

Making maths and English work for all

The review of what employers and learners need from the maths and English qualifications taken by young people and adults

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& Training
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Executive summary

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Executive summary

Employers are concerned about the maths and English skills of their recruits, but they are less concerned about qualifications. They use qualifications as a proxy for skills and, like the general public, employers regard GCSE as the main benchmark. However, Functional Skills are emerging as qualifications that are valued by employers, learners and the education and training sector.

There are three interrelated themes that figure strongly in this review:

- Functional Skills are gaining widespread recognition across small and large employers. Employers who know about them like the approach they embody i.e. applied skills, flexible assessment and problem solving.
- Functional Skills are benefitting learners because they focus on helping people to acquire skills that are valued by employers. They are needed because otherwise those who have not achieved a good pass at GCSE have no public certification of the skills they have acquired.
- The system of Functional Skills is not broken but could be improved. If government continues with the policy of investing in the literacy and numeracy skills of young people the current arrangements for Functional Skills are a good basis on which to build. However, there are steps government and others can take to accelerate the rise in employer recognition and further improve the relevance, rigour and value of these qualifications.



1. Introduction

Maths and English are central to work and life; success in these subjects is linked to better life chances and greater achievement. Following the 2011 [Review of Vocational Education – The Wolf Report](#), government policy is to enable as many young people as possible to improve their literacy and numeracy and to have the chance, if they have not already done so, to gain GCSE maths and English at a grade C or above. It is clear from discussions with employers that GCSE is a qualification they trust and many use it to select employees. As the Ofqual report [Perceptions of A level, GCSE and Other Qualifications](#) points out GCSE is commonly used by employers to make a judgment about a candidate and is used, according to the report, by 63% of larger employers and 51% of smaller employers. GCSE is a valuable, respected and well-known qualification with a strong and established brand, although it is clear from this review that many employers do not have a reliable grasp of the skills and knowledge that GCSE tests.

Significant numbers of young people leave school each year without good GCSE passes in maths and English. In the academic year 2013/14, 37% of pupils did not achieve grades A*-C in both. For many learners without good passes, including many adults and those already in employment, such as apprentices, GCSE retakes may not be the most appropriate route for acquiring or demonstrating maths and English skills.

1.DfE SFR 32/2014: Level 1 and 2 attainment in English and maths by 16-18 students, 2012/13, 11 September 2014

Some learners, having found GCSE difficult in the past are daunted by the prospect of taking it again. The feedback from practitioners is that many of this group of learners find it more appropriate and rewarding to master maths and English if they learn in a work-related context.

A number of non-GCSE qualifications have been designed and developed to meet the needs of this group of learners. Some were originally devised as “stepping-stone” qualifications to GCSE, for example the Cambridge Progression units. Others, such as Functional Skills, provide an alternative route based on preparation for work and life. Such qualifications can be a platform for further study, but in the case of Functional Skills, their primary purpose is to help people to gain the most from life, learning and work. However, to be successful and to meet their primary purpose, Functional Skills have to have credibility with employers.

The Minister for Skills and Equalities, Nick Boles MP, commissioned the Education and Training Foundation in November 2014 to consider how maths and English provision and qualifications available to people aged over 16 years, other than GCSEs, are understood by and meet the expectations of employers.

This review has asked employers their opinion of Functional Skills and other non-GCSE maths and English qualifications. It has asked them whether they understand and value them and whether these qualifications recognise the skills employers require for their workplaces. To gain a rounded view of the value of these qualifications the review has been widened to include the views of practitioners, learners, providers and stakeholders. It has also considered the work that needs to be done to review the standards on which they are based, raise their profile and improve the brand.

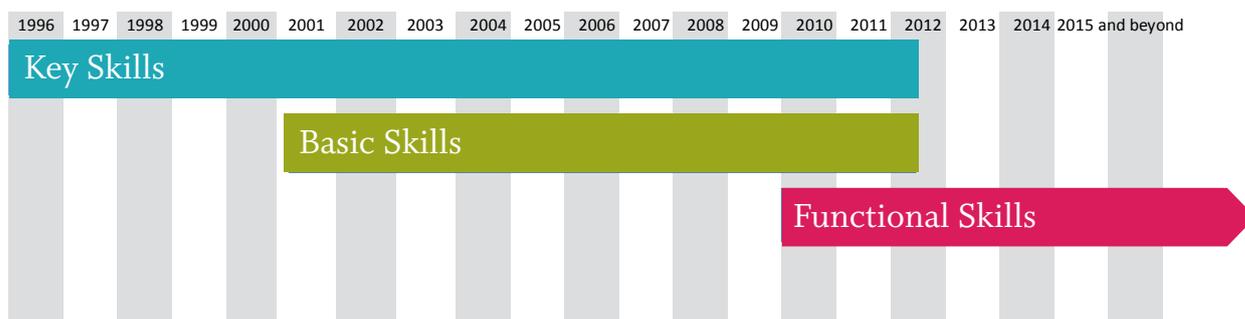
2. Background

There are currently several hundred non-GCSE maths and English qualifications that are available for public funding by either the Education Funding Agency (EFA) or the Skills Funding Agency (SFA). These combine into various qualification types: QCF English and maths (entry to level 2), iGCSE (regulated: counting towards English Baccalaureate), free standing maths and Functional Skills, and, in addition, English for Speakers of Other Languages. The funding picture changes as of the end of July 2015 when the revised condition of funding applies and funding is removed from the QCF English and maths qualifications at Level 2.

The qualifications fall into three main groups. One group are qualifications that awarding organisations have devised as a platform for further learning with the aim of developing some of the knowledge and skills required to achieve Level 2, whilst another group are specialist English qualifications for speakers of other languages. A third group has been devised to provide learners with the skills for the workplace. The main qualifications in this group are Functional Skills, which were introduced in 2009/10 and are currently offered by sixteen awarding organisations.

There have been a number of changes to maths and English qualifications in recent years. Basic Skills qualifications, developed from the literacy and numeracy standards of the Basic Skills Agency in 2001 as part of the Skills for Life Strategy, have been phased out. Functional Skills replaced Key Skills. These were developed in response to the 1996 Dearing Report, which raised concerns from employers about the lack of essential skills in young recruits. Functional Skills are now the most commonly used qualification.

Figure 1. The recent development of literacy and numeracy qualifications



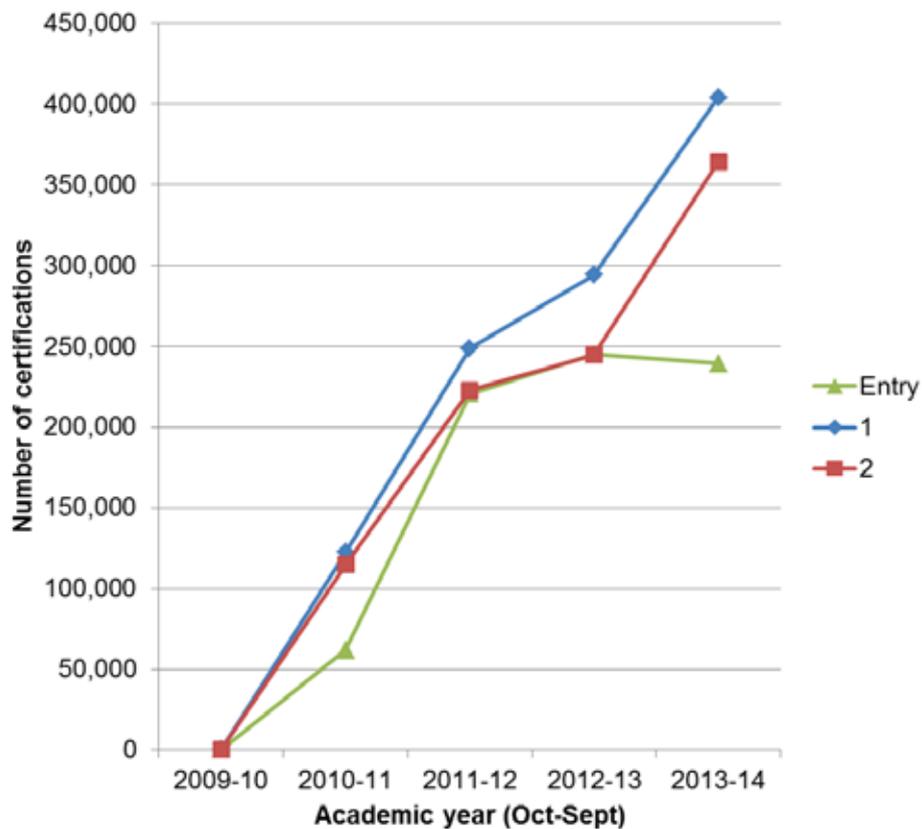
Functional Skills are only available in England. Different qualifications in literacy and numeracy are available in Wales (Essential Skills), Northern Ireland (Essential Skills) and Scotland (Core Skills). This report focuses only on England.

Functional Skills have become the most widely used non-GCSE qualifications. Across maths, English and ICT (the other functional skill) the number of qualifications achieved has increased from just fewer than 300,000 certifications in 2010/11 to just over a million in 2013/14. Functional Skills in maths and English are offered at Entry levels 1, 2 and 3, and at Levels 1 and 2. They represent around 7% of all regulated qualifications in England and outside of GCSE are the highest volume qualifications that Ofqual regulate.

Functional Skills enable learners to apply their skills in everyday life, and can be contextualised for individual study programmes. The assessment regime is flexible. Awarding organisations offer paper-based assessments, on-line assessments or a mixture of the two. Flexibility also exists because of the availability of on-demand tests and assessments that can be taken on employer premises.



Figure 2. Functional skills certifications 2009–2014 at Entry level, level 1 & level 2 (Ofqual)



3. How the review was carried out

The review has been overseen by a steering group consisting of representatives from the Federation of Small Businesses, The UK Commission for Employment and Skills, the Association of Employment and Learning Providers, the Association of Colleges and the National Network of Local Adult Learning Providers, HOLEX. The impartial chair was Professor Ed Sallis, OBE.

Delivery partners Pye Tait Consulting have been responsible for the desk research and an open consultation over a four and half week period. The study yielded both quantitative and qualitative data through a variety of research methods that included:

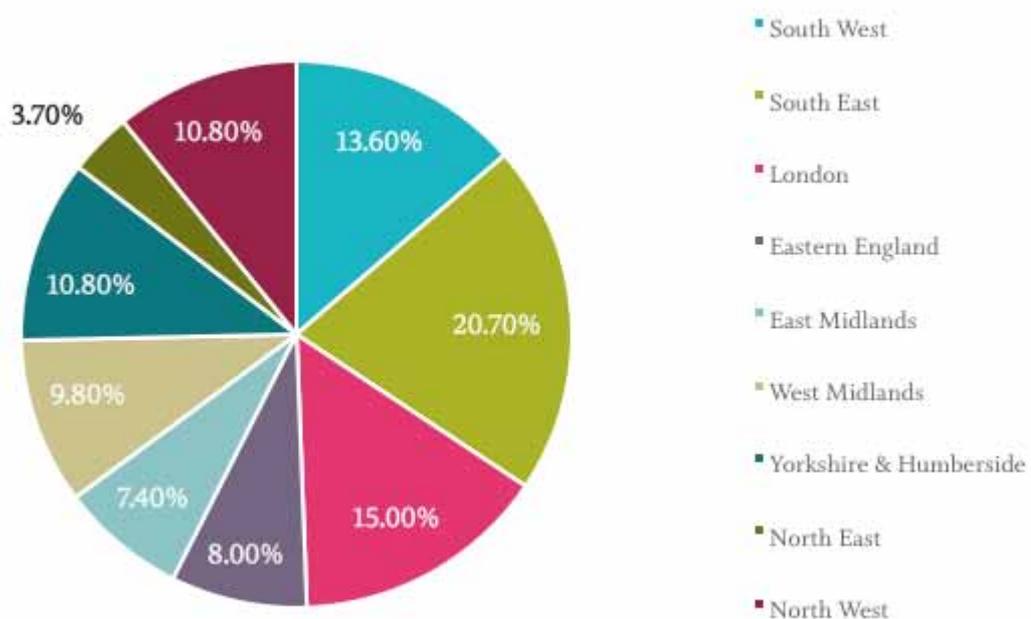
- Online employer survey
- Telephone employer survey
- Online survey of stakeholders and practitioners
- Telephone survey of stakeholders and practitioners
- Workshops, webinars and social media discussions with practitioners, awarding organisations and employer representatives
- Learner engagement

In addition to the quantitative research, bilateral and multilateral discussions were held with a number of key individuals and stakeholders and points raised in these discussions have fed into this review. The steering group also invited a number of expert witnesses to their meetings. This expert qualitative information has been important in formulating some of the judgements made in the report.

In total, 1395 individuals and organisations have contributed to the research. 646 employers contributed, as did 489 educational practitioners. Pye Tait engaged 229 educational stakeholders, and 31 learners, all of whom are apprentices. While the review broadened the spread of its research to cover practitioner, stakeholders and learners its primary focus was on employers.

The employer sample consists of a spread across English regions.

Figure 3. Employer respondents- by region



The survey engaged employers both large and small. Responses from employers were split 42% SMEs (under 250 employees) and 58% larger firms.

Figure 4. Respondent size bands

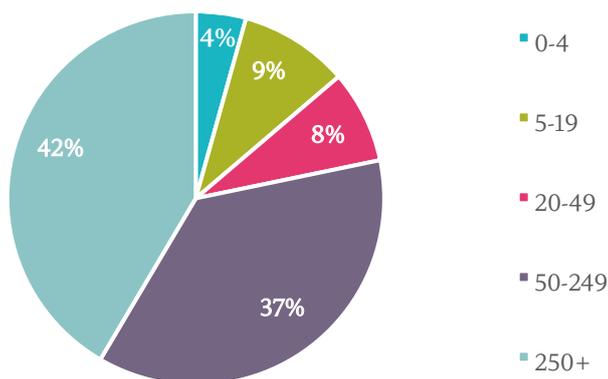
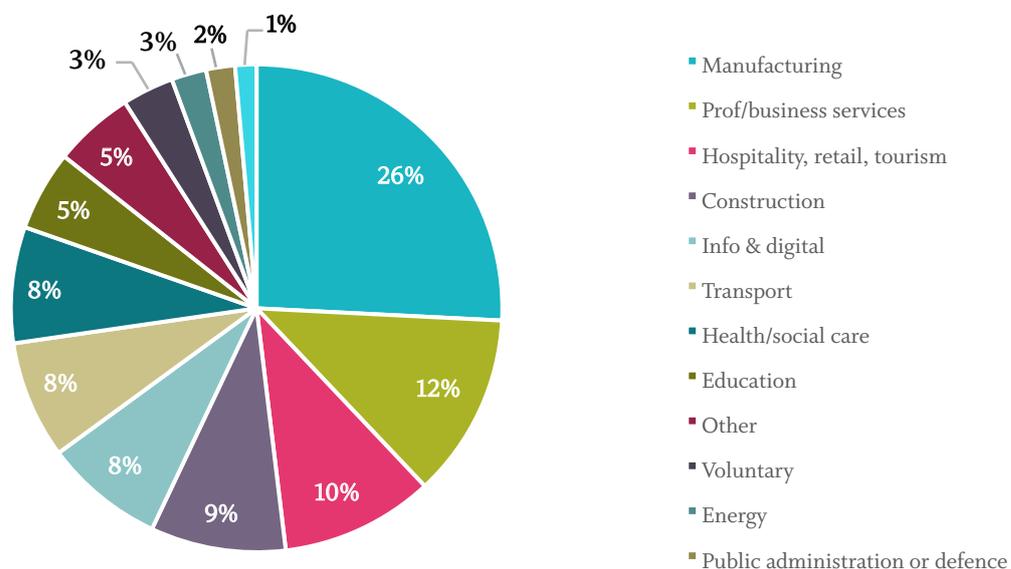


Figure 5. Employer respondents by economic sector



4. Employers' views

This is the first major study of employer views of non-GCSE qualifications in maths and English. Its importance is that it provides an initial evidence base on which to ground a discussion on how these qualifications meet the current and future needs of employers. The review focuses particularly on Functional Skills as these qualifications have been designed to meet the needs of employers. By its nature this is not a definitive study, but given the coverage of employers by sector, region and size it is a valuable pointer to employer attitudes.

The vast majority of the employers who responded to the consultation said that they needed young people with good maths and English skills. It was clear that they want their new recruits to have strong practical and applied skills in maths and English and they value skills over qualifications. Employers do, however, value qualifications as proxies for the skills they require. This is an important point because it means that a successful vocational qualification must not only give students the skills that employers want and need, but also clearly and reliably signal that it does so.

Employers who took part in this survey have concerns about the impact that poor English and maths skills have on their business. Three quarters of the employers consulted believe that action is needed at national level to improve maths and English skills for people who have not achieved grades A*-C at GCSE (77% of larger companies say this is necessary).

Employers are less satisfied with the current level of English than maths skills in young people. When asked about maths and English skills and which, if any, is the greater cause of concern, 46% of employers said that they are most concerned with English skills, 17% said that maths was their main concern and 26% said that English and maths are of equal concern to them. Only 11% of employers said they had no concerns about either subject.

Figure 6. Which skills are of the greatest concern?



Employers are less interested in what they consider to be academic mathematics (e.g. algebra, calculus, etc.), but instead want applied and practical skills including approximation, mental arithmetic, capability with visual data, a solid grasp of units of measurement, the ability to check their own calculations and simple problem solving.

Almost half of employers said that English skills are of the greatest concern. Employers report that they are looking for the “basics” in English, and need significantly enhanced listening and speaking skills, good writing, oral and spoken comprehension and improved spelling, grammar and vocabulary. Employers reported problems with some of their potential recruits and young employees who have difficulties in

constructing e-mails, use text speak rather than properly constructed sentences, and have poor spelling and communication skills.

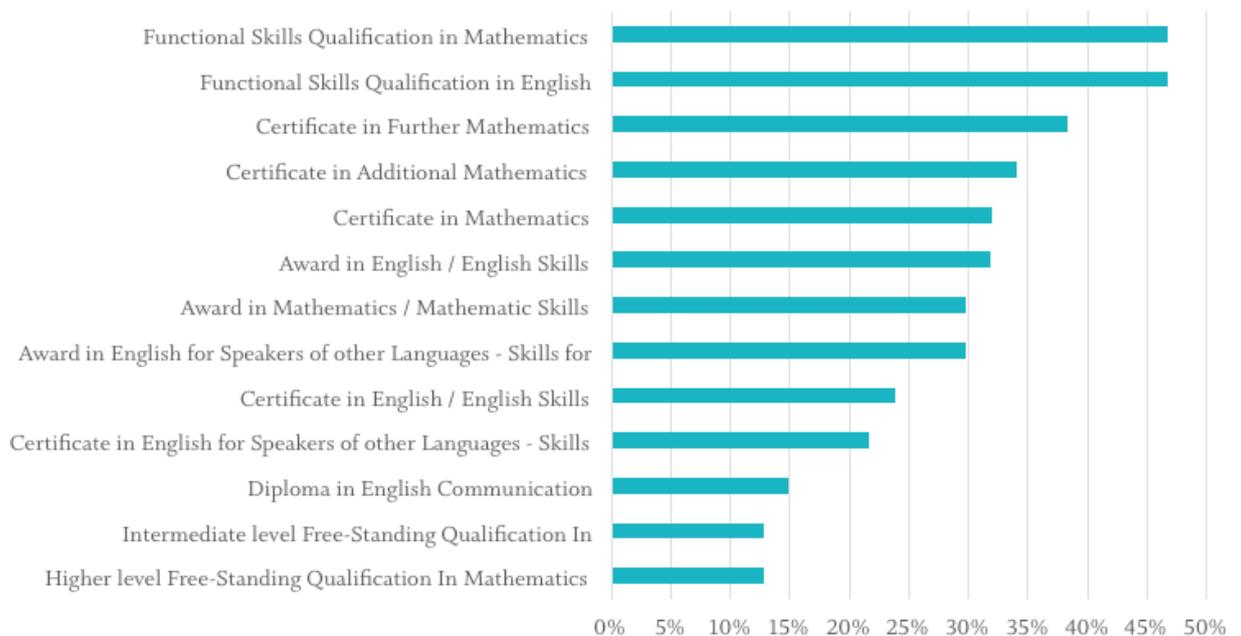
Many employers, from both SMEs and larger companies, report that they struggle to know how to respond when their employees fail to understand that correct spelling, grammar and punctuation are important. When they encounter deficiencies in English and maths, around a third use in-house mentoring, external courses, in-house training and make use of e-learning materials.

One of the main purposes of this review is to understand what employers know about non-GCSE qualifications in maths and English, and whether these qualifications are important and useful to them. It is important to recognise that the vast majority of employers are not experts in either subject and do not understand in any detail skills and knowledge covered in qualifications. Indeed, employers are primarily interested in their businesses, and their benchmarks are the requirements for everyday business and these do not necessarily directly link to the content of qualifications.

The following chart shows employers' awareness of non-GCSE qualifications in maths and English. It shows the proportion of employers who reported that they are very or somewhat familiar with qualifications in maths and English at Level 2 other than GCSEs.

Of the large number of non-GCSE qualifications Functional Skills have the highest level of recognition. 47% of the employers said they are familiar or very familiar with these qualifications (37% are very familiar). However, for other non-GCSE qualifications there is less familiarity, with some being better known than others. Qualifications for speakers of other languages do have a degree of employer recognition, as do some of the qualifications designed to give learners progression opportunities, such as the Cambridge Certificates.

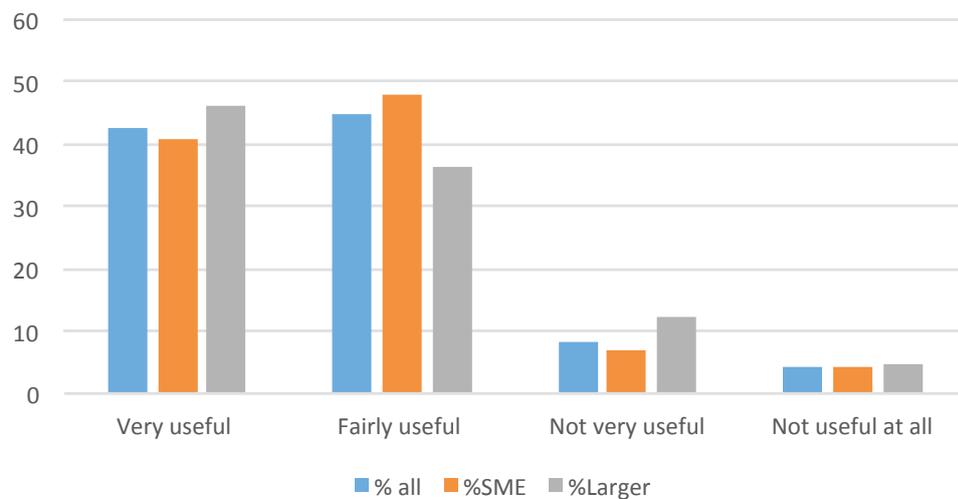
Figure 7. “Very” or “Somewhat” familiar with non-GCSE qualifications



Of the employers who have familiarity with Functional Skills, the vast majority (87%) think they are very useful or fairly useful to the world of work and see them as being an appropriate vehicle for developing the skills they need. This is an important finding and confirms the smaller employer survey that Ofqual carried out in 2014 for their review of Functional Skills, entitled Improving Functional Skills. In their call for evidence 70% of employers and 77% of training providers said that they believed that Functional Skills meet their intended purpose of improving skills for life and learning.

Figure 8. The value of Functional Skills

(The 47% of employers who are aware of Functional Skills qualifications commenting on how useful they are to the world of work)



Some employers reported that they are confused by the proliferation of non-GCSE qualifications in maths and English. There are several hundred non-GCSE maths and English qualifications. Even the market leader, Functional Skills includes features that some employers find confusing, such as being able to differentiate between Entry levels 1 and 2. There were also some employers who expressed concerns about the rigour of the qualifications and their perceived lack of comparability to GCSE. The obvious differences between the test papers of different awarding bodies were also mentioned, as were issues around language and the cultural contexts of the assessments.

However, there were many employers who had little or no awareness of alternative qualifications but who nevertheless thought that practical qualifications were important. This quote typifies the perceptions of employers who rated their awareness as low:

“I had never heard of these qualifications, but I firmly believe that vocational and non-GCSE qualifications are important as people develop in different ways and at different times and GCSEs certainly do not suit all. My problem is that, there seem to be so many of these qualifications and I have to admit that I do not understand what they all are and what level of competence these apply to.’

There was some evidence that employers who had apprentices felt that Functional Skills were a better match for their apprenticeships than GCSE. While there was not a specific question on the questionnaire about this issue it was probed in discussions. The reasons given were because of the problem-solving approach and the flexible assessment arrangements. This group of employers emphasised that flexible assessment arrangements are of critical importance to them because it helps them to manage their apprenticeship programmes and tailor training to apprentices needs. Employers also liked the fact that the content is taught in a contextualised way and is, therefore, regarded by apprentices as more relevant to their vocational learning. A major retail employer said:

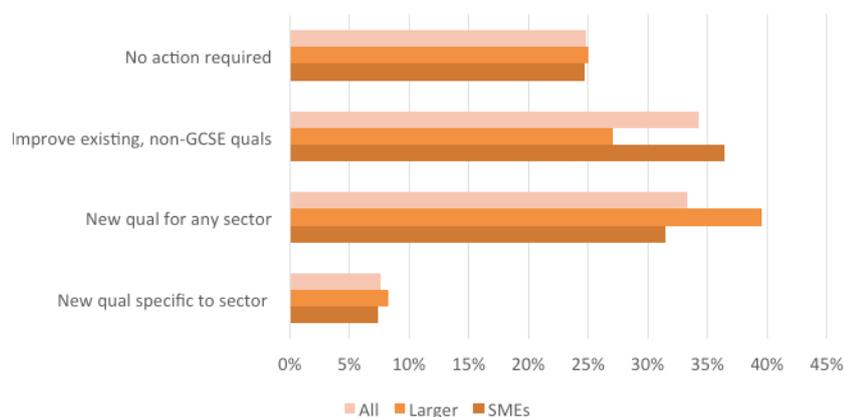
“Functional Skills build a level of confidence within these colleagues – they can do more than they thought they could do. It encourages them to command their potential”

Employers were asked whether they thought new vocational English and maths qualifications should be introduced. The following table shows that nearly 25% of employers thought no actions are required, while a third wanted to improve existing qualifications and 35% wanted to see new qualifications introduced. The remainder of respondents thought that developing new sector specific qualifications could improve standards as they could be tailored for construction, business, health and social care, etc., and could aid the motivation of learners and apprentices and provide structured skills for employers. However, this view represented only a small number of respondents.



Interestingly, many of those employers who showed most familiarity with apprenticeships felt there was a need for stability and said that changing the name could add further confusion in the marketplace, and could undermine the confidence that was building up in the support of Functional Skills. This need for stability was reinforced during the interviews carried out with employers, a view that was echoed by feedback from stakeholders and practitioners.

Figure 9. Should new qualifications be introduced?



5. Views of practitioners and learners

The researchers sought the views of learners, all of whom were apprentices, and from teachers and trainers either from their response to an on-line questionnaire or from seminars and webinars. The learners consulted said they wanted to understand the relevance, purpose and importance of the maths and English they are studying. This is confirmed by recent research commissioned by the Foundation and carried out by NIACE. This need for practical relevance is a point emphasised by many practitioners, many of whom point to the difficulties of re-engaging young people who have poor GCSE grades. They talk of the problems of motivating those who are ‘endlessly repeating failure’ and who often lack the underpinning knowledge and skill to obtain good GCSE grades on one year programmes. GCSE is a broader qualification than Functional Skills, with a greater volume of content.

Some learners, having found GCSE difficult in the past, are daunted by the prospect of retaking GCSE maths and/or English. They prefer the idea of studying a more practically based qualification that takes them to their goal of good functionality by a different route. Many learners find it motivating to master maths and English if they learn in a work-related context and can relate their maths and English to that context. As the Education and Training Foundations report on Effective Practices in Post 16 Vocational Maths states:



“A variety of literature supports the idea that contextualized learning of maths improves both learners’ overall understanding and the extent to which they retain the information they have learned”.

There was a strong sense from the practitioners who took part in this survey that non-GCSE qualifications, and particularly Functional Skills, unlock motivation, give confidence and provide the tools to allow learners to fulfil their aspirations and become confident and skilled members of society.

They provide a route that allows students to learn in a contextualised way that engages and motivates them and provides assessment at appropriate points.

One of the major issues in the success of government policy is ensuring that there is sufficient investment in the skills of teachers and trainers to teach maths and English in the education and training sector. For many practitioners, being able to embed maths and English in the students' vocational programme in innovative and interesting ways is one way to improve learners' mastery of maths and English skills. This is a view amplified in the findings of the 2013 Commission on Adult Vocational Teaching and Learning's report *It's about work... Excellent adult and vocational teaching and learning*. The Commission points out that there are issues in embedding maths and English. Specialist teachers have the subject knowledge but often lack the knowledge of the vocational context, while many vocational teachers are unable to embed literacy and numeracy, as they do not have the skills necessary to teach English and maths to the required level. The Education and Training Foundation has been tackling this problem through extensive programmes of support to improve teaching skills of specialist and vocational teachers in maths and English. For example, through Teach Too Phase 2, it is encouraging industry specialists to share their maths skills in the classroom so that learners can understand at first hand the importance and relevance of maths in the workplace. Many of the respondents who took part in discussion for this review argued that more work needs to be done in training teachers and in developing the pedagogy around vocational maths and English.

3 NIACE Engaging and motivating learners in GCSE maths and English 2015



6. Functional Skills - issues

6.1 Stepping-stones or an alternative route?

Most of the practitioners who took part in the survey reported that while Functional Skills can and are being used as a pathway to GCSE, tagging their purpose as a “stepping-stone” was not helpful and not entirely accurate. They made the point that because of their design and purpose Functional Skills are in reality an alternative route, and the success of the qualification should be judged by reference to employability rather than its ability to help learners prepare for GCSE retake. This does not mean that they thought that Functional Skills learners should not be encouraged to retake GCSE, but that progression should not be seen as the only or main outcome of the qualification. It is important to acknowledge that Functional Skills were not designed as a “stepping-stone”, although a number of non-GCSE qualifications, such as the Cambridge Progression Units, have been designed specifically to develop skills and concepts necessary for success in GCSE.

6.2 The impact of the new GCSE grading system

The argument that Functional Skills should not be seen as “stepping-stone” qualifications is brought into sharp relief by the grading system for the new GCSE. In future, the reformed GCSE will have the “good pass” defined at a more challenging level than the current grade C and, in addition the new GCSE maths qualification is larger in content. This will raise the bar for learners, and the setting of the “good pass” level may lead to a perceived decrease in achievement. This will mean that a greater number of learners will need a valued and credible qualification to signal to employers their competence in maths and English.

6.3 Standard setting for Functional Skills

There was much evidence from employers and practitioners that an improvement in the rigour of Functional Skills would be beneficial to learners, although without impacting on the benefit of flexible assessment arrangements. Ofqual is considering the impact of flexible and on-demand assessment on standards and comparability as set out in its January 2015 report, *Improving Functional Skills*. This review supports the approach that Ofqual is taking to ensure that the quality of assessment materials is improved standard setting procedures are strengthened and qualifications better meet end user needs.

These improvements will ideally be supported by a review of standards on which Functional Skills are based. The standards were last revised in 2000 by QCA and while there is no evidence that employers’ requirements have altered, the impact of technology and changing trends in the workforce suggest that it may be prudent to revisit them. One practical issue in reviewing standards is that the organisation that oversaw what were then the adult literacy and numeracy standards no longer exists. An update of the standards would require an organisation to be given the responsibility for working closely with employers to review them.

6.4 Level 3 Functional Skills

Although not part of the review during discussions with employers and practitioners the issue of a Level 3 Functional Skills was raised. They commented that in many vocational areas learners need a higher level of practical work-related maths and English, especially to support higher-level vocational studies. A post-GCSE core maths qualification has been designed and is intended to meet the needs of many learners, but there is no similar qualification for English. If there were support for a Level 3 Functional Skills its potential would need scoping and there would also need to be an understanding of content, breadth of study, and the necessary rigour of the assessment. It would only have currency if there were recognition of its value by employers. This suggestion would need further research and consultation.

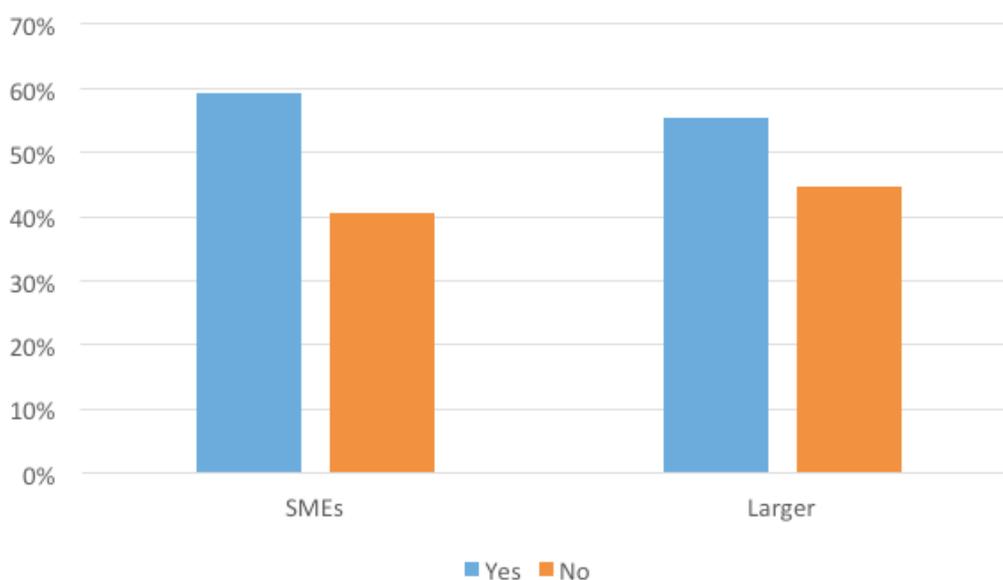


7. Recognition and branding

Contributors to this review have indicated that it takes two generations for the brand recognition of qualifications to become widely recognised. The landscape for non-GCSE maths and English qualifications has been confusing with frequent changes in names that have included basic skills, core skills and key skills. A number of educational stakeholders have drawn attention to the fact that when GCSEs were reformed they continued with their existing name.

A majority of both large and small employers are content with the title “Functional Skills”, although about 4 in 10 thought that the name does not convey a clear message. However, few of those who did not like the name could come up with an alternative, although there were suggestions that the qualifications should be retitled Functional Maths, Functional English, etc. making the purpose of the qualification clearer.

Figure 10. Does the name Functional Skills convey a clear message?



This review indicates there is sufficient investment and momentum by awarding organisations, providers, and teachers to establish Functional Skills as valuable, widely recognised qualifications in the labour market. In the meantime, there are steps government and others can take to accelerate the rise in employer recognition and further improve the relevance, rigour and value of these important qualifications. A major factor in improving employer recognition would be to emphasise the importance of Functional Skills in meeting learners’ and employers’ needs.

8. Conclusion

This review finds widespread agreement about the critical importance of maths and English skills to employers and their desire to see standards improved. Whilst it is vital that the whole education system, pre and post-16, improves success rates in GCSE, this review has found that many employers understand the contribution that non-GCSE qualifications, and especially Functional Skills, play in giving young people and adults the skills they need in the workplace. A good command of practical maths and English are two of the most important skills that any person can have.

The review highlights the view that the main non-GCSE employability qualification, Functional Skills, should be viewed as an alternative route rather than a “stepping-stone”. It should continue to be seen as a qualification in its own right with the key purpose of satisfying employer requirements. This clarity of purpose will give it greater currency with employers. It will also lead to a greater debate about what is expected from Functional Skills and whether standards, assessment and rigour are meeting the needs of the labour market.

However, there is awareness that an alternative route will only have validity and currency if two criteria are met. Firstly, the standards have to be aligned to employability and the content has to be based on what employers need for their workforce. Secondly, Functional Skills have to have flexible but more standardised and rigorous assessment to give employers confidence in them.



9. Recommendations

9. 1. Making changes to the content and assessment to ensure employers' needs are met.

- a. Rigorous but flexible qualifications are needed which clearly and reliably signal to employers the degree to which a learner has been successful in mastering the practical and applied English and maths skills required.
- b. The curriculum content and assessment methods of Functional Skills qualifications should be reviewed to ensure they remain relevant to the needs of employers both now and in the future.
- c. Consideration should be given to a rationalisation of non-GCSE maths and English qualifications in order that they may have greater public and employer recognition and reduce confusion.
- d. The standards on which Functional Skills are based should be reviewed, taking account of employer requirements. An organisation should be designated to take forward the standards review.
- e. The work to support teachers and trainers in improving their skills to teach maths and English needs to continue, as does related work to develop the pedagogy around vocational maths and English.

9. 2. Improving employers' awareness and understanding of Functional Skills.

- f. Awareness and understanding amongst employers of the current non-GCSE maths and English qualifications, particularly Functional Skills, should be improved by a publicity campaign, setting out the purpose and value of them.
- g. The messages in any publicity campaign should be simple, consistent, well evidenced and set in the context of all maths and English qualifications. This will avoid any perception that Functional Skills are simply a “consolation prize” awarded by a GCSE-focused system, signalling failure rather than success.
- h. Consideration could be given to making minor changes to the titles of the qualifications i.e. Functional Maths, Functional English, so that it is clear to employers that learners have gained a practical literacy and/or numeracy qualification. However, sharp discontinuities in the content and labelling of these qualifications should be avoided
- i. Improvement to the curriculum and qualifications should be made on the basis of regular, reliable and representative feedback from employers and providers, and student progress and attainment data.

appendices

Appendices

Contributors

The review group wishes to thank the many employers, practitioners, colleges, learning providers and learners who gave their time to talk to the research team. In addition to the research, discussions were held with a number of expert witnesses, including Rob Wall and Grace Breen, CBI; Ann Haig-Smith, Head of Faculty English and Maths, Abingdon & Witney College; Naomi Nicholson, Jeremy Benson and Ian Pursglove, Ofqual and David Mallows from the UCL Institute of Education; Dr Lynne Sedgemore CBE, Andy Gannon, Joe Lane from 157 Group; Baroness Alison Wolf, CBE; Stewart Segal, Association of Employment and Learning Providers; Graham Razey, Principal of East Kent College; David Hughes, NIACE, and Karen Adriaanse, OFSTED. Our thanks go to them for their time in helping to shape the review.

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