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Developing functional skills qualifications

Standards and assessment approaches for functional mathematics, English and ICT

Final report and recommendations

March 2007

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Executive summary

Introduction

This report provides key recommendations and actions arising from the trials and evaluation of the functional skills standards and assessment over the two component phases:

- Phase 1: Review of the functional skills standards and the development of assessment models

- Phase 2: Trial of assessment materials, and associated issues of qualification design and delivery, with relevant cohorts across the full range of learning contexts

Scope

The functional skills trials phases included nine independent awarding body-led projects as well as two independent evaluation projects. This report has collated the findings and evidence accumulated in this period to inform the development of functional skills pilot qualifications and their effective management and delivery.

Standards

In preparing for the pilots the following recommendations and actions are required:

- The development of nationally agreed common assessment criteria to act as a bridge between the standards and assessment materials and qualifications

- The development of guidance material to support the standards including exemplification materials

- Ensure that GCSE criteria accurately reflect the functional skills standards

- Ensure clear alignment between the standards and the relevant national curriculum levels

- Audit standards to ensure the descriptor terms used at each level are consistent across all standards in each subject area

- Complete the revisions in each subject area to ensure detailed comments have been considered and where appropriate incorporated in the amendments

- Establish an inter-awarding body comparability process to support the pilot phase

Assessment

In preparing for the pilots the following recommendations and actions are required:

- Development of national assessment criteria and detailed guidance on design are required to support the pilot phase

- A national standard is required for the duration of the assessment in each subject at each level

- In order to determine 'functionality', assessment will require nationally agreed high pass marks, standardised across awarding bodies, and the establishment of design parameters which demand the repetition of skills application in multiple contexts

- The pilot should focus attention on awarding body directed task based approaches with the use of generic contexts, while a small number of pilots using centre devised materials should be included, particularly at entry level

- A single component assessment should be adopted for the pilots, with the exception of English

- Further consideration of best practice from key and basic skills work to inform the standalone functional skills in adult contexts.

Manageability

In preparing for the pilots the following recommendations and actions are required:

- The pilot phase should proceed on the basis of awarding body development of assessment materials against nationally agreed criteria with a standardisation process in place across awarding bodies

- The pilot phase should include both on-screen and paper based approaches and robust evaluation of the implications for on-screen implementation should be undertaken and reported

- On demand availability of assessment is desirable but would need to be staged in relation to implementation

- Teaching and delivery support in centres will be critical to learner success and robust support is needed in preparation for pilots. QCA will engage with QIA and SNS to support workforce development with pilot centres

- Evaluation of the impact on curriculum content will be required during the pilot phase

- Investigate with partner agencies the use of key skills practitioners as 'change agents' in centres

- Establish a strategy for raising the status of functional skills with key stakeholders

- Further evaluation will take place during the pilot phase on the use of a national test approach for functional skills assessment.

GCSE

In preparing for the pilots the following recommendations and actions are required:

- Pilots should proceed on the basis of models 1, 2 and 3, and the approach preferred in Wales. DELLS will take forward their approach and contribute outcomes to the QCA evaluation activity as appropriate

- Further work will be completed on the standards and the alignment of these to revised subject criteria for GCSE

- Work will be completed on technical agreement over weighting within GCSE in order to prepare for the pilots

- Modelling in the pilots will need to thoroughly interrogate the impact of the 'hurdle' when applied to a range of candidates across the subject areas

- Further consideration needs to be taken of the impact of multiple hurdles within Diplomas and the proposals for Apprenticeship qualifications

- Subject specialists and representative bodies meet to ensure assessments for functional mathematics fulfil requirements for pilot activity and to evaluate the impact of the introduction of functional skills

- Further collaboration will take place to ensure bodies responsible for supporting delivery are fully briefed in relation to outcomes from the trials and responses from centres

- Work closely with colleagues in Wales throughout the pilot period to ensure that evaluations are shared and that a regulatory partnership in GCSE is maintained

Access and DDA

In preparing for the pilots the following recommendations and actions are required:

- Guidance in relation to access and special arrangements will need to be prepared

- Further consultation will take place with relevant specialists, including legal advice, as well as with teachers, learners and other related groups, to ensure access and special needs are accounted for in the pilots

- ESOL and other particular considerations will be reviewed to inform the development of pilot materials and activities

Independent evaluation of the trials

- On the basis of the reviewed evidence, including the centre visits undertaken, the evaluation project concluded that the trials broadly demonstrate validity across the range of QCA requirements in terms of methodology adopted

Final revisions to functional skills standards	**April 2007**	QCA
Development of national assessment criteria	**April 2007**	QCA/ABs
Identification of pilot centres and notification	**April 2007**	QCA/ABs
Engage with QIA and SNS to support preparation of centres for delivery of pilots	**April 2007 onwards**	QCA/DfES
Development of guidance materials to support qualifications	**April / May 2007**	QCA
GCSE criteria alignment	**May 2007**	QCA
National curriculum alignment review	**May 2007**	QCA
ITT and contract for evaluation of pilots	**May 2007**	QCA
Accreditation of pilot qualifications completed	**mid-May 2007**	QCA
Assessment standardisation meetings	**June 2007**	QCA/ABs
Contracts agreed with ABs	**May / June 2007**	QCA
Pilot qualifications commence	**Sept 2007**	QCA/ABs/Centres

Pilot arrangements

- QCA has met with the awarding bodies involved in the trials to review the overall findings and evaluation and has established an agreed process to finalise arrangements to support the pilot programme.

Introduction

Background

Functional Skills qualifications in English, mathematics and ICT are being developed to support and enhance the ability of individuals to operate confidently, effectively and independently in life, further education and employment. The acquisition of functional skills proficiency by learners of all ages is central to the government's skills agenda and this was reinforced by the recent publication of Lord Leitch's report on economic prosperity and skills.

Since October 2006, QCA has been remitted to work with key stakeholders to establish a set of functional skills standards to underpin the development of qualifications in each subject area. The standards have been subject to critical analysis, challenge and evaluation by awarding bodies, sector bodies, subject specialists, regulatory bodies and others. In addition, awarding bodies have worked with the draft standards to develop sample assessment materials. These have been tested and trialled by centres and learners during a three month period.

Participation and access are crucial to the successful implementation of functional skills qualifications. The objective is to deliver these skills to the widest possible range of learners across a range of learning and training contexts from school to work based training. Design and development work during the trial period has evaluated viable delivery and assessment models to support this objective. For young people the relationship between functional skills, the National Curriculum, and GCSE is a critical one. In the future, the relationship with Diplomas and Apprenticeships will also be crucial. Modelling and testing these relationships has been an important element of the work.

This report summarises the findings of the trial period, including independent evaluation reports, and makes recommendations to support the implementation of a three year functional skills pilot programme to begin in September 2007.

Methodology

The trial work has been completed over two phases. Phase 1 was completed in December 2006 and covered the following activity:

- Work with the functional skills draft standards to test their fitness for purpose in each of the subject areas and at each level.

- Use of the draft standards to model sample assessment materials and criteria and to examine what type of assessment is most appropriate, including test, task and portfolio, or a combination.

- Consultation with centres on the planned approaches to assessment in order to evaluate acceptability, manageability and validity.

- Interrogation of qualification specific issues including the relationship with GCSE, achievement profiles and candidate requirements.

The interim report on these activities is included at Appendix 1.

The final phase of activity was completed in early March 2007. This activity included:

- Trials of sample assessment materials and methods with centres and learners to gather performance data and qualitative feedback from learners and practitioners

- Examination in further detail of technical issues for implementing functional skills qualifications and assessment, including the relationship with other qualifications and in particular with GCSE

- Examination of the manageability and resource issues relating to implementation in centres and for awarding bodies

- Examination of accessibility and DDA issues relating to implementation for learners and centres

- Consideration of the impact of the introduction of functional skills programmes on curriculum models, achievement profiles, resources and delivery.

This report summarises the overall findings with particular focus on the outcomes from this phase of activity.

Coverage

Trials

The trial activity was conducted through nine trial programmes led by awarding bodies. A total of 13 awarding bodies with a range of experience including GCSE, key skills and Skills for Life, participated in the trials. The lead bodies and partners are identified in Appendix 2.

In addition, the first interim reports from the Maths Pathways work were considered. These pilots are at an early stage and the reports reference the need to ensure that evaluation of this work is incorporated into the pilot evaluation for functional skills as they move forward. Where relevant points are emerging these are referenced in this report.

Research

In addition to the trial activity, QCA commissioned the Learning and Skills Network (LSN) to undertake research into the delivery and assessment of key skills and adult literacy and adult numeracy qualifications and assessment in order to inform the development and implementation of functional skills qualifications. The conclusions of this work have been incorporated within the findings and recommendations of this report.

The University of Warwick was commissioned to conduct a short evaluation of the trial activity and reports. A summary of the findings from this work is included in section 7.

Discussions and consultative activity

Through the trial period, discussions and events have been held with a range of bodies, including those with a particular interest in the subject areas covered by the proposed functional skills developments. The outcomes of these discussions and the various issues raised by the groups concerned have also been accounted for within the findings and recommendations of this report.

Standards

The detailed work on evaluating the appropriateness of the draft standards for functional skills in English, mathematics and ICT was undertaken in phase 1 of the trial programme. The interim reports detailed areas for revision and amendment. Additional analysis of the standards has been an outcome of the trial activity in phase 2 where the standards have been used to underpin the development of sample assessment materials and approaches.

The QCA interim report identified that broadly the standards are sufficient to articulate 'functionality' in each of the subject areas but there was detailed comment on each of the subject standards in relation to clarity and useability. These comments and those presented in the final reports are now the subject of scrutiny and the standards are being amended with the support of both subject specialists and awarding body representatives in order to finalise the set that will be used to underpin the pilot qualifications.

The following summarises the key findings at the end of the trial phase:

The suitability of the draft standards to form the basis of development of qualifications in, and assessment of, each of the functional skill areas at each level.

It is clear from the reports that the standards alone are not sufficient to form a consistent and standardised approach across awarding bodies for the development of qualifications and assessment. Several of the submissions reported that the standards, as presented, provide too much scope for interpretation and supporting material will be needed to ensure consistent interpretation. A number of measures across all subject areas are clearly needed to consolidate this process and these have been identified as:

- The development of nationally agreed **common assessment criteria** to act as a bridge between the standards and assessment materials and qualifications

- The development of **guidance material** to support the standards including exemplification materials

In order to further strengthen the standards and to ensure their application in a consistent way to support qualification development as well as teaching and learning, a number of further actions are needed. The reports continued to raise concerns about the alignment of the functional skills standards to subject criteria for GCSE. Currently, the subject criteria are

being revised and this has provided the opportunity to ensure the standards are clearly embedded. As the final revisions are undertaken it will be necessary to:

- Ensure that GCSE criteria accurately reflect the functional skills standards

A similar concern was raised in relation to **National Curriculum levels and alignment with the standards**. Greater clarity of the relationship between these levels is required and it will be necessary to ensure that this is completed to ensure a transparent alignment.

A number of reports focussed on the appropriateness of the content within the standards to the level described. In general the 'level-ness' of the standards is deemed to be sound but there remains some detailed analysis of particular standards in this respect. The use of descriptor terms at each level, for example, 'complex'; 'simple' needs to be standardised. Particular references in the reports for each subject will be incorporated into the final review and amendments to the standards in preparation for the pilots.

Finally, a number of the reports identified the value of an inter-awarding body comparability exercise for ensuring consistent application of the standards. This suggestion will be taken forward to support the pilot work and the sustainability and resource issues this presents will be evaluated as part of the pilot phase of the work.

In addition to those detailed points identified in phase 1 in relation to each of the subject areas the following points were noted:

Mathematics

The articulation of the mathematics standards, specifically in terms of process skills, has created some challenges particularly in the development of assessment materials that can clearly provide consistent assessment outcomes at a particular level. A number of participants identified that the current presentation of the standards provided greater scope for varied interpretation than in the other subject areas. Further analysis of these comments across the trial participants highlights that the focus on process skills is welcomed and supported, but further work is needed to more clearly articulate and present the process elements of the standards.

There remain concerns about the literacy demands within mathematics, particularly if task based assessments are produced for assessment purposes. It is clear from the reports that technical terminology and contextualisation materials will need to be developed carefully to ensure that achievement is not affected by inaccessible language at the given level. This

appears to be a particular concern at entry level and level 1. Guidance will be needed to support the development of materials with regard to this concern.

ICT

There remain concerns that certain aspects of the standards for ICT, particularly at level 2, are specified at a level above that required. In addition, the reports identify a concern that certain sections of the standards focus on specialist IT skills at the expense of functionality. One trial identified a lack of coverage of skills relating to selection of sources, making judgements etc. It will be necessary to audit the standards again to ensure that overall there is a satisfaction that they capture the applied functional skills that are deemed to be important for this area. A number of reports cautioned against development of assessment materials where literacy requirements were either at a higher level than the standards or used technical contexts with high literacy demands.

Two further areas that were highlighted in a number of ICT reports were, firstly, the necessity to ensure that the standards were sustainable over time. Specifically this related to 'future-proofing' the standards to ensure they remain applicable as technology develops. This is an issue that all ICT qualifications must address and it will be important to ensure that the final revisions take account of this issue. Secondly, the reports noted that the repetition of requirements across levels may not be necessary and this should be reviewed for clarity of application in relation to assessment design.

English

In general the English standards have been well received and no significant points were raised in addition to those identified through the interim reports. The level 2 standards received the most attention and there are still some concerns over some of the detail within the requirements. This detail will be considered in the final revisions.

There remain concerns about the potential difficulties in relation to DDA requirements and equality of access, particularly with reference to speaking and listening, as detailed in section 6.

Recommendations and actions

In preparing for the pilots the following recommendations and actions are required:

- The development of nationally agreed common assessment criteria to act as a bridge between the standards and assessment materials and qualifications

- The development of guidance material to support the standards including exemplification materials

- Ensure that GCSE criteria accurately reflect the functional skills standards

- Ensure clear alignment between the standards and the relevant National Curriculum levels

- Audit standards to ensure the descriptor terms used at each level are consistent across all standards in each subject area

- Complete the revisions in each subject area to ensure detailed comments have been considered and where appropriate incorporated in the amendments

- Establish an inter-awarding body comparability process to support the pilot phase

Assessment

Phase 2 of the trials has focussed on the development and use in centres of a range of sample assessment materials to establish the most effective way of assessing functionality in each subject area. This activity has inevitably raised a number of critical issues for awarding bodies, centres and learners themselves on what is understood by 'functionality' and whether a full mastery model is the required outcome.

The following text summarises the key findings at the end of the trial phase:

The suitability and fitness for purpose of the proposed assessment model to form the basis of high stakes, national qualifications.

Mastery

For awarding bodies developing assessment materials, the examination of sufficiency in relation to mastery has been thoroughly examined. There appear to be potential tensions between traditional compensatory models in general qualifications and competence-based assessment in the vocational and skills area. This has required careful attention in designing the assessment materials and developing appropriate marking regimes that will give a degree of confidence in the acquisition of 'functional' skills.

The reports suggest that it is possible to place functional skills requirements on a continuum between compensatory and competence models and that design and marking specifications for functional skills assessments can address this issue. Several mechanisms have emerged as critical in this area.

Firstly, that the required pass mark for functional skills assessments will need to be higher than expected for compensatory models. In this case the trials have suggested a pass mark between 70% and 80% with variations by subject and level. The high-pass threshold for functional skills assessment is required in order to demonstrate learner competence in a particular subject field. This will be a feature of all functional skills qualifications. The consequences of this are discussed below in the section on attainment. This mechanism places significant demands for candidates to consistently apply the skill in the subject area across the assessment tasks.

Technical analysis of assessment approaches, and their implications, is currently being carried out in collaboration between QCA and the trials awarding bodies. This work will see the functional skills standards translated into assessment criteria upon which awarding

bodies base their qualifications. Nationally agreed pass marks, assessment durations and design parameters will be determined with relevant experts by subject and level. It is likely that these same parameters will be present in the functional skills qualifications, irrespective of GCSE integration model. The unitary awarding bodies will ensure that integrated assessment approaches allow competence in the functional elements to be established while maintaining the compensatory nature of the wider units.

The design of the assessment materials is critical to assuring that the required degree of functionality is displayed. This requires demonstration of the skill in more than one context within the overall assessment. The consequences of these assumptions is that:

- Nationally agreed pass marks for each subject, standardised across all awarding bodies will be required

- Design parameters in relation to the repetition of skills within the assessment need to be established and agreed at a national level

Trials involved the use of a range of combinations of approach including multiple choice or short answer questions and longer task based problem-solving activities. Awarding bodies have tested the need for the use of a multiple-choice element within the assessment as a confirmatory objective test. Overall, the use of a multiple-choice objective test is not favoured as a mechanism to support assessment for functionality.

Assessment design

The most common approach to assessment design trialled in this phase of the work has been the use of task-based questions. These are defined broadly as scenario based, problem-solving questions taken in controlled conditions (usually through a timed examination style activity). Variations across the trial activity include the use of multiple-choice questions (see above); the use of learner transcripts in combination with a controlled assessment and teacher led assessment (speaking and listening). The outcomes indicated that task based activity is the most valid model to use in this context.

Test and task-based assessments occupy a spectrum and the assessment approach can be positioned at different points within these parameters dependent upon its appropriateness to the subject area. Advances in task-based design have allowed awarding bodies to incorporate the strengths of test assessments, which can objectively define a learner's knowledge base, within task based activities, providing an effective amalgamation of these

instruments. As a result of these developments, the requirement for a separate test by which to verify or corroborate learner results is superfluous.

The use of portfolios to assess functional skills was addressed by a number of trials through an evaluation of their previous experience from other contexts. The LSN report also commented on the use of portfolios and evaluated the usefulness of this method. In general this work identified that although the portfolio approach undoubtedly provides evidence over time of skills its application is resource heavy both for learners and centres, the outcomes are difficult to standardise within centres, across centres and across awarding bodies, and it is difficult to provide comparative outcomes.

A number of trials used on-screen assessment as the delivery method, specifically those awarding bodies with current expertise in this area. Others used a combination of paper based and on-screen approaches to assessment, dependent on the subject area. A number of issues arising from the use of on-screen assessment are summarised in the section on manageability. In general, on-screen assessment approaches were motivational for learners.

The design of content for the assessment was approached in different ways by those involved. In some cases the awarding body designed the materials and provided these to the centres. In others a template was produced alongside a set of assessment criteria and the centres were able to contextualise the assessment material within certain parameters. In evaluating the outcomes of design approaches it is clear that the majority favour the design of materials by the awarding body. This provides for consistency and reduces the burden on centres. There were, however, positive comments from certain centres that the ability to contextualise assessments was beneficial, particularly for those with adult learners and those that trialled entry level.

Contextualisation can present particular difficulties for ESOL learners, as they are often culturally specific. Similar issues are experienced by learners for whom particular contexts are not familiar to their life experience. There are emotive aspects relating to the use of 'real-life' contexts, suggesting that caution is required when devising contexts and scenarios. The choice of context can greatly affect learners' responses, depending upon their age, setting and life experience.

It is important that at the point of assessment, contexts are readily accessible and clearly understood in order to accurately reflect a candidates' skills proficiency. Unfamiliar or irrelevant contexts can have a detrimental effect on performance and distort assessment

results. Guidance material to support the pilots will need to highlight the possible impact of contextualisation within assessment design.

Nevertheless, there is support for some flexibility in terms of contextualisation. The pilots will need to evaluate a range of approaches to contextualisation within agreed parameters to ensure that the scenario does not disadvantage learners.

The reports clearly identified that the context of questions for assessment purposes needs to be practical and purposeful and that the contexts should be as generic as possible in order to reflect the transferability of skills learned in one context to be applied to another. However, some learners and centres saw the facility to contextualise questions within a specific vocational context as desirable. These issues will require careful consideration going forward but on balance it would appear that generic rather than highly contextualised questions should be used.

In summary:

- Task based approaches are seen as the most valid for functional skills

- Generic, practical and purposeful contexts should be used in question design to support the transferability requirements of functional skills

- On-screen approaches are the most desirable, they motivate learners, can be made relevant, and provide opportunities for efficient feedback of results (see manageability section for further comments)

- Development of national assessment criteria and detailed guidance on design are required to support the pilot phase.

Further Issues

A number of particular issues relating to assessment design were detailed in the final reports. In relation to particular subjects it is clear that assessment design is critical to both coverage of functionality and the inter-related issues of accessibility for candidates. Further, the trial of different assessment types has been evaluated in relation to statistical analysis of learner results.

Detailed trials in English have resulted in a conclusion that for this subject area a single component assessment is difficult. The speaking and listening components of the standards

require a different approach and it is technically difficult to incorporate these within a single task based opportunity in controlled conditions.

It is therefore recommended that for English there will need to be a speaking and listening component that is assessed internally and teacher marked with the results aggregated with the other component in order to provide an overall result. This model already exists within other qualifications and is an acceptable one for centres and learners. It will be necessary in the pilot phase to examine further whether it is possible to provide a combined single component for English, and whether this approach presents manageability issues at centre and awarding body level.

As detailed later in this report, special arrangements may still need to be applied to these qualifications in order for them to be accessible to the widest possible range of learners. This is particularly important for English but may also need to be considered for other subject areas. In general the trial reports indicate a number of advances in technology that reduce the difficulties for candidates with special needs.

In general, with the exceptions identified for English, the most desirable outcome in terms of the assessment approach is for a single assessment that reflects a summative assessment of the functional skill. A number of awarding bodies have identified that this could be supported with units that support learner progression to the target qualification. This is seen as particularly helpful for those learners working towards entry and level 1 qualifications. A unit based approach to entry level achievement is favoured by those trialling at this level. In general, the reports indicate that the assessment should last for between 60 and 90 minutes for each subject. At entry level, further consideration needs to be given to time restrictions. In setting nationally agreed assessment criteria, it will be important to set a national standard for the duration of the assessment for each subject at each level.

Functional skills acquisition for a broad range of learners across the full range of learning contexts is central to the success of the programme. This objective cannot be achieved through the introduction of a particular form of assessment alone. Functional skills qualifications require a shift of emphasis in terms of teaching and learning in order to exercise and enhance these skills. Problem-solving skills-based approaches are learning tools required in life, education and the work-place. The assessment tool provides a focus of learner achievement and substantiates and confirms the acquisition process.

The pilot programme should examine good practice in Skills for Life approaches and incorporate this into teaching, learning and assessment in functional skills development.

The design of functional skills qualifications and their integration with related qualifications not only ensures that progression pathways are explicit and enabling for learners but also reinforces skills development and application as a conspicuous and highly valued learning tool that should be utilised in all learning contexts.

Finally, assessment design has been analysed in relation to achievement outcomes. Detailed work at level 2 is discussed in the section relating to GCSE but overall the reports indicate that there may be a relationship between outcomes and the design of the questions in relation to the degree of familiarity with the context of the questions. Analysis suggests that where contexts are unfamiliar, or not appropriate, there is a detrimental effect on achievement. In most cases these assessments introduce a different type of question and in some cases different contexts than those with which learners are familiar. The results may be a reflection of a combination of factors including question design, unfamiliarity with task based questions, and teaching and learning strategies. A more detailed analysis of these will need to be conducted during the pilot period.

Recommendations and actions

In preparing for the pilots the following recommendations and actions are required:

- Development of national assessment criteria and detailed guidance on design are required to support the pilot phase

- A national standard is required for the duration of the assessment in each subject at each level

- In order to determine 'functionality', assessment will require nationally agreed high pass marks, standardised across awarding bodies, and the establishment of design parameters which demand the repetition of skills application in multiple contexts

- The pilot should focus attention on awarding body directed task based approaches with the use of generic contexts, while a small number of pilots using centre devised materials, particularly at entry level, should be included

- A single summative assessment should be adopted for the pilots, with the exception of English

- Further consideration of best practice from key and basic skills work to inform the standalone functional skills in adult contexts.

Manageability

Issues relating to manageability were reported in four key areas. These include burden on centres and learners; burden on awarding bodies; teaching, learning and delivery issues; and the implementation of on demand assessment. This section also reports on the analysis undertaken by LSN on the relative burden, and other issues, in relation to Skills for Life and key skills qualifications.

The following section summarises the key findings at the end of the trial phase:

The manageability of the proposed assessment model for functional skills for awarding bodies, centres and candidates.

An analysis of the final reports indicates that overall the burden for all concerned in the implementation of functional skills qualifications relates closely to the development, assessment and awarding models agreed for this suite of qualifications. Further analysis concerns the relationship of these qualifications with GCSE and the impact that each of the proposed models for assessment within the context of the GCSE might have in relation not only to the assessment burden itself but to the delivery of the programmes of study within key stage 4.

Awarding bodies report a number of factors that will be critical if these qualifications are to be delivered efficiently and consistently to standard.

For the development phase it is clear that there will be a requirement for the provision of a bank of assessment materials by awarding bodies, and that the up-front development costs may be significant. Generally, the preferred model for development of assessment materials is not the national model, as applies to key skills, but one in which awarding bodies develop assessments against agreed national criteria and guidance.

The provision of a bank of questions and supporting materials generated by awarding bodies, either independently or within consortia, is favoured because of the flexibility this provides in relating to the particular context. The variation of this model, allowing centres to develop materials against further criteria or templates, is not generally favoured across the trial participants, though some have modelled this approach. The area where the latter model may have some validity is for entry level where centres are able to work closely with learners and the context in which they are learning to effectively design content. Even at this level issues of consistency and comparability remain if this approach is taken.

The 'bank of materials' model for development would allow for a standardisation process to be conducted across awarding bodies during the pilot phase and would over the longer term reduce costs and generate valid and robust assessment materials. This is the model currently in place for other high profile general qualifications such as GCSE. This model places the least burden on centres in relation to the development phase. It seems sensible to move forward into the pilot phase on the basis of this model for the development of assessment materials for functional skills qualifications.

The arguments for not adopting a national test relate to the sustainability of maintaining a sufficient bank of test material, particularly if task based; reduced flexibility in design that matches learner profiles (young people and adults); suitable management and governance arrangements over time; and incorporating the relationship with the GCSE in relation to awarding body designed GCSE assessments. The key argument in favour of a national test is that standardisation and comparability issues are less complex. If a national test approach is not adopted, then these activities would need to be undertaken through an agreed process between the awarding bodies, as currently applies for the GCSE. For the pilot programme, it will be necessary to complete a robust evaluation of awarding body assessment design to provide confidence that the materials meet the requirements of standardisation and comparability.

In assessing the manageability for awarding bodies in the conduct of assessment and awarding of functional skills, the optimum model is that of on-screen task based assessments, with the potential for electronic marking. This approach would require further consideration within the context of GCSE but the flexibility and responsiveness it provides is seen as highly beneficial across all participants. It is recognised within the report that this optimum would need a staged implementation for a number of reasons.

These include:

- technical and resource issues in centres, in particular in schools

- the development of quality assured pre-test processes

- the need to supply paper based assessments for certain candidates

- the capabilities of current technology to be applied to all areas of functional skills assessment, for example, speaking and listening in English

Over the pilot period therefore it seems that the most appropriate approach would be to work with those awarding bodies with the technical expertise and resources to develop robust on-screen approaches but to ensure that others can work in the pilots on the basis of paper based assessments. Detailed evaluation of the issues relating to each approach and comparison of the outcomes needs to be undertaken through the pilot phase and the technical and resource implications reported on in detail. It would not be appropriate at this stage to recommend a single on-screen approach for the pilots for functional skills but it is recommended that this outcome be sought for full implementation.

An additional recommendation to support reducing the potential burden is the use of a single summative assessment in all subjects at all levels that is externally marked (potentially electronically) with the exception of English. In this subject, the addition of a speaking and listening assessment will be necessary in the pilot phase. A number of reports indicate that as technology develops it may be possible to assess this component on-line and this should be monitored through the pilot phase. A single, externally marked assessment significantly reduces the burden for centres and learners.

A number of reports noted that the implementation of an on demand assessment for functional skills would not be possible immediately. There are issues of management both in centres and with awarding bodies for this model. This is particularly difficult for schools where assessment is carefully timetabled at different points during the year. Awarding bodies advise that more frequent opportunities than are currently scheduled for GCSE would be possible but these would need to be planned stages in the year. Those trials with adult centres and further education have less difficulty with an on demand assessment regime. It would seem from the reports that a phased introduction of on demand would be desirable and that, as with the on-screen option, in the longer term this should be the preferred model.

All of the reports noted the impact of the implementation in relation to teaching and learning within centres. The trial assessment activity was undertaken by learners without the benefit of teaching and learning strategies to support functional skills. In the pilot phase this must be addressed in order to fully establish the impacts of functional skills programmes on learner achievements and proficiency. The reports emphasised the need for teacher support in delivering functional skills effectively. The analysis suggests a shift in emphasis in English and mathematics is required, particularly in the 14-19 phase. In mathematics, the emphasis on process skills in the standards and the assessment of the application of these skills highlighted real weaknesses in learner's ability. Their ability to address the problems presented in this way identified a general unfamiliarity with this approach. The same was true

for the reading and writing aspects of English. The reports stress not only the need for teacher support and development but also the potential impact on curriculum content that this approach might create. It is difficult to detail this when little teaching and learning has supported the trials of functional skills but it is clear that in preparation for the pilot phase, comprehensive teacher support programmes will be required, and during the pilot the impact on curriculum content will need to be evaluated.

The awarding bodies involved in the pilot programme will produce functional skills guidance to accompany their qualification and assessment material. Awarding body guidance will relate specifically to assessment materials, including information relating to centre delivery, moderation, mark schemes etc. This material will be made available to pilot centres at the earliest opportunity and, where appropriate, to workforce development agencies and wider information provision forums. These processes are standard practice for the awarding bodies although QCA will be closely involved to support pilot delivery.

The analysis undertaken by LSN concerning the experience of Skills for Life and key skills provides further information on manageability issues. The report points out that the nature of the engagement with practitioners will determine the success of the initiative and that this will require greater resource deployment in schools than in further education and training where the development of strategies to deliver key skills is embedded, well resourced and understood. LSN pointed out that willingness to engage with the initiative is not the same as competence to deliver, a lesson learned from key skills implementation in the early stages.

In preparation for the commencement of the pilot, QCA will put in place a structured programme with QIA and SNS to support their activities on workforce development.

The report also points out that establishing a high status for the qualifications is crucial across all key stakeholders, including higher education and employers. This was highlighted as a lesson learnt from the introduction of key skills. LSN pointed out the importance of utilising best practice from key skills and Skills for Life to support functional skills. This was echoed in other trial reports. The report suggests using experienced practitioners as 'change agents' within the functional skills programme. Finally, the report noted the importance of an early and clearly articulated transition plan as a key tool for success.

With particular reference to assessment, the LSN report identifies some key points in relation to the use of portfolios. The report noted that portfolios are more likely to generate transferable skills but are least effective in relation to retention, engagement and

progression. Teachers and learners emphasised the burden on time and resource presented by portfolio based assessment. This accords with other reports and analysis. LSN concluded that on-line and on demand assessment has been motivating for learners in key skills and has contributed to increasing levels of achievement.

Recommendations and actions

In preparing for the pilots the following recommendations and actions are required:

- The pilot phase should proceed on the basis of awarding body development of assessment materials against nationally agreed criteria with a standardisation process in place across awarding bodies

- The pilot phase should include both on-screen and paper based approaches and thorough evaluation of the implications for on-screen implementation should be undertaken and reported

- On demand availability of assessment is desirable but would need to be staged in relation to implementation

- Teaching and delivery support in centres will be critical to learner success and support mechanisms are needed in preparation for pilots. QCA will engage with QIA and SNS to support workforce development with pilot centres

- Evaluation of the impact on curriculum content will be required during the pilot phase

- Investigate with partner agencies the use of key skills practitioners as 'change agents' in centres

- Establish a strategy for raising the status of functional skills with key stakeholders

- Further evaluation will take place during the pilot phase on the use of a national test approach for functional skills assessment.

GCSE

The unitary awarding bodies have continued work to consider the relationship between GCSE and functional skills. This work has focussed on key areas including a further consideration of the proposed models for implementation with GCSE; the application of a 'hurdle'; implications for levels of achievement and particular consideration of the impact on GCSE subjects. Detailed work on modelling achievement rates in GCSE as a result of the inclusion of a functional skills assessment took place in phase 1 of the trials. Additional work is limited but nevertheless has been referenced. A number of the recommendations and issues raised earlier in this report are as relevant to GCSE as to standalone qualification development in functional skills.

Assessment models

As a result of the analysis of all of the trial activity it is clear that the proposal to pilot a free-standing assessment of functional skills (model 1) and an integrated model where the assessment of functional skills is a component of GCSE assessment (models 2 and 3) should proceed. Awarding bodies are confident that this can be achieved through the pilot phase. In mathematics, this will be piloted as part of the Maths Pathways work, and in English, through a pilot agreed initially with Edexcel as part of the unitised approach to GCSE English. Pilot work in ICT is also underway. In all other pilot centres, the free-standing assessment will be piloted with GCSE students. The reports indicate that wherever possible the same approach to assessment design within GCSE should be adopted for the free-standing assessments. This will rely on the processes indicated in section 3 above, that is the development of a set of nationally agreed assessment criteria for functional skills that build on the requirements of the standards.

In Wales, work on the analysis of requirements within GCSE to support the acquisition of skills has progressed and the conclusions to date indicate that further work on integrating and enhancing skills within the GCSE itself is the preferred route. This can effectively form the basis of an alternative approach and it would now seem sensible to provide pilot activity based on this approach so that further conclusions can be reached. In pursuing this approach we will work together to find appropriate solutions in order to retain the three country regulatory partnership for GCSE, with particular reference to English where the challenges are the most pronounced. CCEA will support going forward on this basis. Close work across the regulatory partners will be needed in preparation for pilot activity and we are committed to this objective.

The current revision of the GCSE subject criteria will need to take account of the final version of the standards and ensure these are embedded securely within subject criteria and within programmes of study for English, mathematics and ICT. The development of nationally agreed assessment criteria will support clear alignment with GCSE subject criteria.

A further consideration to emerge from phase 2 of the trials has been the consideration of weighting within the mark schemes of the GCSE to take account of the functional skills component. This work will need to be done in preparation for the pilot so that detailed modelling can take place and be evaluated. It is possible that the weighting of the functional skills component could be different from subject to subject. This will be in addition to the agreements discussed in earlier sections on an appropriate pass mark for the functional skill component itself.

Attainment and the 'hurdle'

The reports reinforce previous detailed analysis that there will be depressed performance overall in GCSE, and in particular in relation to A*-C achievement, if a functional skills 'hurdle' is applied. The interim report noted an average 10% drop, with the percentage ranging from 10-30% across grades and subjects. In modelling this impact the awarding bodies noted that a number of factors should be taken into account at this stage. Candidates' marks for proxy achievements, such as key skills, may not adequately reflect the impact of the 'hurdle'. Modelling predicated on predicted grades may not be sufficient to anticipate the impact. Teaching and learning strategies will have a significant impact on results for functional skills and GCSE attainment over time.

However, in analysing achievement on sample functional skills assessment against predicted outcomes for GCSE, or against achieved results, candidates achieving at grade C or above did less well than would be expected. A detailed analysis for some cohorts showed that when applying a high pass mark for functional skills, as recommended to demonstrate mastery, this was significant. Where a less demanding pass mark was applied, achievement was still below that expected. In particular in a study conducted in English with candidates estimated at C or above for GCSE, only 19% achieved level 2 when the hard pass threshold was applied, and 51% when the easier pass threshold applied (English/writing). A similar pattern emerges over other components for English with differing ranges of achievement at level 2, the highest being in the easier option for reading.

It is clear that a number of factors could contribute here including the standards themselves, the assessment mode and marking regimes, and importantly, teaching and learning

strategies. It is clearly important that the pilots interrogate in more detail the impacts in practice, when modelled on actual achievements, through careful and rigorous monitoring and evaluation of outcomes, as the pilot progresses.

A further concern was reported in relation to English and the application of a hurdle. The three components of functional skills in English – reading, writing, speaking and listening, in effect result in a triple hurdle rather than a single one. It is suggested that this is a more complex situation than was originally envisaged and may present unreasonable barriers to achievement for students in this subject area, in particular.

It is clear that detailed evidence on the impacts of the introduction of functional skills within the GCSE will not be evident until learners experience appropriate teaching and learning strategies and the assessment models are fully piloted. For GCSE, information from a one year cohort will not accurately reflect any significant changes to teaching and learning. The revised timelines for pilots across the three subject areas will allow a measured and evaluated approach.

In relation to other qualifications, the reports noted that the introduction of potential requirements relating to functional skills achievement within Diplomas, and potentially with Apprenticeship qualifications, further add to the complexity for learners. The requirement within Diplomas to achieve all three functional skills at the level of the qualification may impact significantly on overall success rates for both Diploma qualifications and the associated GCSEs. This will need to be monitored closely for 2008.

Mathematics

Following a series of discussions over the period of the trials with subject specialists and advisers, it is clear that a number of issues remain for further consideration. Awarding bodies and centres welcome the process approach developed in the standards but require further exemplification to ensure consistent approaches to assessment design and are concerned to ensure that the application of skills through assessment approaches is demonstrated effectively. They are confident that this can be achieved. Mathematics specialists remain concerned about the capacity for awarding bodies to undertake this work in line with their expectations for functional mathematics. In preparation for pilots, and in order to support the further development within the Maths Pathways projects, meetings between the relevant specialists from awarding bodies and subject bodies will be scheduled to ensure confidence in the process. In many cases these structures already exist but we will ensure that necessary engagement takes place between these interest groups.

The mathematics trials indicated that the assessments were generally found to be too difficult. This was attributed to a number of potential factors, including the reading and literacy demands of pre-release materials. It will be important to ensure that there is a detailed evaluation throughout the trial period to establish whether teaching and learning and assessment design are effectively achieving the required outcomes for functional mathematics.

There remains concern within the mathematics subject community about a distributed model for the development of assessment materials through the awarding bodies rather than a national test approach. In considering arrangements for the pilot we will undertake further analysis to establish whether a national approach is desirable. Earlier in this report a number of reasons for not adopting this approach were identified, including:

- sustainability

- management and ownership issues

- pre-test capacity and the development of national test banks

The preferred approach is that adopted by awarding bodies and the regulatory authorities for other national high status examinations such as GCSE.

The reports indicated that further work would be needed in preparing teachers for delivering functional mathematics and preparing learners for assessment in functional mathematics. Engagement with the National Secondary Strategies and Quality Improvement Agency has already taken place and we will continue to engage with this work by disseminating information provided in the trial reports, and from further work with pilot centres and awarding bodies to engage these agencies and support their work.

English

The key consideration for the introduction of functional English is the potential impact on curriculum content. There is a concern that this will require a reduction in content, particularly in relation to literature and the study of texts. Early analysis from the awarding body reports suggest that currently the English curriculum and consequent assessment for GCSE may be overburdened with non functional repetitive elements relating to literary writing and the analysis of texts. It has been suggested that by refocusing the emphasis towards functional writing and associated activity it would be possible to 'make room' for functional skills without significant disruption. It is acknowledged, however, that further work is needed in this area.

The work being undertaken in Wales will assist with this analysis, where the programme of study contains less literary requirements than in England.

ICT

It is clear that the introduction of functional skills in ICT is less problematic in relation to curriculum and assessment than the other subjects. The current short course GCSE is closely aligned to the functional skills standards and it is therefore recommended that this assessment could form the basis of the functional skills qualification. A number of reports suggest that a stand-alone functional skills qualification in ICT should be available to all candidates and with some further consideration this may well be one and the same as the short course GCSE, and could replace it. If this qualification became the functional skills qualification, it would be suitable and available to all learners.

In Wales there is a concern that functional skills are not graded and that if it were to replace the short course GCSE this would mean that some candidates could not access the equivalent of a 'C' grade in GCSE. This will need further review with colleagues in Wales.

Recommendations and actions

In preparing for the pilots the following recommendations and actions are required:

- Pilots should proceed on the basis of models 1, 2 and 3, and the approach preferred in Wales. DELLS will take forward their approach and contribute outcomes to the QCA evaluation activity as appropriate

- Further work will be completed on the standards and the alignment of these to revised subject criteria for GCSE

- Work will be completed on technical agreement over weighting within GCSE in order to prepare for the pilots

- Modelling in the pilots will need to thoroughly interrogate the impact of the 'hurdle' when applied to a range of candidates across the subject areas

- Further consideration needs to be taken of the impact of multiple hurdles within Diplomas and the proposals for Apprenticeship qualifications

- Subject specialists and representative bodies meet to ensure assessments for functional mathematics fulfil requirements for pilot activity and to evaluate the impact of the introduction of functional skills

- Further collaboration will take place to ensure bodies responsible for supporting delivery are fully briefed in relation to outcomes from the trials and responses from centres

- Work closely with colleagues in Wales throughout the pilot period to ensure that evaluations are shared and that a regulatory partnership in GCSE is maintained

Access and DDA

All those involved in the trials were asked to consider the impact of the introduction of functional skills on access and learners with special requirements. A number of the trials focussed on these issues and key headlines were reported.

In general these qualifications posed no additional problems in relation to learners with special needs. As reported in the interim report the requirements in English for speaking and listening remain difficult for some of this group. It was noted that a set of nationally agreed guidelines would be required and that these could build on those already in place and provided by the Joint Council for Qualifications (JCQ) and the Federation of Awarding Bodies (FAB). Currently the application of special arrangements may not fully meet the requirements of legislation. It will be necessary, once the qualifications are agreed to take further advice in this respect.

The reports noted that the introduction of on-screen assessment may be beneficial to a wide group of learners including those with special needs where technological solutions and other support mechanisms are already available to support learners. There was however general acceptance that paper based options must remain in place for reasons of universal access to assessment in functional skills. Difficulties of providing this option on an on demand basis were noted and issues of comparability were raised.

A particular mention was made in a number of reports on ensuring that the needs of ESOL learners are addressed when developing assessment materials. This is particularly of concern with task based assessment questions where the context of the question itself may provide a barrier to achievement. In a particular instance quoted, a competent learner in Mathematics was not able to demonstrate functional mathematics skills because of a difficulty with the language describing the context of the question. Guidance will need to be provided on the importance of this element of design across all subject areas.

Task based assessment design is also potentially more complex in relation to gender and ethnicity. Cultural and gender bias requires particular attention when contextualising questions for assessment purposes.

In preparing for pilots, consultation with relevant specialists and groups, including teachers and learners, are being undertaken and the on-going process of evaluation of the pilots will need to specifically address access and special needs issues as these progress.

Recommendations and actions

In preparing for the pilots the following recommendations and actions are required:

- Guidance in relation to access and special arrangements will need to be prepared

- Further consultation will take place with relevant specialists, including legal advice, as well as with teachers, learners and other related groups, to ensure access and special needs are accounted for in the pilots

- ESOL and other particular considerations will be reviewed to inform the development of pilot materials and activities

Independent evaluation of the trials

An independent evaluation of the trial activity was undertaken by a research team from the Centre for Lifelong Learning at the University of Warwick. The evaluation was constrained by limited timescales and direct engagement with the trial centres was compressed into a three-week period between mid-February and early March 2007.

On the basis of the reviewed evidence, including the centre visits undertaken, the evaluation project concluded that the trials broadly demonstrate validity across the range of QCA requirements in terms of methodology adopted. The caveat is that in some trials the learner numbers were low and the variety of trial contexts restricted.

The visits revealed concern on the part of centres and practitioners at the speed at which changes are being introduced.

The full report will be used to inform the next stage of work in preparing for pilots in September 2007.

Pilot arrangements

A timetable of activities to take forward the recommendations and actions detailed in this report has been prepared and agreed in principle with awarding bodies:

Final revisions to functional skills standards	**April 2007**	QCA
Development of national assessment criteria	**April 2007**	QCA/ABs
Identification of pilot centres and notification	**April 2007**	QCA/ABs
Engage with QIA and SNS to support preparation of centres for delivery of pilots	**April 2007 onwards**	QCA/DfES
Development of guidance materials to support qualifications	**April / May 2007**	QCA
GCSE criteria alignment	**May 2007**	QCA
National curriculum alignment review	**May 2007**	QCA
ITT and contract for evaluation of pilots	**May 2007**	QCA
Accreditation of pilot qualifications completed	**mid-May 2007**	QCA
Assessment standardisation meetings	**June 2007**	QCA/ABs
Contracts agreed with ABs	**May / June 2007**	QCA
Pilot qualifications commence	**Sept 2007**	QCA/ABs/ Centres