student, it may actually be quite successful. Hunter 2000
- 158 Unpublished data provided by HMI to the NCVQ/SCAA Maths taskforce 1995: see also Nuffield& FEDA 1997
- 159 There are a few isolated exceptions where qualifications have been accredited beyond the date when the QCF ‘went live’.
- 160 In addition to GCSEs, A Levels, iGCSEs, the IB and the Diploma, a few qualifications, including OCR National Diplomas, have not been accredited on the QCF but are still available for use though only for a limited time period. In the current academic year, the majority of registrations for QCF qualifications involve 16-19 year olds. (Source: YPLA)

- 161 The Diploma has the same model, though at a higher level: – each part must be passed, not each question/item within each part. Even so, the model has resulted in very high failure rates because of the number of candidates failing just one or two components.
- 162 Wolf, A (1997) Cresswell 2003; Colley and Jarvis (2007)
- 163 A training provider is paid by results – i.e. more money if people pass. The rational approach is then to have students take most units from a really ‘easy’ awarding body, then move to a high-reputation one; lodge the ‘easy’ credits which they are now forced to accept, and finish the qualification with this reputable Body, which then gives you a certificate. Since all ABs live off their fees, this will create a race to the bottom: an analysis with which many large Awarding Bodies agree.
- 164 NAS briefing note: “Business as Usual” in Apprenticeships
- 165 Soskice (1994); Euwal and Winkelmann (2001); Johansen (2000)
- 166 Submission from Bishop Auckland College
- 167 These were even worse during much of the last decade than at present, because of government targets for particular qualifications. See Wolf, A 2009
- 168 Stanton, G (1996)
- 169 The National Evaluation of Foundation Learning was carried out by ekosgen and NFER
- 170 Kodz et al (1997)
- 171 While concerns have been raised very widely, people are very unwilling to be quoted directly, and prefer their comments to remain anonymous.
- 172 See eg Power, M (2000)
- 173 “Guidelines for writing credit-based units for the Qualifications and Credit Framework’. Downloadable from the Ofqual website.
- 174 Robinson 1996; Wolf 2002
- 175 Torrance 1994, Eraut et al op cit 1996
- 176 Koretz et al 1998; Goldstein and Lewis 1996; Cresswell 2003; Wolf & Silver. As discussed above, Functional skills qualifications were launched in 2008 using detailed written specifications against which individual qualifications had to be developed and accredited. Once again this has not been enough to establish common standards.
- 177 Association of Colleges (2010)
- 178 Countries which have tried to achieve near-universal graduation with university-entrance-level qualifications have generally failed. Baccalaureate graduation rates in France have stagnated, and in Sweden, graduation rates have actually fallen somewhat in recent years. The OECD countries with the fewest vocational options are probably the USA and Canada.
- 179 Not too hot, not too cold, not too hard, not too soft. (Goldilocks and the Three Bears)

- 180 This is consistent with the experience with increased Flexibilities and Young Apprenticeship programmes, discussed (above and) below. Specialist institutions which operate with a longer teaching week, or year, can cover core content and still have more time left for vocational or other content.
- 181 Angwin et al 1998, Ball and Lamb 2001, Thomson and Russell 2007
- 182 Overall, 90% participated at 16; 21% participated at Level 2; 57% at level 3; 12% below level 2.
- 183 Several engineering employers submitted evidence to the Review noting their positive experiences with YA placements, and that they had selected a number of Advanced Apprentices from the previous year's YA cohort. While this was clearly very helpful to the companies and young people concerned, it does not, in my view, alter the balance of the evidence. If young people were generally unwilling to apply for advanced apprenticeships it might be important to give them YA experiences – but the opposite is true. There is vast over-demand for apprenticeships such as these companies offer.
- 184 Goldstein and Lewis eds. 1996; Koretz; et al 1998
- 185 John West and Hilary Steedman, in their submission to the Review, argue correctly that “Many a needless diversion has resulted from the unnecessary idea that vocational qualifications for young people should be ‘coherent’ with vocational qualifications for adults.”
- 186 This was deemed acceptable under ‘E2E.’, the predecessor programme to Foundation Learning
- 187 It also embodies sets of shifting ‘entitlements’ although these mostly apply to and affect the 19+ age group
- 188 Steedman 2010
- 189 Westergard-Nielsen 1997 One form of subsidy is very low wages....
- 190 NAS is offering quite large sums of money to increase 16-year old vacancies. But one quite small authority (Torbay) found that modest payments of £650 per apprentice per year were enough to recruit an additional 150 employers within a 2 year period. 5,000 such payments a year would cost only a little over £3 million, but there is no provision for this in regular apprenticeship funding.
- 191 See Wolf (2010) for a discussion of the arguments against subsidising normal employer training, as opposed to apprenticeship training.
- 192 Johansen (2000)
- 193 House of Lords 2007
- 194 In other words, they paid for the child's education and training. This pattern still exists in a number of high-skill occupations, notably aircraft maintenance.
- 195 Among private companies with contracts as apprenticeship ‘providers’, at least half are specialist training companies as opposed to employers who were offering apprenticeships within their company
- 196 Sanderson 1999
- 197 The Minister for Higher Education recently announced a similar proposal for universities

- 198 Working Rite CIC – the spelling is the same as for ‘rite of passage’ – is a social enterprise based in Edinburgh and active in Scotland. It is hoped that one scheme will be launched shortly in the south-east of England.
- 199 Information from a selection of head teachers
- 200 There were 23 SSCs, although one has just had its contract terminated, bringing the number down to 22. They vary enormously in the degree to which they align clearly with sectors and groups of occupations.
- 201 both in its submission to the Review and in other public documents
- 202 Academic qualifications are outwith the scope of this Review
- 203 Standards monitoring is also critical though not equally so for all qualifications.
- 204 Burgess et al 2010
- 205 Royal Statistical Society 2005
- 206 There was some strong support among submissions for a ‘Tech Bac.’ However, there was no clear consensus on what it should contain, and whether it should be a ‘difficult’ measure, but with a strong technical focus, or a relatively ‘easy’ measure offered as a consolation prize.
- 207 Allen and Burgess 2010
- 208 Adapted and updated from Wolf (2008)
- 209 Whitfield, K. and Bournakis, C. An Empirical Analysis of YTS, Employment and Earning *Journal of Economic Studies* 18.1 42-56 1991; Dolton, P.J., Makepeace, G.H. and Treble The Wage Effect of YTS *Scottish Journal of Political Economy* 41 444-454 1994; Green, F., Hoskins, M and Montgomery S The Effects of Company Training, Further Education & the Youth Training Scheme on the Earnings of Young Employees *Oxford Bulletin of Economics and Statistics* 58 469-488 1996
- 210 Dolton, P.J., Makepeace, G.H. and Gannon, B.M. The Earnings & Employment Effects of Young People’s Vocational Training in Britain *The Manchester School* 69.4 387-417, 2001: 403
- 211 Dearden, L., McIntosh, S., Myck, M. & Vignoles, A. The Returns to Academic, Vocational and Basic Skills in Britain Institute for Fiscal Studies/Centre for Economic Performance: Skills Task Force Research Paper 2002. The LFS is a panel study, rather than a one-off survey. Participants are interviewed several times, over a period of fifteen months.
- 212 Jenkins, A., Vignoles, A., Wolf, A. and Galindo-Rueda, F. The determinants and labour market effects of lifelong learning, *Applied Economics*, 35, 1711-1721. 2004
- 213 Dearden, L., McGranahan, L and Sianesi, B An In-Depth Analysis of the Returns to National Vocational Qualifications Obtained at Level 2 Centre for the Economics of Education Discussion Paper 46 2004
- 214 McIntosh, S. The Impact of Vocational Qualifications on the Labour Market Outcomes of Low-Achieving School-Leavers Centre for Economic Performance Discussion Paper no. 641 2004: 14
- 215 Jenkins, A., Greenwood, C and Vignoles, A The Returns to Qualifications in England: Updating the Evidence Base on Level 2 and Level 3 Vocational Qualifications Centre for the Economics of Education 2007: 47

- 216 Conlon, G and Patrignani, P. (2010) Return to BTEC Vocational Qualifications: Final report for Pearson London: London Economics
- 217 38% for RSA level 2. the RSA awards were administrative, secretarial and office awards with an extremely high reputation. Their successor NVQs have no such reputation or market value.
- 218 McIntosh, S (2004) The Returns to Apprenticeship Training CEP DP 622 London: CEP/LSE; (2007) A Cost-Benefit Analysis of Apprenticeships and Other Vocational Qualifications) RR 834 Sheffield: DES. Average returns, as estimated in the 2007 study, are:

	Males	Females
Recognised apprenticeship	8	-4
Recognised apprenticeship with NVQ3	16	2
Recognised apprenticeship with NVQ2	7	3
Modern Advanced apprenticeship	20	13
Modern Foundation apprenticeship	18	0

- 219 de Coulon, A, Greenwood, C and Vignoles, A (2010) An investigation of the labour market effect of apprenticeships in the UK London: King’s College London and Institute of Education: mimeo
- 220 Submission to the Review
- 221 See also House of Lords (2007); Ryan and Unwin 2001
- 222 Source: DfE
- 223 New NMW requirements also apply post-18
- 224 See eg Steedman 2010
- 225 UKCES analyses using NAS data
- 226 Hodgen, J, Pepper, D., Sturman, L and Ruddock, G (2010)
- 227 See eg Nuffield Foundation and FEDA 1997. See also Smith 2004
- 228 Leney in Green et al 2000: 118
- 229 Ibid pp 119-120 passim
- 230 Büchner and van der Velden forthcoming
- 231 Crawford 2009
- 232 OECD 1999; Rotberg 2004