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FUNDING FOR TECHNICAL EDUCATION

MICK FLETCHER



GATSBY

EXECUTIVE SUMMARY

AIM OF THE PAPER

The aim of this paper is to summarise the current funding arrangements for technical education in England in order to assess whether they might be better designed to promote its provision and uptake. It focuses mainly on provision at levels 3 and 4 and on applied rather than academic programmes.

FUNDING ARRANGEMENTS

The 'funding arrangements' are taken to mean the regulations that cover who and what can attract public funding, the processes by which the scale and balance of provision in any institution is decided and the levels of public funding that relate to particular individuals or activities. The paper draws on guidance published by the Education Funding Agency (EFA) and Skills Funding Agency (SFA), as well as informal interviews with a range of stakeholders.

PROVISION FOR 16-19 YEAR OLDS

Provision for young people in schools, colleges and other providers is funded by the EFA and based in the main on the number of students in an institution. The mix of provision is determined by student choices, although government requires English and Maths to be taught to all those without a GCSE grade C in the subject and encourages further study of Maths for everyone. Students' programmes should normally include a 'substantial' qualification, drawn from an approved list, and a mix of other activities, which can include sport or work experience.

The level of funding reflects, in broad terms, the additional costs of running technical programmes such as the need for lower group sizes for some activities and extra material costs. It does not seek to incentivise the provision of specific subjects, in large part because such incentives to institutions are not felt to influence student choice. It does not systematically recognise the additional capital costs of establishing the specialist facilities required for technical subjects, which means that on occasion institutions can be slower to respond to a growth in demand for technical subjects.

PROVISION FOR ADULTS

The SFA funds provision for adults in colleges and other providers (apart from HE) based on the qualifications undertaken and student characteristics. Public subsidy is focussed on the young and the unqualified with older and more advanced students having to pay some or all of the costs. Priorities in terms of subject areas are influenced by the skills strategies of local enterprise partnerships (LEPs) and their powers over the allocation of skills capital.

As with the EFA, the SFA funding rates seek to reflect the necessary costs of delivering programmes but do not seek to reward or incentivise particular subjects. Providers in general seem content with the differentials between subject areas even though there is growing concern about absolute levels of funding. As with the EFA, funded provision there are some concerns that the capital cost of developing capacity to deliver technical programmes may inhibit responsiveness to potential growth in demand.

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Those over the age of 24 seeking to study at levels 3 and 4 are required to cover the full cost of their programmes assisted if they choose by a student loan. The extra cost of technical subjects, which is not offset by public subsidy as it is in HE, means that students who study them must pay higher fees unless the institution runs them at a loss. Students on programmes of Access to HE have their loans written off if they progress satisfactorily but the same concession is not available to someone who progresses, for example, from a BTEC Diploma to an HNC.

PROVISION FOR THOSE AGED 14-16.

An increasing number of young people aged 14-16 are undertaking programmes with an enhanced technical component either in new types of institution, such as University Technical Colleges (UTCs) or in established Colleges of FE. Although not required to deliver the national curriculum they are required to provide a 'broad and balanced' offer so the additional practical activities are often provided through a longer than normal school day. Despite the different programme offered this new provision is funded on the same basis as other schools following a traditional curriculum.

In new institutions government start-up funding and sponsor's contributions help fund initial capital costs and help offset any difficulties with the revenue funding model. In the longer run they face the same difficulties in relation to updating or expanding their capital investments as do post-16 providers. It also seems unlikely that a curriculum with a strong technical emphasis can be sustained in the longer term without a differentiated funding model such as that applied post-16.

CONCLUSIONS AND RECOMMENDATIONS

Consultation with stakeholders suggests that while there are several problems with current post-16 funding arrangements discrimination against technical provision is not one of them. The complexity and bureaucracy associated with funding and cuts in the unit of resource are of great current concern but apply equally to all subject areas. There seems little enthusiasm to move away from a neutral funding model to one that might contain incentives to deliver particular subjects or programmes.

A major issue across all funding streams concerns the treatment of capital. Although the arrangements for revenue funding appear to reflect differences in the operating costs of technical education (apart from in the 14-16 phase), there are fears that the responsiveness of institutions to growth in demand in technical areas might be held back by the level of initial investment required. The development of more technical programmes for the 14-16 age group argues for a differentiated funding model as applied by EFA in the 16-19 phase.

Although the move to loans for those aged 24+ wishing to study at levels 3 and 4 is relatively new, there are fears about its potential impact on technical education. The higher cost of technical subjects implies higher fees unless colleges choose to subsidise them from elsewhere. There are however precedents in both HE and FE for mechanisms that might help protect technical education.

It is therefore recommended that government should:

1. Ask LEPs to use their oversight of the allocation of skills capital funding to ensure that the provision of technical education is not unduly constrained by the lack of relevant facilities.
2. Ask the EFA to develop proposals to reflect the extra costs of technical education in its revenue funding approach from the age of 14+ in the same way that it does from 16+.

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3. Ask the SFA to provide funding to institutions to ensure that adult students following technical courses at levels 3 and 4 need pay no higher fees than those for classroom-based courses of the same size.
4. Explore how adult students might be incentivised to undertake higher levels of study in technical subjects by cancelling outstanding debt for those who progress to higher technical programmes.
5. Explore whether giving LEPs the power to allocate a limited amount of funding on a 'place led' basis might encourage investment in STEM subjects where demand is currently low but expected to grow.

INTRODUCTION

SCOPE AND PURPOSE OF THE PAPER

This paper seeks to describe the current arrangements for funding technical education¹ in schools and colleges, highlighting recent changes and assessing their implications. Its purpose is to identify the impact of funding arrangements on the provision of technical education and suggest where changes to those arrangements might increase the supply or the uptake of places. The paper is primarily concerned with arrangements in England and with programmes for those over the age of 16, though it also looks at emerging arrangements for the 14-16 phase.

This paper is focused on provision at level 3 (equivalent to 'A' level) and level 4 in STEM (science, technology, engineering and mathematics) subjects with an emphasis on the applied rather than pure sciences. While apprenticeships are clearly one important route of technical education these are the subject of a separate paper². In addition this paper is not concerned with undergraduate studies but does consider some aspects of higher education described as 'non-prescribed HE'.

The work draws mainly on literature produced by government agencies – the Education Funding Agency (EFA) that funds provision for those up to the age of 19 and the Skills Funding Agency (SFA) that funds provision for adults outside higher education – their respective sponsoring departments, Education (DfE) and Business, Innovation and Skills (BIS), and informed commentaries. It also reflects a number of informal interviews with stakeholders across the sector.

ELEMENTS OF FUNDING

It is important to be clear at the outset what is meant by funding arrangements, or what in the FE sector is frequently referred to as the '*funding methodology*'. Many college representatives have in the past focussed exclusively on funding rates or 'the tariff' when in fact there are several important components that need to be considered. Any funding system needs to determine:

- **Eligibility for funding** - who or what can be funded? Not all courses attract public funding; not all individuals can be funded and some provision can only be funded for some people.
- **Priorities for funding**– what does the funder want and what do they want more of? At different times governments have had different priorities and signalled them in varying ways.
- **Allocations of funding** – what contribution should each provider make to the overall pattern of education provision? Since public funding is finite not all provision that is eligible for funding can in practice be funded.
- **Rates of funding** – what is the price to be paid for each unit planned or delivered? The amount of funding per person or per qualification is based on a set of rates or 'tariff' determined by funding agencies in the light of costs, priorities and the availability of

¹ Technical education enables an individual to both acquire the technological and science knowledge base, and develop the practical skills and attitudes required for work in technician roles. This encompasses a broad range of education and training, including some that could be defined as *technician* education - a subset of qualifications and training that would make a significant contribution to an individual meeting the standards for professional technician registration.

² *Apprenticeship Funding Reform – potential issues for technician education* Fletcher, M. Gatsby 2014 Available at <http://tinyurl.com/ofvzsw>

resources. In relation to adults the question of rates also involves the proportions contributed by individuals, employers and the state.

Other features, such as the way in which payments are profiled, and what happens if planning assumptions are not achieved can also affect provider behaviour.

At different times in the last 20 years different aspects of the system have been emphasised. In the early to mid-1990s funding bodies tended to focus on rates as a means of steering the system. This was true of the Further Education Funding Council (FEFC) but also the Training and Enterprise Councils (TECs) that funded work-based learning. From 2002 they were combined to form the Learning and Skills Council (LSC), which increasingly sought to manage through the control of allocations and setting nationally determined output targets for types of provision. Most recently policy, particularly in respect of adults, has emphasised the use of the rules on eligibility to shape what is offered by providers and reflect government priorities.

BACKGROUND TO RECENT CHANGES

Recent changes to the funding of post-16 provision have seen an increasing divergence of the arrangements for young people under the EFA from those for adults under the SFA. The two agencies inherited from the LSC a single system that essentially linked funding to the number and type of qualifications undertaken by students, and primarily sought to reflect in its rates the costs necessarily incurred by providers.

The changes to arrangements for young people derive from the Wolf Review³ which argued inter alia that the funding system (as well as school league tables) provided perverse incentives for institutions to maximise the number of qualifications undertaken by young people at the expense of their utility. This was compounded in Wolf's view by the availability of qualifications designed to attest the competence of adults in the workplace rather than develop the broader skills needing to be acquired by young people; these latter qualifications were seen as easier to accumulate but less helpful to young people in terms of progression. In response the government has removed most vocational qualifications from the key stage 4 league tables, and moved to a system of funding per student rather than per qualification. Although account is still taken of the content of programmes the system is much less fine grained.

In respect of adults, funding rates are based on a matrix that reflects the size and resource intensity of programmes, though as for young people the current system is much less fine grained than its predecessors. The bigger change is perhaps an attempt to move away from determining size on an empirical basis (teaching time or the average guided learning hours (GLH) delivered) to a more theoretical one (the notional hours of learning, expressed as credits, envisaged by qualification designers). Alongside changes to rates are increasingly sophisticated restrictions in eligibility for funding reflecting parallel pressures to target funding on priority groups, standardise programme sizes and reflect employer assessments of relevance.

Outside the 16-18 phase new institutions are being developed with different specialisms – University Technical Colleges, Studio Schools and, recently announced, Career Colleges, all normally spanning the age range 14 to 18⁴. Although they promise a more technically and vocationally focussed education (and a longer working day) than traditional schools, as with full-time provision in FE colleges for those aged 14-16, the funding continues to be based on the standard school funding model. In the short term officials seem to feel that start-up funding will enable these institutions to

³ *Review of Vocational Education – The Wolf Report* Wolf, A. March 2011

⁴ Government has also recently announced a forthcoming consultation on a new network of National Colleges such as the ones envisaged for HS2 and the nuclear industry.

cover any additional costs deriving from their different curriculum but in the longer term there are clearly issues to be addressed.

CURRENT FUNDING FOR 16-18 YEAR OLDS

The current arrangements for funding 16-19 year olds are set out in a series of linked documents on the EFA web site⁵. They include papers on eligibility, funding rates, the allocations process and an overview of the funding formula. There are also more detailed papers on specific issues such as the arrangements for learners with learning difficulties and/or disabilities.

ELIGIBILITY

The policies on eligibility are set out in the Funding Regulations⁶ published by EFA annually. They cover both the eligibility of individuals to attract EFA funding and the eligibility of qualifications for that purpose.

Individual eligibility depends primarily on age and residential status. Those under the age of 16 are not normally eligible for the 16-19 funding model, although recent changes mean that post-16 institutions can, under certain conditions, enrol 14-16 year olds and receive the same funding as a school would for that age group. EFA does not normally fund those over the age of 19, apart from those with a Learning Difficulty Assessment who can be funded up to the age of 24. The regulations concerning residence are extremely complex (distinguishing refugees, asylum seekers, visitors etc.) but the basic principle is very simple – EFA funding is for those legally settled in England.

The eligibility of programmes for funding is no longer tied solely to qualifications. A full-time student must be following a study programme of at least 540 hours, which can be a mix of ‘qualification’ and ‘non-qualification’ activity. The ‘non-qualification’ activity can be work experience or sporting or cultural activities, or even a qualification that is not on the approved list. The determining factor is that it has been planned, arranged and monitored by the institution⁷.

Only the study of qualifications that have been listed by the Secretary of State under Section 96 of the Learning and Skills Act 2000 – offered by regulated awarding bodies and identified as suitable for learners aged 16-19 – can be counted as ‘qualification activity’. This, taken together with the requirement that wherever possible study programmes must contain a ‘substantial’ vocational qualification enables DfE to say that institutions are free to pick whatever qualifications they feel best meet the needs of their students while at the same time retaining firm central control. Although a qualification that has not been approved could be offered as non-qualification activity, there would not be the time to undertake a substantial one as well as a substantial listed qualification.

Full-time programmes must also support all young people who have not achieved a GCSE in English and Maths at grade C or above to improve their performance in those subjects and ideally achieve at that level. For those for whom GCSE is not an appropriate initial goal other qualifications including functional skills qualifications can be an acceptable alternative but only as a step on the way; achieving level 2 via functional skills as many young people currently do does not obviate the necessity to continue to work towards GCSE.

Priorities

Current policy emphasises that it is for institutions to determine the mix of learning activities that best meet the needs of young people and this student centred approach is reinforced by the principle

⁵ www.gov.uk/16-to-19-education-funding-guidance

⁶ www.gov.uk/government/uploads/system/uploads/attachment_data/file/294110/Funding_Regulations_2013-14_-_version_1_01a-final_sd.pdf

⁷ As opposed for example to a part time job the student arranges for themselves.

that *'funding follows the learner'*. DfE is not wholly neutral however; the guidance is clear that wherever possible the major part of a student's programme should be drawn from regulated qualifications and the provision of English and maths for those lacking GCSE at grade C or above is enforced by a condition of funding – unless students are following these subjects they will attract no funding at all. Schools and colleges are encouraged to promote the continuing study of mathematics for everyone up to the age of 18⁸ but where they already have a grade C GCSE there is no explicit compulsion.

The major mechanism through which government currently signals priorities to institutions is not through the funding mechanism but through performance measures or *'league tables'*. DfE recently removed large numbers of what it termed 'low value' vocational qualifications from the performance tables at level 2 arguing that some schools were directing pupils to 'easier' subjects in order to boost their league table standing. Although there is some disagreement about whether all subjects removed were of 'low value', and a more general concern that the manner in which it was done risked devaluing vocational study as a whole⁹, there is little doubt that this change had a direct and immediate impact upon the decisions of some schools over what subjects to offer and promote¹⁰.

At level 3 government has consulted about the nature of qualifications that should be recognised in the performance tables¹¹. It has determined that they be divided into separate lists of academic, technical and applied general qualifications which are not seen as directly comparable. Only those that meet a set of criteria in relation to size (minimum 150 hours) assessment (normally graded including a synoptic element) and employer endorsement (for technical qualifications) should be included. Although it asserts that 'too few' young people take technical qualifications that lead directly to employment it does not propose how this presumed problem is to be rectified; and as yet there are no moves to reflect differences in qualification type in funding rates.

Government has also announced similar reforms to qualifications at level 2¹². From September 2015 young people will be able to study for Technical Awards alongside GCSEs. They will also be able to study *'substantial vocational qualifications'* that prepare young people for occupations that recruit at that level such as construction and hairdressing. Both qualifications will be included in the performance tables from 2017.

Allocations

The principle behind the allocation of funding to institutions remains that *'funding follows the learner'*. The philosophical justification is that this stimulates competition and in turn drives up quality; poor providers who do not deliver what the market wants or do not achieve a given level of quality will find their recruitment and funding shrinking. Competition on quality is also intended to be stimulated by Ofsted grading.

Details of the allocation process can be found on the EFA web site¹³ but the essential point is that it is based on *'lagged learner numbers'* – in broad terms the amount a school or college is paid for any given year is based on the number of students recruited in the previous year and the nature of their programmes. Institutions experiencing growth therefore complain that they have to teach more

⁸ The latest thinking is given in the DfE statement on core maths, December 2013. See <http://tinyurl.com/qbw4jo>

⁹ See for example the discussion: www.bbc.co.uk/news/education-16789215

¹⁰ See Edge commentary: www.edge.co.uk/news/2013/january/league-tables

¹¹ 16-19 VQ reform consultation. DfE 2013

¹² www.parliament.uk/documents/commons-vote-office/June%202014/18%20June/2-Education-TechAwards.pdf

¹³ www.gov.uk/16-to-19-education-funding-allocations

students than they are paid for; those with falling recruitment tend not to complain about being ‘overfunded’.

The EFA rationale for this arrangement is twofold; that being paid on actual (if lagged) recruitment bases the allocation on evidence rather than projections that can be disputed: and that incremental growth usually involves extra students in the same classes rather than wholly new areas of work. The protection afforded to institutions that face falling numbers gives them time to make the necessary adjustment to their costs.

Exceptions to this process are few but can be made. Where a school opens a new sixth form or a new academy involving sixth-form study is set up in an area, funding is based on planned numbers until recruitment patterns become clear (lagged data would give them nothing in the first year!) Local authorities occasionally broker changes in the pattern of provision, which, if accepted by all parties, can lead to rebalancing of funding.

Rates

The funding paid to institutions reflects the mix of provision as well as the number of students. The principle involved continues to be that funding rates should not provide incentives that favour one subject over another because that could distort the market and impair consumer choice. It is therefore necessary to reflect the fact that some courses necessarily cost more than others to deliver either because they need more intensive staffing or use more equipment and materials.

The detail around EFA funding rates and the national funding formula is set out annually in a separate part of the funding guidance¹⁴. In simple terms the funding for each student is based on a standard national funding rate, adjusted for the size of the programme they are following with weightings that reflect the extra costs institutions incur when teaching certain subjects, supporting disadvantaged students and operating in London or the South East. Part of the funding is linked to completion of the programme.

The national funding rates for 2013/14 are set out in Table 1 below. EFA have announced that the same rates will apply for 2014/15 except that those aged 18 at the start of the academic year will attract only 82.5% of the quoted rate.

Table 1: National funding rates for 2013/14

Band	Category	Annual timetabled hours	National funding rate per student (£)
	Full time	540+	4,000
4	Part time	450-539	4,000 ¹
3	Part time	360-449	2,700
2	Part time	280-359	2,133
1	Part time	Up to 279	4,000/FTE

The rates are uplifted by the weightings outlined in Table 2 below to reflect the extra cost of delivering certain programmes. A full list of which sector subject areas attract which weighting is set out in annex 2 of the funding guidance but in general engineering and manufacturing attracts 1.3,

¹⁴ www.gov.uk/government/publications/funding-guidance-for-young-people-2013-to-2014-rates-and-formula

Construction (along with retail, care, IT and hospitality) 1.2 and the highest band is reserved for those agricultural colleges that operate a particularly expensive form of delivery using extensive practical facilities. The pure sciences and mathematics, normally studied as academic A levels, attract the basic rate.

The set of three uplifts set out in Table 2 below represents a simplification of the previous LSC model that differentiated between arts and science A levels (the latter being uplifted by a factor of 1.12) and had seven weights on a scale from 1.00 to 1.92¹⁵. Although at first sight this might seem to be damaging to STEM provision, EFA modelling suggests that it makes little difference to the distribution of funding between institutions – most sixth forms for example have much the same overall balance of science and arts activity. Moreover, schools in particular do not tend to distribute resources internally in a manner that directly replicates the way funding comes to them from EFA.

Table 2: Programme weights for 16-19 year olds

	Weighting value
Base	1.0
Medium	1.2
High	1.3
Specialist	1.6

Issues for technical education

The regulations around eligibility do not appear to raise any special issues for technical education. The requirement that any vocational qualification should be ‘substantial’ is consistent with the nature of existing qualifications – a BTEC Diploma in Engineering for example is typically delivered in around 540 hours teaching per year. The requirement that those who have not attained at least GCSE grade C in English and Maths should continue to study these subjects is a positive step. The reforms to the performance tables at levels 2 and 3 do not appear to disadvantage STEM in any way and the proposals for the Tech Bac measure may be a positive move.

There is a potential concern that technical education might be affected by the move to funding per student which caps funding below the level previously applied to very large programmes such as the International Baccalaureate (IB). Unpublished research by DfE and EFA, however, does not suggest that technical studies are particularly likely to be harmed: the courses most affected other than IB are A levels or combinations of A levels with applied general qualifications such as BTEC offered in schools.

It is possible that the cut in funding for 18 year olds may indirectly and unintentionally affect technical education. Those individuals affected are significantly more likely to be on vocational programmes (over 70% compared with 50% of 16 year olds) and on programmes at level 3 (71% compared with 57% of 16 year olds); and FE institutions are affected to a greater extent than schools. There is however no published data by programme area and it is not an argument that has been advanced by the organisations opposing the change.

There is no evidence and no systematic argument from stakeholders to the effect that the rates used by EFA discriminate against technical subjects. The intention of EFA and its predecessors has been for

¹⁵Details and an explanation of the rationale for the change can be found in: www.gov.uk/government/uploads/system/uploads/attachment_data/file/180961/EFA-00073-2012_16-19_funding_policy_document.pdf

the rates to reflect variations in necessary cost and the consensus among providers seems to be that the funding agencies have achieved that outcome. The largest element of cost is teaching staff and the current rates are felt to reflect the lower group size needed for practical subjects reasonably well.

However, the rates do not appear to take into account the capital costs involved in setting up the practical facilities needed to teach technical subjects; public institutions like colleges may from time to time benefit from capital allocations which can be used for this purpose but the rates reflect running costs and do not provide fully for depreciation. This may be a growing problem as the pace of technological change increases. It is possible that this issue will be more acute for those delivering technical rather than academic subjects in what are nominally similar disciplines, but this issue has not emerged in public debate.

In theory the move to a simplified rate structure might have disadvantaged technical education by reducing differentials but there appears to have been no argument advanced on those grounds and contacts with providers suggest that this is not an issue for them.

It is occasionally suggested that rather than being neutral the rates should embody a financial incentive for providers to recruit students to STEM subjects. There seems little appetite for such a move among either providers or officials concerned with the sector; they generally argue that while increasing the rate might increase expenditure on STEM subjects it is not guaranteed and nor is it clear how higher rates would translate into increased recruitment.

CURRENT FUNDING FOR ADULTS

The current arrangements for funding provision for adults (other than prescribed HE¹⁶) through colleges and training providers are set out in the SFA funding rules 2014-15¹⁷. This document seeks to bring together all the regulations affecting SFA-funded provision in one place (and 134 pages) but the information on funding rates is in a separate 25 page document and accompanying 6,500 row spreadsheet. The SFA claims to have simplified the funding system for adult skills though that view is contested. In addition to funding adults SFA funds apprenticeships and traineeships for those over the age of 15 but that part of the system is dealt with in a separate paper¹⁸.

ELIGIBILITY AND CONTRIBUTIONS

The SFA rules on eligibility include some of the same features as EFA rules but are far more extensive. In part this is because education up to the age of 19 is free, whereas post-19 individuals might be eligible for full funding, part funding or a loan – hence the heading ‘*eligibility and contributions*’. In large part, however, the greater relative complexity of SFA funding derives from it being based on qualifications rather than students, with decisions on who is eligible to be supported for what being taken in Whitehall and reflecting factors such as age, level of study, location of learning, employment status and even size of employer.

As with EFA there is a basic threshold for individual eligibility; individuals must be UK residents or ordinarily resident in the EU for 3 years. They must be over the age of 18 (25 if they have a Learning

¹⁶ Essentially university degrees and Diplomas.

¹⁷ Available at :

www.gov.uk/government/uploads/system/uploads/attachment_data/file/287917/Funding_rules_2014_15.pdf

¹⁸ See <http://tinyurl.com/ofvzsw>

Disability Assessment) but if they are 25 or over and wanting to study at level 3 or above they are only entitled to support through a loan¹⁹. In very broad terms²⁰:

- All individuals over the age of 19 can attract full support to achieve a basic skills or first full level 2 qualification.
- Individuals aged 19-23 can attract full support to achieve a first full level 3 qualification.
- Individuals over 19 studying for a qualification that is less than 'full' or is at the same level as one they already hold at level 2 (or level 3 for those aged 19-23) must pay 50% of the cost (called 'co-funding').
- Students referred by DWP or in prison can be fully funded to take units of approved qualifications (in addition to whole qualifications).

The arrangements for determining the eligibility of provision for funding are set out in a further 27-page guide²¹, the Qualifications information Guide. To simplify somewhat, in order for qualifications to be eligible for funding they should:

- Be drawn from the QCF or list of approved Access to HE or A level courses.
- Conform to a minimum length – currently 15 credits in the case of most provision at level 2 and above.
- Demonstrate their suitability for facilitating progression into employment (if an occupational programme) or further learning.

In addition SFA has signalled that it may in future introduce criteria relating to assessment processes.

Qualifications that constitute a licence to practice or relate to proprietary processes (e.g., Microsoft training) are only eligible to be funded in certain circumstances. There are similar restrictions on qualifications that reflect statutory requirements, such as fork lift truck driving or Health and Safety.

All qualifications are subject to an annual review process so providers need constantly to be alert for changes. This year SFA has removed eligibility from a number of qualifications that have had a very low take up as well as most of those that fell below 15 credits, although there is an appeal process.

PRIORITIES

The main way that SFA signals (and enforces) its priorities is through the eligibility and contribution rules. Within those rules colleges and other providers are free to deliver the mix of provision that they feel best meets the needs of their local communities. SFA does however reflect the priorities signalled by BIS in its grant letter through the allocations process – currently apprenticeships are the highest priority and providers delivering growth in apprenticeship numbers are the ones most likely to have their allocations increased.

Increasingly government is looking to local enterprise partnerships (LEPs) to determine local skills strategies to which provider plans are expected to conform. In three pilot areas SFA is withholding

¹⁹ BIS is currently consulting about proposals to remove grant funding for most level 2 provision and for learners aged 19-24 and replace it with a loan facility.

²⁰ This is highly simplified and for illustrative purposes only; anyone wishing to advise on claiming funding should refer to pages 123 – 129 of the funding rules.

²¹

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/286455/Qualifications_Information_Guide_201415.pdf

part of college funding until the LEPs are satisfied that their priorities are reflected in college plans. This arrangement only applies to colleges, presumably because they have (in theory²²) greater autonomy than independent providers whose conformity to external priorities can be enforced through contract.

Relating college programmes to LEP priorities is complex, partly because many LEPs focus on sectors seen as necessary to economic growth rather than the full range of employment opportunities in their areas. Furthermore college provision is described in terms of subjects²³ whereas LEP priorities tend to be set in terms of industrial or occupational classifications. This is not just an issue about data but reflects an underlying difficulty; someone who trains as a plumber may work in the construction sector but equally could work in hospitality (e.g., employed in a hotel or holiday park) or as a teacher (in FE) or in retail (a builders merchant).

To take a concrete example, the Coventry and Warwickshire LEP identify Low Carbon Vehicles as a priority industrial sector. Its growth will clearly require people with engineering skills, but also involve those trained in design, accountancy, marketing, law, logistics and a host of other occupations²⁴.

ALLOCATIONS

The basic logic for SFA allocations to individual providers is to reflect their performance in the previous year after making overall adjustments in the light of any changes in government policy. Policies are set out in the annual Skills Funding Statement²⁵, the most recent of which announced a reduction in the adult skills budget, partially offset by an increased allocation of FE loans, and a continuing emphasis on apprenticeships and traineeships. The indicative allocation of loan funding identifies the total that students at that institution can draw down from the Student Loan Company (SLC); this sum cannot be transferred to grant funding if the take up of loans is low.

Standard percentage changes for these broad categories of provision are applied to the most recent robust data on the volumes delivered by providers, but the overall level of change for any one institution is moderated to give a degree of stability in the short term. It is important to note that while SFA allocations reflect policies to encourage, say, apprenticeships, or provision for young people they do not attempt to influence the subjects that are offered or even the sector subject areas into which provision might be organised. This is seen as a matter for institutions to determine in the light of guidance from LEPs and other local stakeholders.

Adjustments to funding levels within year are becoming as important as initial allocations. The performance of institutions is monitored quarterly and maximum contract values are moved up or down to reflect under and over-achievement. In the first year of operation there were particularly large adjustments to the initial allocations of the advanced learning loan facility.

RATES

SFA funds programmes on the basis of a rates matrix that takes into account both their size and 'resource intensity' or costliness. As with predecessor systems this latter element mainly reflects lower group sizes in practical subjects and the need for equipment and technician support. The rates do not contain any explicit incentives for particular types of qualification though the funding for some is 'determined by policy' and not linked to size as measured by credits.

²² In theory colleges (like universities) receive 'grant-in-aid' to support their programmes whereas providers receive a contract to deliver the SFA's programmes.

²³ A full list of sector subject areas is here <http://tinyurl.com/l7ye9th>

²⁴ Similar issues arise when developing apprenticeship standards; see the discussion in *Apprenticeship and the Concept of Occupation*, Unwin, L. & Fuller, A. Gatsby 2013 <http://tinyurl.com/lk7own3>

²⁵ Skills Funding Statement 2013-16 BIS February 2014

The rates do not take into account the full cost of developing and maintaining capital facilities. These are more likely to be needed by STEM subjects, though Drama and Sport for example also incur significant capital costs. Capital allocations for colleges and other providers are now determined by LEPs and analysis by AoC of the funding distributed in the first year (as well as a study of LEP skills strategies) suggests that supporting STEM developments has been a clear priority. It is not clear how far there has been any national moderation of LEP plans to avoid imbalances in provision.

The most recent rates matrix is set out in table 3 below²⁶. The matrix has grown substantially since the initial proposals for simplification which would have provided just three size bands and three programme weights. Even so the 65 different rates represents a considerable reduction on the hundreds of different values that resulted from the preceding formula and offers greater clarity on the levels of government funding available. In general terms engineering, construction and user IT programmes (along with catering and hair & beauty) fall in band C; science falls into band B while the most expensive bands relate only to specialist agricultural and horticultural provision. The only example of band D given in the guidance is music technology. A large Diploma in Engineering (over 133 credits) therefore earns £8,583.

The rates in the matrix are for fully funded provision; where provision is co-funded 50% of the rate applies. There is in addition a cap of £4,400 per individual per year (calculated before weightings are applied). In respect of loans, the stated rates represent a maximum figure; the loan to an individual is based on the fee actually charged by the provider up to the maximum level shown.

As with the EFA the SFA makes additional payments to reflect the extra costs of operating in London and the South East and the extra costs associated with teaching disadvantaged students and those with learning difficulties and/or disabilities.

²⁶ SFA Funding Formula and Rates Version 1 March 2014.

Table 3: SFA funding rates (2014/15)

Funding band (credits)	Funding band (Guided learning hours)	Programme weighting				
		A – Base (unweighted rate) (£)	B – Low (£)	C - Medium (£)	D – High (£)	E or G* - Specialist (£)
Small provision (1)	Up to 12	50	56	65	80	86
Small provision (2)	13-20	100	112	130	160	172
Small provision (3-5)	21-44	150	168	195	240	258
Small provision (6-8)	45-68	300	336	390	480	516
Small provision (9-11)	69-92	450	504	585	720	774
Small provision (12)	93-100	600	672	780	960	1,032
Certificate (13-24)	101-196	724	811	941	1,159	1,246
Certificate (25-36)	197-292	1,265	1,417	1,645	2,025	2,176
Diploma (37-48)	293-388	1,987	2,225	2,583	3,179	3,417
Diploma (49-72)	389-580	2,573	2,882	3,345	4,117	4,425
Diploma – Access to Higher Education	N/A	3,022	3,384	3,928	4,835	5,197
Diploma (73-132)	581-1060	4,170	4,670	5,421	6,671	7,172
Diploma (133+)	1061+	6,602	7,395	8,583	10,564	11,356

ISSUES FOR TECHNICAL EDUCATION

The eligibility and contribution rules do not, in themselves, appear to raise any specific issues for technical education. In so far as they encourage the development of mathematical skills they may have a positive effect on the supply of people qualified to enter technical programmes at level 3 or above but the effect is likely to be slight. The restriction of full funding to those seeking a first qualification at any level may affect some wanting to undertake technical education but no more than for any other subject.

Some of those over the age of 25 may be deterred from undertaking technical education by the requirement to take out a loan or otherwise meet the full costs of their course. This may have a greater impact on technical studies than some other areas for two reasons. Those on courses of Access to HE are able to have any outstanding FE loan written off on completion of a subsequent HE programme; and this is reflected in the relatively high take up of such courses. There is no equivalent for technical education, yet a parallel could be constructed. An FE loan at level 3 could be written off for example for anyone who completes a level 4 qualification in a STEM subject or a higher apprenticeship.

Secondly, those wishing to study a technical subject at level 3 or 4 after the age of 24 will have to take out a loan (or otherwise finance a fee) that is 30% larger than someone who studies a humanities programme of equal size. This is not the case in HE where HEFCE grant effectively equalises the cost of STEM and non-STEM provision: and it is not the case in co-funded SFA provision where the student contribution is set at 50% of the unweighted base rate. Government has withdrawn the arrangements whereby apprentices over the age of 24 were required to fund at least 50% of their learning (the other 50% coming in theory from the employer) and there is a case for similar flexibility in terms of STEM costs.

Giving LEPs greater influence over the planning of FE provision seems likely on balance to favour technical education since the priorities of most LEPs seem focussed on growth rather than employment per se and to reflect concerns over skill shortages in growth sectors. In a market-driven system, however, it is not clear how local priorities can affect the decisions of individual learners; nor is it clear why individuals should be discouraged from training for occupations available in other areas of the country but not locally. High quality and impartial information advice and guidance is needed to help resolve these tensions.

An interesting recent development has been the suggestion by Liam Byrne MP that it might be worth exploring whether adult FE could be funded on a per student basis along the lines of EFA rather than per qualification as at present. While the huge variation in the size of adult programmes would make a simple per student funding system unworkable it might be worth considering funding per full time equivalent (FTE) student or even funding per place. LEPs for example might be given the power to apply a limited amount of place led funding where the demand for priority subjects was too low to be viable under the present 'lagged' arrangements but expected to grow once investment in new provision had been made.

CURRENT FUNDING FOR 14-16 YEAR OLDS

While funding for the education of the 14-16 age group has not changed in recent years, there have been important changes to the institutional structure of provision which may in time require such change to be contemplated. Schools are becoming increasingly differentiated with the growth of University Technical Colleges (UTCs) following a curriculum that emphasises scientific and technical subjects, studio schools that emphasise practical learning and proposals for Career Colleges that would also emphasise practical subjects but be co-located within FE colleges. FE colleges are able to recruit groups of students directly at the age of 14 and there is a small but growing number of Free Schools that also deliver to that age group. In all cases there is a requirement that they should offer a

broadly based curriculum including English and maths (but not necessarily the national curriculum); their technical or vocational specialisms are provided in addition to academic GCSEs, sometimes requiring a longer school day.

ELIGIBILITY

All pupils in local authority maintained schools in England must follow the national curriculum which specifies the subjects to be taught and the content of those subjects²⁷. At key stage 4 for pupils aged 14-16 there are mandatory subjects (English, maths, science, citizenship and computing) and four further areas of 'entitlement' where pupils are entitled to be offered one subject from each block (arts, humanities, modern foreign languages and design & technology). In addition there is a requirement to offer religious and physical education and personal, social and health education. Academies and other independent providers are not required to follow the national curriculum but should provide 'a broad and balanced offer' including English and maths.

The national curriculum does not specify the amount of time to be spent on each subject but stresses that the minimum requirements do not take the whole school week. Schools are able to add subjects, either from within the entitlement group or outside it altogether including vocational qualifications or non-qualification activity. On average it seems that English, maths and science typically occupy some 2 days per week, and the other statutory requirements another two days leaving around one for locally determined variations.

Another facet of eligibility concerns which institutions are eligible for public funding to offer provision to pupils aged 14-16. Following the Wolf Review it was agreed in principle that FE colleges could offer such programmes; in practice DfE have restricted the opportunity to those institutions with an Ofsted grading of Good or Outstanding and with a secure and separate place in which the teaching can take place. In the first year therefore only six colleges are offering a 14-16 programme though many more initially expressed interest.

PRIORITIES

Government priorities are clearly signalled through the mandatory and optional elements of the national curriculum where science and maths play an important part. They are also signalled through performance measures, however, which have a direct effect upon the practice of institutions. The headline measure of school performance at KS4 – the percentage of pupils gaining 5 GCSEs including English and maths at Grade C or above – was amended following the Wolf Review to exclude a large number of vocational subjects that had formerly been deemed equivalent to GCSEs. Government has now identified a limited number of 'high quality' vocational qualifications that from 2014²⁸ can be included in tables relating to technical and applied general subjects alongside the traditional academic ones. From 2017 Technical Awards and 'substantial vocational qualifications' will also be reported.

An additional performance measure is the English Baccalaureate; a count of pupils at a school achieving a limited set of more academic qualifications – English, maths, science (which from 2014 can include computing) a language and history or geography. It is designed to encourage schools to offer those qualifications said to be most valued by higher status universities (though a similar move to identify so-called 'facilitating subjects' at 'A' level appears to have been dropped).

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www.gov.uk/government/uploads/system/uploads/attachment_data/file/244221/SECONDARY_national_curriculum3.pdf

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www.gov.uk/government/uploads/system/uploads/attachment_data/file/287489/2016_KS4_Publication_list_revised_March14.pdf

ALLOCATIONS

As with post-16 provision, allocations of funding to schools and colleges for 14-16 year olds primarily reflect demand. The aim of government policy is that good schools should be enabled to grow while those offering poor provision or not meeting their needs in other ways should face the threat of declining numbers. In line with this policy funding allocations do not attempt to manage the numbers applying for particular types of specialist school.

Government policy in relation to UTCs is to encourage their expansion up to around 100 institutions. There seems to be no overt national policy in relation to their focus other than a concentration on technical subjects²⁹ and perhaps an implied preference for engineering. The detail of which technologies are emphasised is an issue for local sponsors and part of the criteria for approving an application is that the sponsors can demonstrate that they are responding to local need. It is not clear how many studio schools are envisaged by government though the DfE supports their expansion as part of its diversification agenda. As with UTCs there is no national presumption about the mix of specialisms that is required for studio schools; the sponsors must demonstrate through the application process that the institution meets a locally identified need. Provision for those aged 14-16 in FE colleges reflects the same policies. Consideration at a national level concentrates on the capacity of the sponsoring institution to deliver high quality education and demonstrate local need. Thinking around Career Colleges is at an early stage and their numbers and focus are not clearly determined.

RATES

Funding for pupils in local authority maintained schools up to the age of 16 is determined by the local authority on the basis of a formula, the nature of which is prescribed by DfE. In essence the formula must be based on pupil numbers and can reflect their age – the key factor is the age weighted pupil unit of resource or AWPU. A school can attract additional funding based on factors such as where it is located (a weighting for London and the SE) and whether pupils count as disadvantaged (the pupil premium).

Academies and free schools (including UTCs and studio schools) receive funding on a similar basis, calculated as what they would have received were they a local authority school in the same area. As the proportion of schools that are academies grows this arrangement is increasingly anachronistic and there is mounting pressure to develop a national funding formula. Such a formula has however been on the DfE agenda for many years and always deferred because of the turbulence it would cause. The latest small step, announced in March 2014³⁰, is the proposal for a minimum level of funding to be introduced in 2015.

Funding for 14-16 year olds in FE colleges comes directly from the EFA³¹. It is based on the post-16 formula but is modified to reflect the 14-16 context. There is for example no reduction for non-completion and the disadvantage uplift uses disadvantage as a proxy for the measures of under-achievement used at 16+.

Unlike post-16 funding there is no reflection in the schools formulae of the different costs of delivering different subjects. In large part this is because all schools (up to now) have had to deliver

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www.gov.uk/government/uploads/system/uploads/attachment_data/file/289391/140312_UTC_HTAG_FOR_PUBLICATION.pdf

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www.gov.uk/government/uploads/system/uploads/attachment_data/file/293930/Fairer_school_funding_consultation.pdf

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www.gov.uk/government/uploads/system/uploads/attachment_data/file/268614/14_to_16_enrolment.pdf

FUNDING FOR TECHNICAL EDUCATION

the same national curriculum and in practice have delivered it in substantially the same way. This is changing as academies, including UTCs and studio schools, do not have to follow the national curriculum and the latter explicitly aim to deliver education in a different way. UTCs deliver more than the national curriculum, often through adopting a longer teaching day.

Although precise comparisons are difficult the level of funding for 14-16 year olds is higher than that for 16-18s in schools or colleges. The AoC estimates it as around 20% higher; some indication of the difference can be gleaned from the fact that while the base rate for 16-18s is £4,000 (£3,300 for 18 year olds) the minimum funding proposed for key stage 4 is £4,529. In both cases there are additions for disadvantage, area costs and disability.

ISSUES FOR TECHNICAL EDUCATION

Many of the recent changes in arrangements for the 14-16 phase of education seem positive from the perspective of technical education. An increasing number of schools are no longer confined to delivering the national curriculum, though they are (rightly) expected to continue to emphasise English and maths. Schools and FE colleges are able to deliver vocational qualifications to this age group and build in extended project work and work experience in partnership with sponsoring employers. The performance measures at key stages 4 and 5 are being modified in an attempt to increase the status of vocational qualifications. All these changes seem set to continue since, with varying degrees of enthusiasm, they command cross party support.

The major issue posed for technical education concerns the rates paid for provision and whether the principle of per-student funding remains tenable once the nature of programmes offered at different institutions begins to diverge sharply. It is clear from the experience of the post-16 sector over decades that delivering practical and technical subjects is more expensive, primarily because of restrictions on group size. Research for the charity Edge has suggested that the curriculum offered by UTCs costs around 20% more than average to deliver – based on lower group size and a longer working week partially offset by a more efficient staffing model.

There are precedents in post-16 provision for some institutions offering agricultural education to receive higher rates of funding than other colleges do for apparently similar subjects on the grounds that their delivery model is inherently more expensive. This thinking might be extended to specialised institutions such as UTCs. The division of subjects into academic, applied general and technical might provide an alternative logic based on the nature of provision rather than the type of provider.

CONCLUSIONS AND IMPLICATIONS FOR TECHNICAL EDUCATION

The major conclusion to be drawn from this survey is that funding arrangements for educational provision post-14 in general do not pose any special difficulties for technical education. Although there are concerns about the complexity of the system and its associated costs in terms of bureaucracy, and also concerns about the impact of successive cuts in the unit of resource the fears are, in the main for provision as a whole and do not relate specifically to technical education or STEM.

In part this reflects the fact that the detail of the funding rates is not such a large driver of institutional behaviour as some observers might imagine. Inspection and performance measures have a much larger effect on school and college practice. Moreover, some of the intended variations in funding derived from funding rates are overshadowed by unplanned variations in institutional income deriving from changes in student choices. Schools and colleges tend to manage this unpredictability by treating income in aggregate, at least in the short term, i.e. they don't try to align income and expenditure at the course or subject level.

Moreover incentives to institutions do not readily translate into incentives for students. This is one reason why there seems little appetite to seek to promote technical education by increasing funding

rates for certain courses. The other reason is that the policy of all political parties remains one in which the choices of students (or their parents) drive the system. The arrangements for funding therefore reflect the desire to establish a 'level playing field' as a basis for institutional competition which it is believed will maximise quality and responsiveness.

There are however a limited number of areas where funding policy might be better aligned with the aspiration to increase the provision and uptake of technical education. The first concerns the capital cost of establishing, and to a lesser extent maintaining, up to date technical facilities. Differences in revenue funding reflect differences in running costs; they take account of the greater consumption of materials in technical subjects but mainly reflect differences in group size. They do not systematically reflect the extra cost of setting up – the capital equipment or the extra space required in some technical disciplines.

The impact of the extra cost of establishing technical facilities is that STEM provision cannot be extended as readily as that for other subjects when demand increases³². Institutions do receive allocations of capital funding but it is less predictable and operates on a longer time frame. To be sure that growth in technical education is not constrained by an inability to respond quickly a more pro-active capital strategy might be required that finances development ahead of demand materialising. Such development, with its attendant risks of over-supply might be informed by the forward planning and priorities of LEPs who might be charged with ensuring the availability of STEM capacity in their areas.

A second area of potential difficulty concerns the growing development of technical education for the 14-16 phase. The clearest illustration is the distinctive provision offered by UTCs but parallel developments in FE colleges and studio schools raise the same issue. Post-16 funding arrangements reflect, in broad terms, the nature of the curriculum as well as the number of students; pre-16 they do not. To expect UTCs and other providers to deliver a high-quality technical education for the same funding as for a traditional academic education is clearly not sustainable.

There are two precedents in the post-16 system for recognising that some institutions face extra costs. Certain agricultural colleges attract a higher rate of funding for courses that are also offered elsewhere because they do so through the use of particularly extensive practical facilities. There are some parallels with the nature of provision in UTCs which deliver the national curriculum requirements but in a distinctive and more resource intensive way.

The more general arrangement post-16 is to reflect the extra cost of particular subjects wherever they are studied – either in a broad brush manner by EFA or qualification by qualification as with SFA. Given the variety of institutions now starting to offer a more technical curriculum from 14+ this seems the better approach to adopt, and the EFA method would appear the most practical. It is also the most pragmatic approach – EFA would only need to apply from age 14+ the method it uses from 16+.

Finally it could be useful to revisit the arrangements for funding provision at levels 3 and 4 for students over the age of 24 to seek to ensure that technical subjects are not unintentionally discriminated against. At the present time support is only available for this provision through loans. Unlike HE there is no public funding to institutions to ensure that technical programmes need be no more expensive than academic programmes of the same size.

There are two possible consequences of these arrangements. One is that students on technical courses need to take out larger loans (or pay higher fees) than others, which could act as a

³² The positive aspect of this is of course that institutions do not withdraw them lightly as they know they will be difficult to re-instate.

disincentive to participation. The other is that institutions under-price technical subjects to avoid such a disincentive; it seems that many have chosen this latter route, which risks making such courses a less attractive proposition to colleges in the long run.

Serious consideration needs to be given to rectifying this anomaly, particularly since the extension of loans to level 2 and/or to younger students is under active consideration. At the same time consideration should be given to incentivising student participation by writing off advanced learning loans should someone progress to a higher level technical course. The precedent of writing off debts for those who progress from a course of Access to HE to higher education appears to have been highly successful in maintaining participation on these programmes.

RECOMMENDATIONS

It is recommended that government should:

1. Ask LEPs to use their oversight of the allocation of skills capital funding to ensure that the provision of technical education is not unduly constrained by the lack of relevant facilities.
2. Ask the Education Funding Agency to develop proposals to reflect the extra costs of technical education in its revenue funding approach from the age of 14+ in the same way that it does from 16+.
3. Ask the SFA to provide funding to institutions to ensure that adult students following technical courses at levels 3 and 4 need pay no higher fees than those for academic courses of the same size.
4. Explore how adult students might be incentivised to undertake higher levels of study in technical subjects by cancelling outstanding debt for those who progress to higher technical programmes.
5. Explore whether giving LEPs the power to allocate a limited amount of funding on a 'place led' basis might encourage investment in STEM subjects where demand is currently low but expected to grow.