The specification for

TLM Certificates in Open Systems and Enterprise

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This is version 5.0 of the TLM handbook for schools IT qualifications and first published in September 2014.

The Qualifications and Credit Framework (RQF) was designed by the UK government's Qualifications and Curriculum Development Agency now replaced by Ofqual. The RQF is referenced to the European Qualifications Framework devised by the European Union. ITQ is the qualification framework based on the UK National Occupational Standards for IT Users developed by eskills and the Awarding Organisation Forum that is made up of all the Ofqual accredited organisations that offer IT User qualifications.

The assessment model for the qualifications presented in this publication was designed by TLM in consultation with all other awarding organisations that offer the ITQ. It was agreed that for delivery in schools, all awarding organisations will use the same structural model although each will set its own tests and use its own methods for assessing any coursework components.

Contents

1. For those in a hurry!

Please read the rest of the book later as the details are important!

1.1 TLM's assessment model is common to most of its qualifications. It is based on competence-based assessment of coursework using a portfolio of evidence supported by a free optional cloud-based evidence management system and an externally set and marked synoptic grading examination. The rationale for this design can be found at https://theTLMs.org/community/qual_design

1.2 Pupils have to demonstrate competence against the assessment criteria from their day-to-day work and the teacher assessor has to verify that they are competent in relation to the general level descriptor using indicative assessment criteria. TLM's external moderator will check the judgements and the quality of the evidence and provide feedback. This process is not graded, the intention is that it is a flexible way of checking basic practical competence in the subject at the qualification's framework level. Once this is secure the pupil becomes eligible to take a grading exam. If the coursework is secure the candidate should at least get sufficient marks on the grading exam to get a pass grade but it is not inevitable. If many pupils pass the coursework but fail to achieve a pass grade overall it implies that the coursework assessment is not sufficiently rigorous and should be adjusted accordingly.

1.3 The grading test has questions of varying difficulty. This will differentiate the grades from the most to least able based on knowledge and understanding under-pinning practical competence. For example, at Level 2 grade A*/A (9/8) indicates the student is potentially suitable for higher level academic study such as A levels. F Grade (4) candidates are not likely to cope with highly academic Level 3 courses and should be guided to either further consolidate at Level 2 or start practical level 3 courses where the academic demand is lower.

Procedures

1.4 The first thing to do is to arrange assessor training with TLM. TLM trains at least one assessor as Principal Assessor who must accept responsibility for standards within the Centre. The Principal Assessor can train and appoint assessors within the Centre as long as they are competent to take on the

work and are willing to sign an agreement on the web site to uphold standards.

1.5 TLM will provide initial training in the pedagogical model and using the supporting technologies to provide the evidence needed. The purpose is to get you started and then we provide on-going support to ensure you are confident and we can work as a professional partnership. We advise new Centres to do some coursework assessment early so that they can receive feedback and quickly become confident in doing routine coursework assessment. Our aim is to make this no more onerous than normal routine assessment that anyone would do as a normal part of the teaching job. This gives more time to focus on teaching and therefore to support raising attainment.

1.6 The grading exam can be done in three modes. The first mode is a "mock". This enables the school to put all, a sample, or individual pupils into an exam that is identical to the real thing to gauge readiness to take the "real exam". We mark the exam externally for you so that it is identical to taking a real exam. It's identical in all respects but it won't actually provide the qualification. For this reason, a mock exam costs the same as the real thing but you might use it strategically with a representative sample to support grade predictions and judge readiness for cohort entry. Mocks are entirely optional you can put none of the cohort in or all of the cohort multiple times but the intention is for you to use sampling to provide you strategic management information from relatively few tests.

1.7 The second mode is the "real exam". This is the main grading exam and provides the grades for the qualification as a whole. Once a school has designated the examination as the real examination, they are committed to accepting the grades as such. The third mode is "resit". Candidates are allowed one resit and this should be arranged before the qualification is claimed. We discourage "blanket resits". The purpose of the resit should be to give a candidate that has clearly and unexpectedly under-performed a second chance, it should not be used routinely to try and improve the grades of an entire cohort.

1.8 Once the qualification is finalised the candidate cannot retake it for at least 6 months. This is to give time for further study to make a significant difference in the outcome. This retake might well not be eligible for league table points, it will depend on DfE policy at the time.

Differences with respect to GCSE

1.9 Tech Awards are not GCSEs. They provide points equivalent to GCSEs but they have different rules. With TLM qualifications there are multiple versions of the exam designed to be the same difficulty so we have much more flexibility about when candidates can take the exam and the time can be different for different children or groups in the same school. Coursework moderation is on demand to suit you not us but we advise doing it as you go along so there are no pressure points or surprises at the end of the course when there is no time to do anything about it.

1.10 Level 2 and Level 3 exams can be done on-line or on paper. Level 1 are on-line only. Ring us for current prices or look at the fees section on the web site www.theTLMs.org/community/fees. You must give at least 6 weeks' notice to take any exam. This gives us time to plan the marking so we can get results to you promptly. We also need any fees to have been paid in full before the pupils take the exam. If you can give more than 6 weeks' notice we will give you a higher priority when it comes to marking.

1.11 Level 1 qualifications provide the points of the G-D grades of GCSE and Level 2 A*-C. If a pupil achieves the Level 1 qualification it has no effect on the Level 2 other than its points will be replaced by the Level 2 if the candidate upgrades to it. Unlike GCSE you can schedule progression from Level 1 to Level 2 over time making a more coherent progression from KS3 to K4. If the candidate fails to achieve a Level 2 grade after they have achieved Level 1, they still have the Level 1 grade to fall back on.

1.12 Qualification information:

- **TLM Level 2 Certificate for IT User Skills in Open Systems and Enterprise**
    - 600/6688/X / Level 2, 17 credits / 120 GLH, 170 TQT
- **TLM Level 1 Certificate in IT User Skills in Open Systems and Enterprise (ITQ) - ungraded**
    - 500/8080/5 / Level 1, 13 credits / 100 GLH, 130 TQT
- **TLM Level 1 Certificate in Open Systems and Enterprise – Graded**
    - 601/4559/6 / Level 1, 16 credits / 120 GLH, 160 TQT

2. Introduction

2.1 The purpose of these qualifications is to recognise the development of IT User Skills directly related to the National Occupational Standards. They support progression to higher level qualifications in digital technologies and they are complementary to existing qualifications in the TLM provision using the TLM assessment model. For example, they enable extending the range of IT User contexts when compared to the Open System Computing qualifications and they are complementary to other Tech Awards. Anyone wanting to develop their knowledge and understanding of IT applications in order to hone practical skills relevant to learning and the world of work will benefit from these qualifications.

2.2 The most significant change in this handbook since the original 2015 version is adding a grading exam to a variant of the Level 1 qualifications for 2017 onwards and rationalising the wide range of units to a simpler more generic approach. This is the result of changes to the way qualifications are used in performance measures and provides greater consistency with the established TLM assessment model employed in other TLM qualifications. The Level 1 grading is done using the same model as for Level 2 with a multiple-choice exam eligible to be taken once the coursework criteria have been evidenced at Level 1. Centre have the choice of using either Level 1 graded or ungraded

2.3 In summary, in 2015 and 2016 the Level 1 qualification is the Level 1 ITQ with no grading and no externally set exam. From 2017 it will be available as graded variant by an on-line multiple-choice exam covering the same syllabus in Annexe B as the level 2 qualification. It will simply have Level 1 questions. Just like the Level 2 the coursework will remain the same and provide the Level 1 ITQ as well as the new points scoring qualification.

2.4 We believe these innovative qualifications provide the most inclusive and cost-effective points scoring ICT qualifications available while preserving the necessary rigour for the highest attaining candidates. In addition, there is a clear intention to reduce the bureaucratic overhead on teachers while preserving the benefits of coursework for motivating learners. We have demonstrated that we can provide Level 2 qualifications that are accessible to average and below average attaining learners, and at the same time differentiate the A*/A (9/8) students, identifying those that are likely to be successful in academic A levels and those that will be more

suited to vocational pathways or consolidating their academic attainment at Level 2.

2.3 While these qualifications can be configured to enable coverage of digital literacy, IT and computing with a choice of contexts and emphasis to suit local interests and needs, the TLM Open Systems Computing qualifications are specifically designed for this purpose. We can support the new National Curriculum POS at Key Stage 3 and Key Stage 4 and provide certification of competence across the curriculum without over-burdening teachers with administration.

2.4 This specification is for 3 qualifications, 2 at Level 1 (graded and ungraded) and the other at Level 2 targeted on schools. It has the following key benefits.

- devised by employers in partnership with IT subject specialists.
- clear and flexible unit-based structure referenced to the European Qualifications Framework (EQF).
- progression route from Entry Level learning to Level 3.
- straightforward assessment of competence in the use of IT to support learning in all subjects.
- grading exams at Level 1 and Level 2 (level 1 available ungraded)
- on-going support from our team of subject specialists.
- flexible enough to accredit skills and knowledge acquired in other subjects as well as in specialist lessons.
- provides a focus for continuing professional development for IT teachers through moderation/verification feedback.
- growing pool of free and open-source teaching and learning resources.
- moderation/verification of coursework on demand.
- flexible examination opportunities throughout the year.
- scope to provide all children in a school with recognised qualifications irrespective of ability.
- Level 1 units upgradeable to Level 2 by providing additional evidence and passing the level 2 examination.
- reduced bureaucracy for teachers and flexibility for them to target specific interests.

2.5 We support formative assessment practices allied to summative differentiation by outcome that can optimise and motivate attainment for individuals rather than assume all will reach a certain level or grade at a

particular time. We do this by providing a coursework component that is competence based, reflecting the best and most up to date research in assessment in the workplace complemented by a short academic style examination. All candidates must complete the coursework to a Level 2 standard before being eligible to take the synoptic grading exam. The Level 2 exam grades candidates across the A*-C (9-5) range. Candidates that do not meet the Level 2 coursework standards can meet standards at Level 1 or Entry Level. The Level 1 exam grades in the pass, merit, distinction and distinction* range. In this way we can provide for the entire age and attainment range using current frameworks in a single inclusive system that has low bureaucratic overhead and low costs.

3. Summary of the Level 1 and 2 specifications

3.1 The Level 1 certificate is available ungraded or graded across 4 levels from Pass to Pass with Distinction* the highest-grade equating to 80%+ of the available marks and a pass equating to a minimum of 50%. The qualification is based on the National Occupational Standards (NOS) for IT Users developed by the Sector Skills Council for IT and Business together with employers and IT subject specialists.

3.2 The Level 1 qualification (ungraded) requires 13 credits from a wide range of units. From 2017 a graded Level 1 with 16 credits from 5 generic units that can be applied to a wider range of applications. The Level 2 certificate provides grading across 4 levels from A*-C (9-5) with A* (9) the highest-grade equating to 80%+ of the available marks and C (6) equating to a minimum of 50%. The qualification is based on the National Occupational Standards (NOS) for IT Users developed by the Sector Skills Council for IT and Business together with employers and IT subject specialists. The Level 2 qualification requires 17 credits from the coursework.

Content

3.3 The qualifications content has been designed for use in schools by referencing it to the statutory programmes of study, typical activities needed to support subjects across the curriculum and testing prototypes in schools with feedback from teachers and learners. It is also designed to enable learners to meet the needs of employers through referencing to the national occupational standards and to ensure that the most academically able can be stretched and routed to appropriate academic progression at Level 3.

Assessment

3.4 The Level 2 qualification assessment has two components.

Component 1

Coursework assessed in terms of competence in using technology to support learning.

Component 2

An externally set and externally marked examination to assess knowledge and understanding that underpins user competence.

3.5 The Level 1 qualification (graded) is line with the Level 2 qualification.

3.6 The qualifications are unit based. Units have credit values in the qualifications and credit framework (RQF). A minimum of 17 credits is needed for the qualification at Level 2 with at least 9 credits including the Improving Productivity using IT (IPU) unit (4 credits) at Level 2 and IT Security unit at Level 1 (1 credit). Since some credit can be carried forward from Level 1, smoother progression is possible. The IPU unit together with IT Security and underlying knowledge and understanding common to all units is the basis for the synoptic externally set and marked examination for Level 2. There is a full list of units available from https://theTLMs.org/community/ITQ_Unit_credit. The list includes the levels and credit values of units in the ITQ framework. There is a link from this page to download the full assessment details for all the units.

3.7 Level 1(graded) requires 16 Credits from 5 mandatory units. These units are derived from the national occupational standards adapted to a more flexible approach for use in schools. In addition, there is an on-line multiple choice grading exam for Level 1. Level 1 (ungraded) requires 13 credits, with Improving Productivity Using IT being the only mandatory unit

Rationale

3.8 The assessment is specifically designed to motivate learning that will support the highest grade(s) attainable by each candidate. At Level 1 all units are designed to underpin the range of units available at Level 2.

At Level 2, learners must demonstrate that they can achieve at least 17 credits through coursework before being eligible for the examination but there is considerable flexibility in how that credit can be achieved. Those that have completed the coursework to a high standard are far less likely to fail to achieve the grade C (6) standard (or higher) set in the examination. The qualification cannot be achieved without a minimum performance in both assessment components, independently. This ensures basic competence in realistic scenarios as well as general knowledge and understanding across the subject.

Aggregation of marks

3.9 The internally assessed externally moderated coursework provides 30 marks and the externally set and marked test 70 marks. Both coursework and exam cover the full breadth of the qualification content. This means 70% of each qualification is externally assessed in terms of the marks available and 100% of the content is externally assessed in terms of the breadth insofar as this is possible in a written controlled examination. If the candidate achieves a total score of 50 marks from the coursework and the examination, they will be awarded a grade C (6) at Level 2 or a Pass at Level 1. For 60 marks or more a grade B (7) Level 2, Merit at Level 1. For 70 marks or more a grade A (8) at level 2 and Distinction at Level 1. For 80 marks or more a grade A* (9) at Level 2 and Distinction* at Level 1. In this way those candidates that are more suited to academic work will be differentiated from those more likely to benefit from further practically based study at Level 2 or Level 3.

3.10 Any candidate that completes the coursework to a satisfactory standard at Level 2 but fails to gain sufficient marks in the examination will still receive the ITQ (NVQ for IT Users) since they will have been assessed to exactly the same standards as the adults that achieve this qualification in the national system that is based on 100% coursework. They will also be awarded the Level 1 qualification subject to taking the Level 1 grading examination and gaining sufficient marks. The school will gain the league table points associated with exam grades achieved. We expect slippage from Level 2 to Level 1 to be relatively rare but from an individual's point of view it prevents them doing 2 years of work and coming away with nothing because they had a bad day in an exam.

3.11 In the interests of inclusion, the only additional examination fees are for examinations taken. TLM operates a subscription model that covers all these qualifications and we want to maximise opportunities without financial penalties. In the case of a candidate that does not meet the Level 1 criteria, there are certificates at Entry Level available. Entry 1 is achievable by learners with Special Educational Needs with moderate learning disabilities. We believe that this gives us the most inclusive and cost-effective points scoring IT qualifications available while preserving the necessary rigour for the highest attaining candidates.

4. Qualification Content

4.1 The qualification is made up from units in the Qualifications and Credit Framework (RQF). The RQF is referenced to the European Qualifications Framework (EQF), the largest system for referencing nationally accredited qualifications in the world. Unit credit is compatible with the European international credit transfer system ECVET. The units were designed by the Sector Skills Council for IT and Business in order to provide learners with the skills needed by employers. This specification is an interpretation of the learning outcomes and assessment criteria in those units to support learning in schools. There is an emphasis on developing the transferable knowledge, skills and competences that will support raised attainment in the subjects of the curriculum as well as supporting employability.

Key subject aims

4.2 The over-arching aim is to enable learners to support their learning in all subjects using IT tools that are freely and legally available from the internet. Subordinate aims include:

- developing the skills needed for employment.
- gaining practical experience and competence with contemporary technologies including programming where appropriate.
- increasing the capacity to transfer knowledge and skills between contexts.
- developing practical skills in creativity and problem solving.
- developing an understanding of the social and commercial impact of IT.
- developing an understanding of the legal, social, economic, ethical and environmental issues raised by IT.
- developing safe, secure and responsible practice when using IT including reducing risk.
- developing the skills to work collaboratively with IT.
- developing skills in critical evaluation and feedback.

Knowledge and understanding

4.3 The following knowledge and understanding will be required to support learning for the qualification.

- Demonstrate knowledge and understanding of audiences at which work is targeted.

- Understand the purpose in common applications and/or applications they have used.
- Demonstrate knowledge and understanding of strengths and weaknesses in the ways information is presented.
- Demonstrate knowledge and understanding of intellectual property.
- Know common file types and the implications of open and proprietary standards.
- Understand information flow starting with input of information, processing and output.
- Understand the costs associated with different applications including direct and indirect costs.
- Have the confidence to deal with the unfamiliar such as the code in a computer program and work out what to do.
- Understand the principles of ordered list of instructions underpinning algorithms.
- Understand abstraction as picking out common features of objects in order to simplify. E.g. A common structure for a template to input information into different systems.
- Understand the benefits of target setting for IT projects.
- Know specific characteristics of software in order to make choices of tools.
- Demonstrate a practical understanding and respect for acceptable use policies.

Skills

4.4 Opportunities are provided to support the following skills, the great majority of which will be assessed directly.

- select, use and integrate IT tools and techniques to meet needs.
- find, select and evaluate information for its relevance, value, accuracy and plausibility.
- manipulate and process data and other information, sequence instructions, model situations and explore ideas.
- transfer competence in a familiar context to an unfamiliar context.
- communicate data and information in a form fit for purpose and audience.
- adopt safe, secure and responsible practice when using IT.
- develop appropriate and effective IT-based solutions in a range of contexts including computer programming solutions.
- self and peer assess to gauge the effectiveness of their own learning.
- think creatively, logically and critically evaluate their own and others' use of digital technologies.

Unit contents

4.5 The detailed content of units was originally published in the e-skills publication

National Occupational Standards for IT Users

4.6 The document was superseded by us adopting the units and they are available from https://theTLMs.org/community/ITQ_Unit_credit and the web site handbooks section under resources.

4.7 There is further guidance for coursework assessment on the TLM web site and in Annexe D below. All centres have an assigned Account Manager who will be very pleased to help at any time. Our aim is to give professional assessors, most of whom are qualified teachers, the confidence to make judgements with a minimum of bureaucracy so that they can focus their time on maintaining their professional knowledge and skills and supporting learning through effective teaching rather than "chasing paper". There is often a confusion between bureaucracy and rigour, since unnecessarily complex bureaucracy can actually detract from rigour by obscuring the importance of the outcomes.

4.8 Web sites - TLM provides support through a cloud-based system. Providing assessment grades and the management of certification through the Awards Site is mandatory and all assessors are provided with training in its use. It is simply a matter of recording learner competence against the unit criteria as the evidence is collected and claiming a certificate on behalf of the learner when a unit has been fully assessed. (See Annexe G)

4.9 The community learning site provides on-line exams and free optional facilities for learners to submit their evidence on-line, linking it to the assessment criteria across single or multiple units. The assessor can accept or reject this evidence and comment on it providing a full audit trail for evidence. Moderator/verifiers can get immediate access to this evidence and so it is potentially a lot more efficient than alternative methods. No paper, no e-mails with file attachments necessary. There are facilities for progress tracking that can be based on criteria and/or units. The system can be linked as an extension to any standards compliant VLE/e-portfolio system for centres that are already committed to a specific VLE product. Training can be provided and free support is available from your Account Manager. The aim is to eliminate all paper-based bureaucracy, all screen-shots and referencing that draws time away from teaching.

4.10 Telephone and e-mail support is available to all Centres. There is a general convention of firstname.secondname@theTLMs.org for e-mail addresses. It is usually best to e-mail your account manager in the first instance.

5. Assessment

Assessment summary

Coursework

5.1 Evidence has to be provided against the unit assessment criteria from practical tasks related to the learners' everyday work supported by IT. This could be from specialist ICT lessons, from use of ICT in other subjects or a combination. The way evidence is gathered is up to the assessor, the only requirement is that it clearly supports the judgements against the assessment criteria and the relevant learning outcomes. If on moderation the account manager finds gaps in evidence related to a particular candidate, they will request more evidence before approving the award of the unit certificate. Assessors must then adjust their work to ensure all their learners are providing the appropriate level and breadth of evidence. We encourage early submission of at least some evidence so that assessors are confident from the feedback that what they are providing is sufficient (and indeed not over-kill). In this way we can maintain standards while supporting improved efficiency.

5.2 Improving Productivity Using IT (IPU) is a mandatory unit at each Level. The Level 2 unit is worth 4 credits, Level 1 unit is worth 3 credits. The Level 1 IT security unit (ITS) is also mandatory for the level 2 qualification. This means IPU at level 2 provides 4 credits and ITS 1 credit towards the overall level 2 qualification. 5 Mandatory credits. 12 more credits (making 17 in all) must be achieved with at least 5 of those credits at Level 2 and any others at Level 1 or higher. 17 credits in the mandatory and optional units equate to 120 guided learning hours at level 2 (170 TQT). Unit choice will depend on the particular interests of learners in the centre and/or the centre's own curriculum emphasis.

5.3 In broad terms differentiation is related to the degree of autonomy of the learners so that Level 1 and Level 2 learners can be taught in the same groups. The outcomes for individuals in terms of the broad level descriptors allied to the assessment criteria, verified by the teacher/assessor and externally moderated by TLM will determine the final outcome. Grouping learners is up to the school but the design enables maximum flexibility.

Progression and inclusion

5.4 There are some fundamental misunderstandings of unit-based assessment with regards to progression and inclusion. The paragraphs below will explain how criticisms related to these issues can be rejected.

5.5 Learners gaining Level 1 credit can carry evidence forward into the Level 2 qualification. The Level 1 qualification has much the same content as Level 2 even though it is expressed more generically and in practice differentiation by outcome is possible enabling Level 1 and 2 candidates to be taught in the same groups. This makes arrangements for progression much more flexible and potentially more seamless. It would be possible to start with Entry Level certificates for all learners in Year 7 (or even in primary school) building up to Level 1, Level 2 and some Level 3 units through KS3 and KS4. Again, such organisation is up to the school, the qualification design simply enables this and the payment model enables more scope to reward learners more regularly with the aim of increasing their motivation.

5.6 These strategies make the Level 2 certificate more accessible to a wider range of candidates since any candidate failing to meet the coursework requirements at Level 2 is eligible to be certificated at Level 1 if they have evidence to support the Level 1 criteria which is likely. They do not need to be fully at the Level 2 standard at the start of the course but they can progress to it by the end and have certificates to reward their achievements along the way.

5.7 Below Level 1 there are simpler Entry Level certificates at Entry 1, 2 and 3. These have been used to support learners with Special Educational Needs. It is therefore very unlikely that any learner embarking on a TLM IT qualification will not achieve at least some kind of recognised qualification at a level appropriate to their current attainment level with a progression route from where they end up to higher levels. This inclusion is achieved without sacrificing rigour for the highest attainers since the questions in the examination targeting the A/A* (8/9) grades can be as difficult as necessary without risking weaker candidates dropping out of a grade altogether.

5.8 Beyond Level 2 it is possible for Level 2 units to be converted to Level 3 by candidates if they provide evidence that is clearly at the higher level. For the highest attainers this provides an accelerated route to Level 3 so that they are not just marking time at the end of KS4.

5.9 Coursework, particularly at Level 2 should reflect useful and meaningful projects. Examples might be to publish work on a site such as Lulu.com in English with their own ISBN and professionally finished book. (It's a free service and was used to produce this manual). They might share a mathematical model in a Google spreadsheet with a learner in a school in a foreign country. They might publish their science investigation in web pages with reference links to e.g. Wikipedia. These projects lend themselves to cross-curricular work but equally well, the learner could design a simple web site for a local business and relate their project directly to meaningful work experience. It is far better to learn through creating original work that has a real and practical purpose than to do simulations or theoretical exercises and that is fundamental to TLM's coursework philosophy.

5.10 **Criticisms of coursework answered**

Criticism 1: Coursework is too susceptible to plagiarism and other forms of dishonesty.

A Google search will have a high chance of finding any extended text that has been copied from an on-line source. If we are genuinely concerned about "copying from the internet" simply inform teachers of how to combat the issue using freely available tools. Require teachers to accept professional responsibility for the authenticity of their learners' evidence. If teachers really want to cheat, why would they not simply tell students the answers to an exam? If learners want to cheat why not simply forge a convincing looking certificate? There is no tradition of easy certificate authentication so there is a high probability that forgery will be successful. A complementary examination means that we can check back to see if individual teachers are "passing" student coursework for a disproportionately high number that then fail the examination. That provides an evidence source to cross-reference the quality assurance in order to better target staff development.

Criticism 2: Unit based assessment means that knowledge is in compartments.

Unit structures are for administrative convenience NOT teaching plans. There is nothing to stop elements of several units being supported through one or more projects concurrently. The unit IPU is explicitly designed to

work in parallel with other units. Most academic syllabuses are divided up into sections. That is no different in practice to labelling the sections units. If teachers do not teach unit-based courses effectively, train the teachers, don't blame the tools.

Criticism 3: Unit based assessment does not support progression.

On the contrary, unit-based qualifications organised in a levelled framework provides a better support for progression when the unit content is designed for that purpose. Where qualifications are opportunistically designed to simply target one level there is a good argument that progression is badly supported but that is true of any qualification whether unit based or not.

Criticism 4: Competence based assessment has to be lowered to the level of the least difficult assessment criterion.

In well-designed assessment units the assessment criteria are contextualised to the general level specified in the overall level descriptors. This means all assessment criteria should be interpreted in terms of that overall level. It is impossible to measure anything with absolute precision and it is scientifically bogus to claim we can, even if it is politically sensitive to admit that there will be some uncertainty in assessment outcomes when applied to individuals. This is true of both coursework based and exam-based methods. The important thing is to get a reasonably consistent set of outcomes within the expected degrees of uncertainty.

Criticism 5: Exams have always been the tried and trusted way of assessing attainment. There is no need for anything else.

Examinations have been widely used for academic assessments in schools and universities. However, that is largely due to their academic heritage where theory is often more important than practice. Even so coursework is well-established where there are practical elements e.g. in science and medicine. Few jobs assess prospective candidates exclusively using written exams. In most practical areas from brain surgery to teaching, no-one would trust a written examination on its own to prove competence. That is not to say examinations are not of value. The key is to use coursework **and** examinations intelligently together in order to provide something that is better than either treated in isolation.

The Examination

5.11 The examination is only available to candidates that have completed the coursework to a satisfactory standard. This policy is designed to reduce the number of candidates taking an examination for which they are not well-prepared and to ensure that IT competence is validly assessed in the workplace rather than as a purely academic exercise or simulation. No candidate can achieve a qualification simply by taking a written exam. In terms of competence in a practical subject, we judge such scenarios to be invalid assessment.

5.12 Candidates that provide sound evidence of meeting all the criteria across units including IPU and IT Security with at least 17 credits for Level 2 and 16 for Level 1 will be awarded 30 marks for their coursework. They will then be eligible to take the examination which is worth a further 70 marks. Candidates achieving a total mark of 50 or more will be awarded grade C (6), Level 2 or Pass, Level 1. Candidates achieving a total mark of 60 or more will be awarded a grade B (7), Level 2 or Merit, Level 1. Candidates achieving a total mark of 70 or more will be awarded a grade A (8), Level 2, Distinction, Level 1 and those achieving 80 or more a grade A* (9) Level 2, Distinction* Level 1. The examination questions will get progressively more difficult through the examination with scope to stretch the highest attainers without a very minor uncharacteristic error preventing the achievement of a top grade.

Weightings

5.13 The assessment objectives provided by the unit learning outcomes are approximately evenly weighted in the coursework element. The synoptic element underpinning the examinations at Level 1 and Level 2 is related to the following learning outcomes:

IPU 1 - Plan select and use appropriate IT systems and software to meet needs
IPU 2 - Review and adapt the on-going use of IT tools and systems to make sure that activities are successful
IPU 3 - Develop and test solutions to improve the ongoing use of IT tools and systems

5.14 These are collective contributors to AO3 - Competence in the use of IT to support learning.

5.15 These learning outcomes are contextualised in the range of Level 1 and Level 2 units and require the support of under-pinning knowledge and understanding. The examination provides a means of testing associated knowledge and understanding and of grading the qualification. For this aspect of the assessment the assessment objectives are:

AO1 - Recall, select and communicate knowledge and understanding.
AO2 - Analyse, evaluate, make reasoned judgements and present conclusions.

5.16 The overall weighting of the objectives will vary depending on the grade

At Level 2

Coursework is assessed across the full range of content internally with external moderation. The externally set and marked exam covers the full range of content. The coursework provides 30 marks and the exam has a maximum mark of 70.

Grade C approximately weighted AO1 - 30%, AO2 - 30%, AO3 40%.
Grade A approximately weighted AO1 - 37%, AO2 - 37%, AO3 26%

At Level 1 (graded)

Coursework is assessed across the full range of content internally with external moderation. The externally set and marked exam covers the full range of content. The coursework provides 30 marks and the exam has a maximum mark of 70.

Pass approximately weighted AO1 - 40%, AO2 - 20%, AO3 40%.
Distinction approximately weighted AO1 - 40%, AO2 - 40%, AO3 20%

5.17 This then provides evidence that the Grade A (8) candidate is likely to be more suited to future academic study whereas the Grade D (5) candidate is likely to find it difficult to cope with courses highly dependent on academic testing.

Learner entry and costs

5.20 TLM website has the latest fee structure shown. Examination entry will depend on whether or not learners meet the coursework criteria. There are no fees for replacement certificates or verification of certificates because

all certificates can be directly authenticated against TLM's secure database. For details of current costs please refer to the web site.

On-line examination

5.21 The examination can be delivered in a traditional paper-based format or on-line. The cost of this is shown in the published fees page. The on-line version has a secure web user interface and requires no software installation. It can run through any standard's compliant web browser on any type of computer. The user is restricted to an area in the centre of the screen during the test and has no access to the internet, or any other storage device without moving the mouse pointer out of the secure area and this will set off a warning. Assessors should warn candidates that persistence will result in disqualification from the examination. Since the Level 2 on-line exam contains open-ended questions, it has to be physically marked and so the results will not be immediately available but we will aim to have these ready within 6 weeks of taking the exam. Schools need to provide at least 6 weeks' notice to take the exams and exam fees must be paid in full before candidates will be allowed to take the exam. Please provide more notice if possible.

5.22 No candidate should have prior access to the questions in an examination paper either directly or indirectly, before they sit the paper. TLM will have several versions of the examination available and if there is any suspicion of compromise of security, the Principal Assessor should contact TLM to work out a solution. Assuming there is no malpractice, it might simply be a matter of scheduling an alternative paper. Papers will be planned to be of similar difficulty. Candidates can retake an examination once before claiming the award. After the award is finalised candidates must wait 6 months before retaking the entire qualification. Centres can use the exact same procedure for mock exams. These are charged at the same rate and might help inform the centre of the likely results outcome when candidates take the fully regulated examination.

Internal standardisation of coursework

5.23 The Principal Assessor has the ultimate responsibility for consistency in assessment standards within a centre. All assessors have signed a contract agreeing to uphold standards and should therefore co-operate with the Principal Assessor and Account Manager at TLM to ensure that

standards across the centre are consistent. It is advisable to send work samples to TLM early to check that evidence is at the right standard so that there is time to make any adjustments necessary to the course and learner expectations. TLM will generally check a higher quantity of work from new assessors and feedback to ensure that they are confident to make appropriate judgements over time. This reduces risk and improves efficiency in the longer term.

Authentication

5.24 All assessors must take reasonable steps to ensure that any coursework evidence submitted by candidates is a true reflection of the candidates' competence. This is in keeping with the assessor undertaking to uphold and maintain standards in the contract with TLM.

5.25 Certificates can be authenticated directly on-line using the certificate number or by scanning the QR code on the certificate. There is no charge and it makes it more likely that certificates will be checked and that in turn improves security. Certificate forgeries are a significant problem when authentication is not simple and straightforward because convincing forgeries are easy to achieve with recent technologies and will get easier as time goes on.

6. Other considerations

Access arrangements and special requirements

6.1 All TLM's qualifications are intended to be accessible, as widely as possible. Centres should contact TLM if they have any questions related to accessibility issues.

Language

6.2 The language for provision of this qualification is English only. This will only change if we have a significant demand in another language that is sufficient to cover the additional costs involved.

Malpractice

6.3 TLM has comprehensive policies and procedures for dealing with malpractice. These are documented with our policy document page. Assessors should be familiar with these policies and make them clear to candidates. Assessors should inform their account manager if they suspect any instance of malpractice that could have a material effect on the outcome of any assessments, either for themselves or colleagues. This is part of the upholding of standards that is part of the contract with TLM.

Equality of opportunity

6.4 TLM promotes equality of opportunity through policies and procedures. These are again documented in our policy pages.

Resources, support and training

6.5 A clear goal is to enable learners to support all their IT user needs using resources freely and legally available from the internet. This is related directly to national policies for inclusion and equality of opportunity. The reality is that there is so much user dependence on proprietary applications that we can only support the transition to free and open resources through education and common sense.

6.6 TLM does not require centres to use Free and Open-Source applications but it certainly encourages them to do so. Most of the key software applications needed to support any of the assessed units are available

freely from the web including office suites, graphics and sound editing. As a nation we could save hundreds of millions if not billions of pounds in software licensing fees by providing users with the skills, knowledge and confidence to migrate to free and open-source applications. You Tube, OpenClipart.org, Wikipedia and many other sites provide free content that supports learning and the number and range of such sites is increasing.

7. Grade Descriptions

A **grade A (8)** candidate will exhibit most the following characteristics.

7.1 Candidates demonstrate a high level of independence in using IT applications to support their learning. They recall, select and communicate a thorough knowledge and understanding of the technologies common to a range of applications including the impact of their use in social and commercial contexts.

7.2 They apply knowledge, understanding and skills to a variety of situations, selecting and using a range of IT tools efficiently to solve problems and produce effective IT-based solutions to support their learning. They relate these to comparable activities in the world of work. They manipulate and process data efficiently and effectively. They interpret information and transfer knowledge and understanding from familiar to unfamiliar contexts. They work creatively exploring and developing ideas. They adopt systematic approaches to safety, promoting secure and responsible practices.

7.3 They use scientific methods to analyse problems such as control of variables and observations to identify needs and opportunities. They set hypotheses in the context of IT user issues and critically analyse and evaluate the applications they use. They review their own work and that of others making supportive and constructive criticism where appropriate. They use IT to communicate effectively, demonstrating a clear sense of purpose and audience.

A **grade C (5/6)** candidate will exhibit most of the following characteristics

7.4 Candidates demonstrate the ability to select and use relevant knowledge, ideas, skills and procedures to complete well-defined tasks and address straightforward problems. They take responsibility for completing tasks and procedures and exercising autonomy and judgement subject to overall direction or guidance.

7.5 They use understanding of facts, procedures and ideas to complete well-defined tasks and address straightforward problems in supporting their learning. They interpret information and ideas related to the social and commercial impact of IT, showing awareness of the types of information

that are relevant to their areas of study. They identify, gather and use relevant information to inform their actions and make judgements about how effective their actions have been.

7.6 They work safely and securely, identifying key risks, taking reasonable actions to avoid them. They collaborate in reviewing their work evaluating the way they and others use IT and they take positive actions to improve. They use IT to communicate, demonstrating consideration of purpose and audience.

7.7 A **pass Level 1** candidate will exhibit most of the following characteristics: Candidates demonstrate the ability to identify relevant facts, ideas, skills and procedures to complete well-defined tasks and address straightforward problems with structured guidance. They can take responsibility for completing tasks and procedures and exercising autonomy and judgement in some circumstances.

7.8 A Distinction **Level 1** candidate will exhibit the characteristics of a pass level candidate but will show a more extensive range of knowledge and understanding that is indicative of potential for straight forward up-grade to **Level 2.**

Annexe A

Example Level 2 Examination.

The following principles will apply to the design and structure of each exam.

1. Questions will vary in the general area of the required learning outcomes and cover all the IPU assessment criteria. Questions will reflect a balance of the content syllabus as well as the IPU learning outcomes.
2. Efficient use of applications/cost savings. Minimum 30%.
3. Knowledge of data standards/interoperability. Minimum of 15%.
4. Making judgements in a probably unfamiliar context. Minimum 10%.
5. Analysis of data/information in an IT context. Minimum of 10%.
6. Dealing with quantifiable and calculations. Minimum of 10%.
7. Safety, security, acceptable use. Minimum of 5%.
8. IP - copyright, trademarks, patents. Minimum 5%.
9. Multiple choice questions on any paper. Maximum 15% of the score.
10. Open-ended free response questions. Minimum 15% of the score.

Questions

1. **Which of the following is a description of a purpose for using Information Technology to support a task?**

   a) To reach a wide audience at low cost.
   b) To increase costs.
   c) To make the task more complex.
   d) To support the IT industry.

   (a) (1 mark)

2. **Why might using a web page be a better method of presenting information than a desktop office presentation program?**

   a) The web page is a bigger file and easier to see.
   b) The web page is easier to get to a lot of people more efficiently.
   c) The web page is in a proprietary file format whereas the desktop file is open.
   d) The web page has more multimedia capability.

   (b) (1 mark)

3. **Which of the following software applications would be most appropriate for collecting survey data.**

a) A word processor.
b) A spreadsheet.
c) A web form.
d) A presentation program.

(c) (1 mark)

4. **When planning a task using IT**

a) make sure the software used is all from the same supplier for compatibility.
b) always work on the internet.
c) always work in a team.
d) set SMART targets.

(d) (1 mark)

5. **Which of the following statements is FALSE?**

a) It is possible to run a business using only resources that are legal and free from the internet.
b) It is possible to develop a spreadsheet model with three different people in different countries all working on the same sheet at the same time.
c) The internet was developed by Microsoft and Apple to get their products to work together.
d) The world wide web is supported by millions of databases.

(C is false) (1 mark)

(The internet was the result of a US Defence need to link together different incompatible networks – elimination requires knowledge related to the purpose of IT and being competent in selecting IT applications)

6. **Formal writing is important in some situations.**
Describe a situation where you would be careful to write formally and a situation where you would not be concerned with writing formally.

(Write formally in a Blog, write informally in a chat session or any other reasonable cases)

(2 marks, 1 for each)

7. **What type of file has a .jpg extension?**
(Image file - with trade-off between size of file and quality of image)
(2 marks)
(1 mark for image, photograph, picture. 1 mark for reference to compression.)

8. **What type of application is associated with .mp3 files?**
(Music)
(2 marks)
(2 for music, audio, 1 mark for sound, podcast or other plausible type.)

9. **Where would you see the contents of a HTML file displayed?**
(2 marks)
(In a web page or in a web browser, either will do)

10. **What type of file has a .exe extension?**
(2 marks)
(2 marks, for Program or Executable File or Application)

11. **Why should you never open .exe files sent to you over the internet?**
(2 marks)
(It might be a virus or other malware) 2 marks, for virus, malware, worm, trojan or another example. 1 mark for it could harm your computer or a general indication that it is dangerous).

12. **Describe two reasons why downloading a large file using a Smart-phone might be a disadvantage when compared to using a broadband cable connection.**
(2 marks)
(Takes longer, could cost money, could lower the performance of the phone for other apps, 1 for each of two reasons.)

13. **I have an application that is intended to help in designing graphics for posters and advertising.** It saves files in its own

format, naming files with a. ofz extension. I want to save my file for display on the internet, describe the facility in the software that I should look for to do this?

(2 marks)

(Save as... or Export to .jpg, .png or .svg. 2 marks, 1 for save as or export and 1 for naming an internet graphics format - allow gif)

14. **You work for a small company and you have received a request to discuss your company's products with a potential customer in Brazil.** Briefly describe applications which you might use to meet these requirements saving your company money compared to standard 'phone calls.

(2 marks)

(Use voice over IP e.g. Skype or Google Hangouts allow Sipgate or similar although these do cost small amounts. 2 marks, for voice over IP applications, or 1 each for two specific examples)

15. **What is the purpose of an Acceptable Use Policy (AUP)?**

(2 marks)

(To enable a group of people to work together using IT in a way that is socially acceptable to the group. 2 marks for any reasonable description)

16. **Take one subject at school and describe 3 ways in which IT makes you more productive in it.**

(3 marks)

(e.g. in English I can draft and redraft work more easily and I can share my work with other people through Blogging. Spell-checkers help me improve my spelling by flagging up words that are incorrectly spelt. In History I can search for information in secondary sources and find specific details needed for homework. I can present my work in a neater way and use messaging to discuss work with my friends.)

17. **To make a video many pictures are taken very quickly one after the other.** These pictures are called frames and the more frames that are played each second the steadier the video picture will be. Each

frame is stored as digital data and the sharper the image and the richer the colour the bigger the quantity of data in each frame.

Which of the following statements best fits the information provided for a 10-minute video file?

The size of the file in MB

a. only depends on the rate frames are played back
b. only depends on the data in each of its frames
c. depends on both the rate frames are played back and the data in each frame
d. only depends on the software playing it back

(c) (1 mark)

18. **Which of these passwords is most secure?**

a. LETMEINNOW
b. 1235775321
c. 120dollars
d. 50%Certain

(d) (1 mark)

All have the same number of characters but D has a bigger range of character types. Knowing this will support testing the choice of a password as a security solution.

19. **"Copyright law" in a digital age is unworkable. Explain two reasons why someone might agree with this and two reasons why someone might disagree.**

(4 marks)

(Reasons to agree: There is massive evidence of law breaking with illegal downloads of music, films and programmes from the internet. It is so easy to copy digital data it is impossible to prevent this without the disadvantages of inconvenience to all users outweighing the advantages. There are so many different licenses it is impossible for ordinary people to understand them all. Copyright mostly protects large monopolies rather than individual authors as it was originally intended.

Reasons to disagree: Although there is a lot of law-breaking, copyright is still used usefully in most information-based industries. Using digital rights management, it is possible to protect digital information against copying. It is the best way to make sure authors get rewarded for their work.)

20. **What is the difference between a Creative Commons licensed music file and a music file that is in the public domain?**

(2 marks)

(Creative Commons licenses generally allow sharing but with some conditions e.g. acknowledgement of the author. In the public domain there are generally no restrictions to how the work is used.1 for explaining each)

21. **.svg (Scalable Vector Graphics) and .png (Portable Network Graphics)** files are W3C Standards for graphics files. My company wants me to design a logo which might be used in web pages or on large display boards.

Explain 3 reasons why I should start by producing the logo as a .svg file.

(3 marks)

(1 mark for each of the following up to 3 marks total. Saying svg files are scalable, 1 for they stay clear or sharp or don't lose resolution, 1 for it's easy to convert from svg to other formats, 1 for the file size is small even for large clear images, 1 for saying they are the internationally agreed standard for vector graphics or similar.)

(The .svg file can produce images of any size without loss of resolution, it is easy to produce a .png or ,jpg file from a .svg file, it is difficult to produce a .svg file from a .png file. Producing a large high-resolution image with .png will produce a very large file. .svg is supported by most up to date web browsers, .svg is the W3C standard for vector graphics, it is XML based and will become increasingly important with HTML5 and the current and future generation of web browsers.)

Explain 2 advantages that a .png file has over a .jpg file.

(2 marks)

(1. They support transparency so images display properly on a variety of backgrounds. 2. None of the original data is lost when the file is compressed)

Explain 1 disadvantage of a .png file compared to a .jpg.

(1 mark)

(There is a limit to how small the file can be compressed which could lead to web pages in which many .png files are embedded opening very slowly or cause added data transfer costs e.g. with mobile technologies)

Give one reason why preparing text in a text editor might be an advantage compared to using a full feature word processor.

(1 mark)

(When transferring text between applications, style features transferred with a word processor document can cause formatting problems in a different application e.g. in a web page. It is safer to use plain text and add styles afterwards. Text editor will run faster on low spec machines. Text editors are freely available with most computers. Any one of the reasons.)

23. **.pdf is a widely used file format for documents. Which of the following statements is true?**

a) pdf was designed so that documents from a range of different word processors could be printed on paper consistently
b) pdf is a proprietary standard controlled by Adobe and can only be accessed legally with Acrobat Reader
c) pdf is the best method of providing information on the internet
d) pdf uses lossy file compression

(a) (1 mark)

Many people use pdf when putting information directly in web pages would be better. Pdf is now gaining use for electronic book readers

mainly because it can be used for copy protection more easily than HTML files.)

24. **When considering the page layout, what is the difference between putting information into a web page compared to putting it into a Word Processor?**

(1 mark)

(There is no fixed page size in a web page so the exact layout can change on different sized screens whereas with a WP the layout will always be fixed to the chosen page dimensions. Knowledge needed when deciding on tools and solutions related to documents)

25. **Here is a macro from a spreadsheet. Its purpose is to check the type of data contained in spreadsheet cells.**

```
Sub ContentChk()
If Application.IsText(ActiveCell) = True Then
  MsgBox "Text"
Else
                    If ActiveCell = "" Then
                    MsgBox "Blank cell"
                          Else
End If
If ActiveCell.HasFormula Then
     MsgBox "formula"
Else
End If
If IsDate(ActiveCell.Value) = True Then
       MsgBox "date"
    Else
End If
End If
   End Sub
```

What 4 types of data is the macro checking?

(Text, Blank cell, formula, date)

(2 marks)

(remove one for each error)

What is the purpose of the MsgBox function?

(1 mark)

(It will put a message box onto the screen)
If I replaced the line

```
MsgBox "Blank cell"
```

with

```
Sub PutNumber(9)
```

What is my likely intention?

(2 marks)

(1 for calling a Macro or Subroutine, 1 for its purpose. I would be calling another Macro to put a number 9 somewhere, probably into the blank cell.)

How would I test to see if my solution worked as intended?

(1 mark)

(If ActiveCell = "9" Then MsgBox "9" – or something plausibly similar)

26. Your school only has one proprietary Word Processor available for which license fees have to be paid. You don't have any money to buy the software and currently have a computer but no software. Explain how you might solve this problem, any possible difficulties you might have and possible solutions.

(2 marks)

(You can use e.g. OpenOffice, LibreOffice, Google Docs or other applications that have a wide range of import/export filters and that can be used legally, free of charge. The main drawback is that documents using complicated tables and formatting might not transfer accurately. (1 mark) (1 mark any of the following) Possible solutions: Ask the school not to make any documents unnecessarily complex, keep things as simple as possible. Ask the school to make a free Word Processor available so that it can be used at home and school without cost or restrictions on your family and friends using it. Note that any answers that imply illegal software copying or use in violation of the license should get no marks.)

27. **A small business decides to move its operations to Cloud Computing** where there will be no local servers and all the resources will be accessed using a web browser.

(i) **Explain why the company might want to do this?**

(1 mark)

(Any of - Save most of the maintenance costs of locally managed services, save the cost of licensing locally installed applications, save on hardware, access services from a wide range of locations)

(ii) **Explain why it would be a good idea not to rely on a single broadband connection?**

(1 mark)

(If the internet connection is lost, they will not be able to do any work)

(iii) **Explain low-cost options to ensure the service is maintained even if the main connection is lost.**

(1 mark)

(Second high speed connection and several low-cost connections such as 3G through smart-phones)

(iv) **Some people say that office applications can't work efficiently in this way.**

What do you think? Explain your answer.

(3 marks)

(Looking for some analysis such as it depends on the activities that the company is engaged in. If they need a lot of the features in desktop applications, heavy commitment to video editing or such like, probably it won't work. If they are doing typical standard things like letters, text documents with a few illustrations, general accounts, CRM, spreadsheets etc. it probably will. Also give credit for saying use the Cloud mainly but keep a local provision for specific apps. or reduce risk by maintaining the local capacity as a backup until practical use proves it is redundant.)

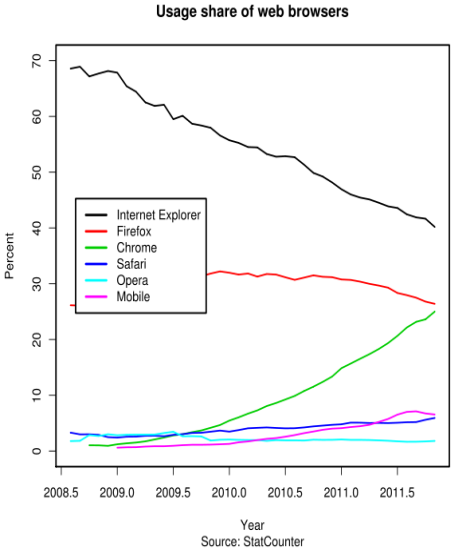
28. A company is about to upgrade its desktop office software and the cost will be £10,000 in new licenses. They have the option to use

a different office suite for free. What are the likely issues involved in deciding what to do?

(3 marks)

(They can make an immediate saving but will it cost money to retrain staff? Can they transfer important files reliably to the new system? Can they keep the old system going alongside the new system in case there are any problems? Any other plausible rational considerations.)

29.



The graph shows the access of the Wiki-media Commons by different web browsers. Wiki-media Commons is the source of the images used in the Wikipedia encyclopaedia.

(i) Which web browser has declined in its usage share at a rate of about 10% per year.

(1 mark) (Internet Explorer)

(ii) What is the approximate rate of growth in the usage of Chrome? (About 15% per year, allow anything between 10% and 20% per year. Note that it

is an increasing rate so what really matters is the tangent to the curve at 2011.5) (2 marks 1 for the number 1 for the units)

(iii) **Approximately when will Chrome become** the most popular browser?

(1 mark)

(Any time between 2012 and 2013)

(iv) **Why would it not be safe to assume that the web browser** usage pattern shown here is the same for usage in general all over the world?

(1 mark)

(Because the users of Wiki-media might not be typical of users in general)

(v) **Some people say Chrome is becoming more popular** than Internet Explorer because it is cross-platform. Explain what cross-platform means and whether you think this is the best explanation comparing with other possibilities.

(2 marks)

(1 mark for cross platform meaning it runs on different types of computer/operating system, 1 mark for any other reason e.g. it's faster, more standards compliant, linked to Google search etc.)

Level 1 Example Examination Sample Questions

2 marks for each question correct.

1. A text message is suitable for

A. informing a friend that you are ready to meet them.
B. telling an employee that they are to be sacked.
C. explaining how to take a computer apart.
D. making a job application.

2. Using the keyboard short-cut CTRL + C keys will result in

A. copying the highlighted item.
B. starting the print process.
C. pasting the highlighted item.
D. quitting the program.

3. **On checking a document, you have just completed you see red lines under a word, this means:**

   A. The word has the wrong font.
   B. The word might have a spelling error.
   C. The spacing is incorrect between words.
   D. The word needs to be increased in size.

4. **You receive an email from someone you do not know and it asks you to download and install a file with a .exe extension. Why should you be careful about following this instruction?**

   A. Installing lots of programs on your computer takes up valuable hard drive space.
   B. Your computer's system settings may not be able to cope with the program.
   C. The file might install a program that you do not like.
   D. The file might contain something that can harm your data or affect your computer’s security.

5. **You have been asked to design an advertisement for a business using their logo. There is a folder with 4 files in it. The file that is most likely the one to use for their logo image is**

   A. business-logo.mp3.
   B. business-logo.png.
   C. business-logo.exe.
   D. business-logo.xls.

6. **A design brief you are working on asks for a website with a black background and a dark red font for the text. This could be a problem because**

   A. the colour of blue requested is subject to copyright.
   B. the dark background will increase the time to download the whole web page.
   C. some monitors will not show the correct dark blue colour.
   D. some colour-blind people will find it difficult or impossible to read the text.

7. You are going to work on a project with a friend who has moved to a German school. The most efficient way to carry out this project is by

A. e-mailing a .doc file attachment and making amendments and then email back for more amendments.
B. recording podcasts and send them by e-mail.
C. using a cloud-based word processor with permission for both of you to edit
D. printing out your ideas on paper and then posting to Germany for your friend to comment and then return by post.

8. The letters FOSS stand for

A. Federation Operating for Secure Software
B. Freedom of Software Security
C. Free and Open-Source Software
D. Faulty Operating System Syndrome

9. A file with the extension .wav is linked to a web site. The type of program you will need to use this file is

A. A music player.
B. A spreadsheet.
C. A presentation program.
D. A database.

10. When writing a blog entry to provide evidence of your project for your assessment you should always

A. use formal writing.
B. use many fonts to give variety.
C. use very high-quality unprocessed images.
D. cut and paste the text from a word processor.

11. If you are writing a letter to apply for a job, which of the following fonts would probably not be appropriate?

A. Comic Sans
B. Times New Roman
C. Arial

D. Verdana

12. Your best friend offers you an unlabelled CD with a copy of the latest well-known Word Processing software on it. What should you do with the disc?

A. Offer to give your friend the money for it to cover the license fee.
B. Make a number of copies of the disc for your friends and family and return the original.
C. Make a number of copies to sell at the local car boot fair.
D. Refuse it explaining that it is not licensed for copying.

13. While visiting the technical staff in the school/college server room, you notice a post-it note with the administrator's password on. Do you?

A. Copy it down so that you can fix computers for other students later.
B. Tell your friend who is older than you so that they can deal with it.
C. Discuss the password with people on a social network to check it is a strong password.
D. Tell one of the people in charge of the technical staff that you know the password now.

14. When creating a web site for a local wildlife club, should you:

A. Use proprietary software that is expensive to use and learn but is recommended by others?
B. Make a complicated site to show off your skills?
C. Document as much as you can and use open systems where possible?
D. Find a site you like and copy their code and images to save time.

15. Your school, is hoping to deploy a new CMS. What does CMS stand for?

A. Copyright Management System
B. Content Management System
C. Content Manipulation Software
D. Context Management Software

16. **Your friend would like you to share some pictures you took while out playing some sports. You ask them to bring you a USB memory stick. USB means**

A. Unlimited Storage Bin
B. Universal System Bus
C. Universal Serial Bus
D. Unlocked System Bus

17. **When dealing with targets, the "R" in SMART means**

A. realistic.
B. resistor.
C. red.
D. ring.

18. **At a local meeting of people in your local village someone suggests using a Wiki to share information. This is a good idea because**

A. people outside the village will be unable to alter the contents.
B. the workload of keeping information up to date can be shared.
C. all Wiki contents is owned by Wikipedia.
D. all Wiki program code is owned by Google.

19. **You are working on a public forum with some students from other countries. You notice that one of the students has made a lot of English errors. You should**

A. text your friends to join the forum so they can help you make fun of the foreign student.
B. ignore it as it is not your problem.
C. send a private message asking if they'd like you to send them a corrected version.
D. leave the forum because the English is so bad and it shows the participants are stupid.

20. **Your friend asks you to join them when you get home from school on an internet game site. When you go to the link, another window opens up and it asks you to download and install a file. What should you do?**

A. Download and install the file.
B. Ask someone technically knowledgeable if it is safe to download.
C. Close the site and go to a different site
D. Use your brother or sister's login so it doesn't mess up your desktop settings.

21. You are thinking about purchasing a new tablet device for your school work. The best place to find out about the best one is

A. the tablet company's website as they know why it is so good.
B. a newspaper owned and funded by the person who runs the tablet company.
C. a community forum of people that have used the tablet
D. a community forum of people who have used the tablet and several other tablets.

22. You have designed your own piece of Open-Source software and you want to distribute it, but you don't want anyone to take it and make a proprietary version that can then be closed. What license should you apply?

A. Public domain
B. Apache license
C. BSD license
D. GPL

23. You have been asked to specify a computer for a partner school in a developing country. They have told you that one of their main problems is an unreliable electricity supply. One strategy that might help is

A. provide the most up to date desktop technology.
B. provide them with a server and thin clients.
C. provide a laptop with a very long battery life.
D. insist on using the Windows operating system

24. For a geography lesson you found a number of very useful documents and files. The most efficient way to present this information is to

A. download the files onto a USB memory stick and hand them in with the print out.
B. make links to the files in your e-portfolio web page report and use an on-line message to give the page reference to the teacher.
C. burn the files on to a DVD and hand that in.
D. make screen shots of the web links and copy and paste these into a word-processed document and print it out.

25. After carrying out an investigation in science, to display and analyse your measurements you would use

A. a word processor
B. graphics software
C. a spreadsheet
D. an audio editor

26. Sometimes when justifying the cost of buying software "total cost of ownership" (TCO) is used. This is is different to the license cost because it

A. only applies to open-source applications.
B. excludes the cost of the packaging.
C. includes all costs such as training and support.
D. is only the cost of the media disc.

27. HTML 5 based development is a good idea because it is

A. based on proprietary standards.
B. more advanced than i-TML 4.
C. an open standard.
D. a Google product.

28. The government department that established a policy for the use of open standards in government is

A. The Department of Trade and Industry
B. The Cabinet Office
C. The Department of Technical Innovation
D. The Department of Computing Technology

29. In the UK, owning the copyright of a book means you or your family can set the license conditions for using that book for

A. 10 years.
B. up to 70 years after your death.
C. an unlimited time.
D. a fee paid to the government.

30. Using someone else's work without their permission and pretending it is yours is called

A. plebeianism.
B. pluralism.
C. primitivism.
D. plagiarism.

31. Which of the following is a good reason for building your ePortfolio?

A. You can show your educational achievements to a potential employer.
B. You can see how you learnt more things over time.
C. You can revise and go back over your work.
D. All of the above.

32. Lossy compression throws some of the data away in order to make a file smaller. This would be a bad idea for compressing a program file because

A. the program needs every bit of code and it would not work at all if some of its code was missing.
B. using lossy compression could introduce a virus into the code.
C. it would make it easier to copy the program for illegal use.
D. the program would run more slowly than originally intended.

33. Your younger sister tells you she has a new friend she found on the internet. Which of the following will enable you to be sure about this person?

A. Search the internet using their name and address.
B. Search the 'phone book using their name and address.

C. Search for their school or employer.
D. None of the above would make things certain.

34. In order to make your English video project available in a particular format such as the open mpeg format the process is called

A. Encasing
B. Entreating
C. Endearing
D. Encoding

35. The file extension .flv is

A. associated with flash video which is open source.
B. associated with flash video which is proprietary to Adobe.
C. associated with HTML 5 and therefore quite new.
D. associated with the ipad for showing on-line movies.

Annexe B: Detailed syllabus for the examination

B.1 Note that while this content syllabus covers the range of the qualification in terms of what can be sensibly tested in a controlled exam, it does not cover every single aspect of learning. Elements requiring practical competence in a work context are more validly assessed through practical coursework evidence which is to a minimum standard of competence.

B.2 In the examination, questions will be set related to the following broad areas associated with improving productivity through the use of IT. Examples are illustrative rather than exhaustive.

1. Audiences at which work is targeted. Aspects of the work that makes it particularly suitable for the audience. Global audience and how communications technologies offer scope to improve productivity. Key characteristics of writing formally as opposed to writing informally in IT environments and why.

Examples: Knowing that people with disabilities need special consideration. Simple cases such as choosing colours that will not cause problems for people with colour blindness, having text alternatives for graphics to enable blind people to know what is being displayed, subtitles for videos for deaf people.

Description of a science investigation or other learning activity taken from the core curriculum, using a web page(s) with links to references so that a future employer can see the quality of work simply by knowing the URL.

Using translation software to communicate with someone in a different country.

Public web page (Wiki) to collaborate with friends in producing an information page about the local environment because it enabled collaborative working. Making it easy for other people to contribute and make the results easy to link to other similar sites. Advantages and disadvantages.

Formal writing in a web page to present part of an e-portfolio is important because employers will get a bad impression otherwise. Creating notes on a subject so they are accessible to themselves and peers from any location and can be linked to references and supporting resources. Using on-line publishing services for formally written texts.

Informal writing, SMS conventions, chat and instant messaging of friends using accepted short cuts and slang to communicate meaning. Awareness that many people using English discussion groups and mailing lists are not native English speakers.

Checking e-mail headers to make sure replies are only sent to people that need them. Not using automated replies on mailing list e.g. “I’m out of the office” and why.

“Spam” - knowing not to contribute to it e.g. by making your e-mail address public in a web page or replying to it.

2. Purpose in common applications and/or applications they have used. Security and safety when working online.

Examples: Word processing makes redrafting more efficient. Collaborative technologies enable sharing documents and concurrent development. Vector design programs produce drawings that can be scaled almost infinitely without loss of quality or increasing the size of the files. Web browsers should all display information provided on the internet consistently irrespective of the device. A spreadsheet enables mathematical models. The internet is increasingly the computer platform, its purpose is to store and provide and enable creation of information all over the world. Text messages enable low-cost asynchronous communication.

Basic principles of files names and structures associated with applications. File sizes, file types and conversion between files. Issues related to interoperability of applications from different providers. Save as, import and export to and from applications.

Passwords enable security but quality of passwords matters. Identifying unsafe practice. Knowing that people on the internet should not be trusted without good and independent verification of their identity. Knowing that simple internet searches can reveal a lot about you and other people. Knowing that leaving your computer without logging out is a very significant security breach. Knowing about common internet scams.

3. Strengths and weaknesses in the ways information is presented. Make comparisons between methods. Improving the way information is presented. Making information more accessible.

Examples: As a method of presenting information to a general audience, using web pages is better than desktop presentation software if sharing the information and updating it for a wide range of users is important. Desktop presentation software is better if there is a need for visual effects to a static audience. A lot of information gets presented inefficiently because most people associate presentation with desktop presentation software and many have little experience or skills to use other methods. The problem with e-mailing files as attachments or even downloading a file is that there is then a big task managing all those files and no means of updating them centrally. Mostly routine presentations are simple slides and so there is no great advantage compared to using linked web pages or a simple web-based presentation system. Giving the audience the URL (web address) of the information means all they have to do is book mark it. If anchors are set in the information and published the users can integrate precise bits of information into their own information systems with simple links. With the shift from desktop to the web these issues are becoming increasingly important in improving productivity.

There is still reluctance to acknowledge benefits when people have all their personal learning locked into older less efficient methods. This is why education for technological change is important rather than just teaching current established practice.

Handling and interpreting information in IT contexts, trends, rates of change and comparisons. Understanding trends will help in making better choices and improving productivity.

Information in formats that can be viewed and edited by free tools is more accessible to more people. Importance of open standards and the interests of particular commercial entities in proprietary standards.

Significant facts should be referenced to evidence. Many people providing information have a commercial interest. This includes the news media who will often distort facts to get a reaction to sell more news. Companies selling software and services will play up any advantages and keep very quiet about any disadvantages. Candidates need to be aware of the possible conflicts of interest behind the information presented to them enabling them to make better decisions that underpin improved productivity.

4. Copyright licensing and patent issues that affect information associated with common applications. Candidates will be expected to be familiar with commonly used file types and important open standards.

Examples: All candidates should be able to Identify key image file formats svg, jpg and png as open standards associated with web browsers. .psd as a common undocumented proprietary image format associated with desktop applications. HTML5 as an open standard including video playback. Flash video as a proprietary video file format. Describe the relationship between copyright and licensing. Illegality of using copyright material contrary to the license. Problems of long-term access to information in “secret” formats and for interoperability of data between applications from different suppliers and the effect on competition. Referencing work and respecting trademarks. Balance between the power given to copyright/patent holders compared to the power of the end-user. All these have a significant impact on risk and productivity.

In recent years licensing for sharing has become increasingly common. Whereas the traditional approach is to forbid copying without paying a license, removing such barriers can massively increase proliferation. Examples are the IBM PC hardware design, worldwide web, Wikipedia, web browsers, Android Smart-phones. Note, mostly these things are NOT copyright free, they are copyrighted but they are licensed for free use sometimes with conditions.

Association of common files such as .doc, .docx, .xls, .xlsx, .ppt, .pptx, .pdf, .eps, .html, .odt, .odc, .odd, .wav, .mp3, .mpg, .ogg, .mov, .wmf, .flv, .exe, .txt, .zip, .rtf, .mp4, .jpg, .png, .svg, .gif, .avi. with types of application is expected.

5. System of information flow starting with input of information, through processing the information to outputting results.

Examples: Providing information in an e-portfolio system, linking it to assessment criteria and providing self-assessment and passing it to an assessor, assessor returning it with feedback. This could be in any subject of the curriculum. Listing the information sources needed for a homework assignment, explaining how they will be organised and how the final outcomes will be presented. Gathering empirical data through data logging, processing it and presenting it in graphical form. Gathering data from the internet about two different software applications and processing and presenting the results to highlight comparative data. Collecting survey data using web forms, processing it and presenting the results.

Issues in an information flow linked to interoperability of different components in the system. Efficiency in terms of the degree of automation in the process and the tools used (Too many people collect data in word processor documents even at national government level. It is simply bad and inefficient practice probably resulting from low expectations in digital literacy and lock-in to dated methods and software) Macros, scripts and programs that improve productivity. Issues related to copyright and licensing of information in the system.

6. Costs of different applications, direct and indirect costs.

Examples: Putting information directly into web pages makes them available to anyone with a web browser and there are options to get free web browsers on free operating software. Putting information into e.g. MS Publisher and saving in .pub files makes it impossible to access the information without buying MS Publisher (and MS Windows). There are then license fees to pay for Publisher and the Operating System on which it is running. Saving a drawing in svg format enables it to be accessed and edited using free software and displayed on the web. A drawing in .cdr format can only be reliably opened using Corel Draw. Compare different aspects of costs to a company in procuring different applications and decide which is most significant. For example, managing e-portfolios on a local server will need maintenance on the local server whereas managing an e-portfolio on an internet-based server means no local server management. Training costs can be significant in changing working patterns. If short term costs are critical it will mitigate against the investment in training needed to support more efficient working practices in the future. Direct costs include software licenses, technical support to install the application. Indirect costs include the hardware to run the application, need for other associated applications e.g. anti-virus software, maintenance, mandatory upgrades that cost additional fees, technical support, training on new systems.

7. Target setting for IT projects. SMART targets, the importance of objectives and targets that can be rationally evaluated. Identifying resources needed for projects. Identifying critical success factors.

Examples: When producing a book and publishing it with its own ISBN using on-line publishing set specific targets at key points in the process. In the context of an e-portfolio recognise that providing 3 screen sized pages for 3 subjects by 31st July is a SMART target. Know that “produce an e-portfolio to show employers” is an aim not a SMART target. “Critical to success of this project is

access to the internet, a graphics editor that can produce .png files, an on-line content management system" these are critical success factors.

8. Specific characteristics of software to make choices of tools.

Examples: Using Inkscape as a design tool because it is free and is available on 3 major desktop platforms. Use MS Word for documents because it is the only word processor available on the school network. Use Google Docs spreadsheet because it can be used by several people in different schools at the same time working on the same sheet. Using Portable Apps because they can be run from a USB key without having to install anything on the computer. Use a content management system because it is easy to generate and edit web pages making them available to a wide audience. Support for macro generators/programming to automate common processes. Analysis of software applications to identify factors and attributes that support productivity and efficiency, including short-, medium- and long-term effects.

9. Purposes and outcomes in ICT projects

Examples: Describing how a science investigation was presented on the internet. Describe how they supported learning in their Ebacc subjects using IT. Describing how they published their own book with its own ISBN. Describing how they built a simple web site for a small business that did not have a presence on the internet. General understanding of productivity issues coming from practical projects they have completed.

10. Key aspects of local "Acceptable Use Policy" and their purpose. Legal issues related to usage.

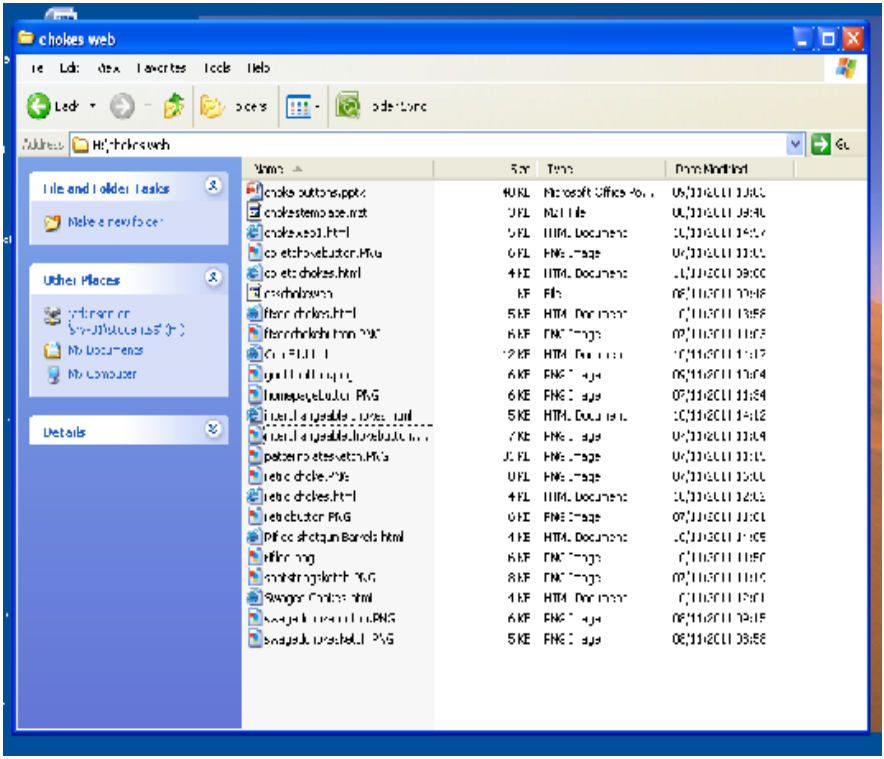
Examples: Not sharing passwords, being polite to other people in social/collaborative networks, not attempting to hack into the system or use other people's accounts. No bullying. Reasons can include privacy, accountability, technical security against malware and general good manners. How do constraints relate to acceptable use affect productivity? Legal issues such as copyright and licenses.

Annexe C

Extract from portfolio evidence used to support coursework assessment criterion.

Building web sites for a purpose <anon> Nov 2011

1.1 Determine what website content and layout will be needed for each page and for the site.



On starting compilation of the website, it is useful to list out the page content, roughly plan the web site content & then create a folder to hold all the content, pictures, sketches, etc. See screen shot, folder for my Chokes website. Note pictures & sketches reduced to .png or jpeg files, to control the integrity of the images & their file size.

1.2 Plan and create web page templates to layout content
Planning can extend to every part of the process from background to font, picture sound & video content. Templates can be designed using CSS which can then be used throughout the site to ensure consistency from font, through layout to background etc. Proper planning & Design of a web page can influence many factors, how easy it is to read, how easy it is to obtain the information on that or other associated pages, links to particular articles outside the web site can be included, even to music or video clips. Layout needs to be carefully considered, the aim should be ease of use for the consumer, access to key information, maybe to other linked sites should be as easy as possible. See CSS below from my John Patrick Knives website.

```
<!-- Stylesheets --><!--[if IE 6]><link rel="stylesheet"
type="text/css" href="css/ie6.css" /><![endif]--><!--[if IE
7]><link rel="stylesheet" type="text/css"
href="css/ie7.css" /><![endif]-->
<style type="text/css">
                    @import url(css/plugins.css);
                    @import url(css/base.css);
                    @import url(css/nav.css);
                    @import url(css/custom.css);
          </style><!-- Standard meta tags →
```

I have used Kompozer, Mr Site and 'Web Easy Professional 6' to create most of the web sites I mention in this report, but Microsoft Publisher also offers a "Website" creation option which uses preset styles (CSS) to produce a number of different styles of website, the program is extremely easy to use, see screen picture right but has limitations in flexibility and the content efficiency.

1.3 Select and use website features and structures to enhance website navigation and functionality.

I have constructed a number of "buttons" which can be mouse clicked to navigate around the site, plus one on another site that embedded a link to a standalone article, see below;

Annexe D

Unit assessment - coursework guidance

Level 2 Unit 1 - Improving Productivity Using IT (4 credits)

1. Plan select and use appropriate IT systems and software to meet needs.	**2. Review and adapt the on-going use of IT tools and systems to make sure that activities are successful.**	**3. Develop and test solutions to improve the ongoing use of IT tools and systems.**
1.1 I can describe the purpose for using IT.	2.1 I can review the on-going use of IT tools and techniques and change the approach as needed.	3.1 I can review the benefits and drawbacks of IT tools and systems used in terms of productivity and efficiency.
1.2 I can describe the methods skills and resources required to complete tasks successfully.	2.2 I can describe whether the IT tools selected were appropriate for the task and purpose.	3.2 I can describe ways to improve productivity and efficiency.
1.3 I can plan how to carry out tasks using IT to achieve the required purpose and outcome.	2.3 I can assess the strengths and weaknesses in my final work.	3.3 I can develop solutions to improve my own productivity in using IT.
1.4 I can describe factors that might affect the task.	2.4 I can describe ways to make further improvements to my work.	3.4 I can test solutions to check that they work as intended.
1.5 I can select and use IT systems and software applications to complete planned tasks and produce effective results.	2.5 I can review outcomes to make sure they match requirements and are fit for purpose.	
1.6 I can describe how the purpose and outcomes have been met by the chosen IT systems and software applications.		
1.7 I can describe any legal or local guidelines or constraints that apply to the task or activity.		

Level 1 Unit 1 - Improving Productivity Using IT (3 credits)

1. 1. Plan the use of appropriate IT systems and software to meet needs	**2. 2. Use IT systems and software efficiently to complete planned tasks**	**3. 3. Review the selection and use of IT tools to make sure tasks are successful**
1.1 I can identify the purpose for using IT in my work.	2.1 I can identify automated routines to improve productivity.	3.1 I can check the outcomes of my work to make sure they are as intended.
1.2 I can identify the methods, skills and resources needed to complete my tasks successfully.	2.2 I can use automated routines to improve productivity.	3.2 I can decide whether the IT tools I chose were suitable for my tasks.
1.3 I can plan how to carry out the task using IT to achieve the required purpose and outcome.	2.3 I can complete planned tasks using IT.	3.3 I can identify some strengths and weaknesses in my work on completed tasks.
1.4 I can identify reasons for choosing particular IT systems and software applications for the task.		3.4 I can suggest some improvements to make my work more effective.
1.5 I can choose a particular technology to meet my needs.		
1.6 I can identify an acceptable use policy and legal requirements that affect my work.		

The first thing to note is the similarities and differences between the units in broad terms. (See the general description of RQF qualifications at Level 2 below for more on this) At Level 2 the expectations are to be able to describe what they are doing, be more self-sufficient and work in more detail than at Level 1. However, the basic nature of the projects they undertake can be similar enough to leave the final assessment judgements until there is evidence produced. It is also important to regularly bring the learners' attention to the differences so they know what they need to do and, in some cases, make the transition from Level 1 to Level 2 towards the end of a course over several projects contextualised by contexts interesting to the learners and related to the other units chosen. These units should be used in conjunction with the content syllabus so that the knowledge needed for the examination is gradually gained supported by

practical experiences to make it real. There now follows guidance for assessors in interpreting the criteria.

Assessor's guide to interpreting the criteria

General Information

RQF general description for Level 2 qualifications

Achievement at RQF Level 2 (EQF Level 3) reflects the ability to select and use relevant knowledge, ideas, skills and procedures to complete well-defined tasks and address straightforward problems. It includes taking responsibility for completing tasks and procedures and exercising autonomy and judgement subject to overall direction or guidance.

Use understanding of facts, procedures and ideas to complete well-defined tasks and address straightforward problems. Interpret relevant information and ideas. Be aware of the types of information that are relevant to the area of study or work.

Complete well-defined, generally routine tasks and address straightforward problems. Select and use relevant skills and procedures. Identify, gather and use relevant information to inform actions. Identify how effective actions have been.

Take responsibility for completing tasks and procedures subject to direction or guidance as needed.

Requirements

- Standards must be confirmed by a TLM Level 2 Assessor or higher.
- Assessors must at a minimum record assessment judgement as entries in the on-line mark book on the TLMs.org certification site.
- Routine evidence of work used for judging assessment outcomes in the candidates' records of their day-to-day work will be available from their e-portfolios and on-line work. Assessors should ensure that relevant

web pages are available to their Account Manager on request by supply of the URL.

- When the candidate provides evidence of matching all the criteria to the specification subject to the guidance below, the assessor can request the award using the link on the certification site. The Account Manager will request a random sample of evidence from candidates' work that verifies the assessor's judgement.

- When the Account Manager is satisfied that the evidence is sufficient to safely make an award, the candidate's success will be confirmed and the unit certificate will be printable from the web site.

This unit should take an average Level 2 learner 40 hours of work to complete but this can be concurrent with other work since the IPU units are synoptic across other units. In all cases assessors are advised not to assess units in isolation when there are logical links between units or indeed work in other subjects.

Assessment Method

Assessors can score each of the criteria L, S or H. N indicates no evidence and is the default starting point. L indicates some capability but some help still required. S indicates that the candidate can match the criterion to its required specification. H indicates performance that goes beyond the expected in at least some aspects. Candidates are required to achieve at least S on all the criteria to achieve the full award.

Expansion of the assessment criteria

1. Candidates will plan select and use appropriate IT systems and software to meet needs.

1.1 I can describe the purpose of using IT in my work.

Candidates should be able to describe the purpose of their work and why using IT adds value to it in some way or ways.

Evidence: will be provided directly from the presentation of work in web pages that has clear purpose and describes the purpose of the work.

Additional information and guidance:
Candidates might describe the audience at which they are targeting their work and any aspects of the work that makes it particularly suitable for the audience e.g. "I presented a science investigation using a web page with links to references so that a future employer can see the quality of my work simply by knowing the URL". "I used a public web page to collaborate with my friends in producing an information page about the local environment because it enabled us to work together effectively. It also made it easy for other people to contribute and made the results easy to link to other similar sites". They should be able to describe the key characteristics of writing formally on a web page to present part of an e-portfolio as opposed to the style used for chat and instant messaging of friends. The candidate will show evidence of understanding relevance in relation to purpose. Information that is irrelevant to a task will not support its purpose and inaccurate or biased information could be against the purpose. The main difference between Level 1 and Level 2 is that in Level 2 description needs to be explicit, whereas in Level 1 it is enough to identify purpose e.g. from a list of options or other supporting structures. Their documented web pages, blogs and/or files should contain descriptions in keeping with the guidance here but they should be appropriate for the particular context chosen for their project.

1.2 I can describe the methods, skills and resources needed to complete my tasks successfully.

Candidates should be able to systematically analyse a task and match needs to resources. They should be able to describe the methods, skills and resources they need in some detail.

Evidence: will be provided directly from the presentation of work in web pages that has clear purpose and describes the methods skills and resources relevant to successful completion.

Additional information and guidance:
For example, as a method of presenting information to a general audience, using web pages is often a better choice than desktop presentation software. In a web page, the information is permanently and immediately available to the intended wide audience and this information can be linked to related information in other pages. They might need skills related to e.g. preparing images for use on-line so they are suitable sizes and load quickly on low bandwidth connections. They can describe issues related to copyright (PLTS) and

accessibility if they intend others to use the information they prepare. The resources needed could include time, software, hardware or new learning and expertise. Again, evidence of description will differentiate from Level 1.

1.3 I can plan how to carry out tasks using IT to achieve the required purpose and outcome.

Candidates should be able to provide clear and structured plans for tasks and at least one project of 20 or more hours.

Evidence: A documented plan that supports a project presented in a digital format e.g. a web page, document file or IT planning software.

Additional information and guidance:
Candidates should have planned a project of some complexity. For example, designing a structure for an e-portfolio with a title page linking to subjects of interest, listing the information sources needed for input, the software tools they will use for processing information to include in their portfolio and the intended audience for their finished product. They should provide evidence that they have considered costs and where relevant the file formats generated by the tools in order to make information widely accessible. Will their work force other people to have to buy software in order to access it? Planning should consider such issues to avoid problems later and knowledge and understanding of these practical issues will contribute to them doing well in the examination.

Plans should typically be based on an aim, some specific objectives and/or SMART (Specific, Measurable, Attainable, Relevant and Time-limited) targets. Candidates should realise the importance of objectives and targets that can be rationally evaluated rather than vague statements of aim. An example in the context of an e-portfolio might be to provide 3 screen sized pages for 3 subjects by 31st July. Resources required are 20 hours of time and access to the Drupal Content Management System. Plans should include concise descriptions of the methods and actions needed for success and these can relate directly to the range of assessment criteria in this section. This is just a specific example and students are encouraged to undertake projects that have direct use to them either in supporting the formal curriculum or outside. Other projects could be to produce a professionally published book with its own ISBN using a free on-line publisher, producing a digital music track and promoting it, producing an information video to teach younger children how to use HTML tags, adapting a

computer program to teach software development principles through games or puzzles (Examples at https://theTLMs.org/community/LinkPuzzles)

1.4 I can describe factors that might affect the task.

Candidates should be able to describe a range of factors that could affect the way they carry out their tasks.

Evidence: Evidence from content of their web pages describing these factors and considerations in their planning

Additional information and guidance:
Have they considered the time the task is likely to take, any copyright issues in obtaining suitable resources, cost of resources and any e-safety and/or relevant security considerations? This is not intended to be an exhaustive list. The factors considered simply have to be credible and useful in the planning process. Again, being able to describe the factors and relate them to the task is a Level 2 characteristic, identifying factors with a prompt list or similar is Level 1.

1.5 I can select and use IT systems and software applications to complete planned tasks and produce effective results.

Candidates should have sufficient breadth of experience to make an informed choice about the IT systems and software to use.

Evidence: Evidence from content of their web pages and day to day working files indicating effective results and appropriately selected supporting resources.

Additional information and guidance:
Candidates should show evidence of making appropriate choices between different applications or systems in order to complete a project of some complexity. For example, they might choose a vector drawing program to originate diagrams rather than use a raster (bitmap) graphics program because of the greater flexibility in handling and scaling shapes. They might choose open-source applications for lower cost or ethical reasons. They might choose web-based systems for ease of linking to other information sources or sharing resources with others. A legitimate reason for choosing a particular system could be that it is the only one available but candidates should be encouraged to

question why this is the case given the growing list of freely accessible tools and resources on-line.

1.6 I can describe how the purpose and outcomes have been met by the chosen IT systems and tools.

Candidates should describe how the tools and systems they chose have been successful in supporting their project outcome as part of an evaluation.

Evidence: Evidence from documented evaluations.

Additional information and guidance:
They can also point out weaknesses in the tools and alternatives that they might have adopted with hindsight taking account of feedback from their peers and others. Assessors can give specific headings and general guidance to make it clear that an evaluation must target specific outcomes and their strengths and weaknesses and not just result in general opinions such as "I think I was successful". Descriptions should reflect Level 2 functional skills in English and the ability to describe how... is the key difference between Level 1 and Level 2 work. Note that the evaluation could be written or verbal but if verbal should be recorded e.g. as a podcast or video.

1.7 I can describe any legal or local guidelines or constraints that apply to the task or activity.

Candidates should demonstrate that they can describe the legal and local guidelines and constraints that apply to the activity. These should be relatively straightforward summaries of say the acceptable use policy and copyright as a minimum.

Evidence: Evidence from documented descriptions.

Additional information and guidance:
Candidates should demonstrate that they abide by any local acceptable use policy and that they can describe the policy in general terms. They should make a declaration that they license their work for free use and that it is their own work and any sources of information are referenced to their owner. They should not use copyright tools or information without first gaining permission (or have it provided directly in the license). Any further local constraints can be included in this work but some description of the AUP and copyright should be present.

There is no need to have a detailed understanding of very complex terms and conditions. At this stage an overview of the main purpose and key requirements is sufficient.

2. Candidates will review and adapt the ongoing use of IT tools and systems to make sure that activities are successful.

2.1 I can review the on-going use of IT tools and techniques and change the approach as needed.

Candidates should be able to provide evidence of reviewing their work with specific focus on the IT tools and techniques they have used. They should describe at least three occasions where they have changed techniques, tools or approach as a result of evaluating their work in a project or projects.

Evidence: Written recorded evidence in web pages or day to day document files describing their work.

Additional information and guidance:
One way to approach this would be for the candidate to maintain a Blog as a diary supporting their work. They can use the TLM learner site for this purpose or their own resources as long as evidence is accessible to the Account Manager for moderation and verification. Putting together their e-portfolio or providing a digital resource or service to the community are suitable activities that can be reviewed and documented in a Blog or documented directly in a student evidence page linked to the assessment criteria on the TLM learning site.

2.2 I can describe whether the IT tools selected were appropriate for the task and purpose.

Evaluation should include a description of the IT tools and their fitness for purpose. This can be organised as an analysis of strengths and weaknesses.

Evidence: Evidence from documented description conforming to the criterion and guidance.

Additional information and guidance:
Candidates should be able to make clear judgements about the IT tools available to them supported by evidence. They should consider not only the

"brand" but the functionality and cost including indirect costs such as dealing with viruses, upgrades and administering licenses. File formats generated by applications should be considered in relation to lock-in to a particular product that could reduce future choice. Assessors should provide guidance to get candidates to refer to specifics rather than general statements such as "I think the tools were appropriate" without justification. Listing strengths and weaknesses will help avoid bland generalisations. The characteristic of Gold Level 2 as opposed to Silver Level 1 is the ability to describe specific aspects of the tools used and to make rational judgements about their properties. For example, the tool did or did not provide the facility to save a document in an open file format, the tools are expensive so only available to me in the place of work, the tools required some time to learn/were easy to learn. Some operations were slow and limited the speed I could work; I only used a very small number of the available features.

2.3 I can assess the strengths and weaknesses in my final work.
Candidates should provide evidence that they have analysed end products of their work and stated associated strengths and weaknesses taking into account feedback and views of other people e.g. their peers.

Evidence: Evidence from documented descriptions conforming to the criterion and guidance.

Additional information and guidance:
Strengths and weaknesses should relate to some of the following: format, layout, accuracy, structure, style, quality, clarity for audience. Getting candidates into the habit of using the strengths and weaknesses method and making an overall comment of judgement about the success of their work is recommended. They should get peers/intended audience to help them review and assess their outcomes.

2.4 I can describe ways to make further improvements to my work.
Candidates should use the evidence from their evaluations to inform ways in which future work can be improved.

Evidence: Evidence from documented descriptions conforming to the criterion and guidance.

Additional information and guidance:

Analysis of strengths and weaknesses as the work progresses forms the foundation for this assessment. Include examples from correcting mistakes and errors, improving connectivity or interoperability by adopting open standards, learning new technologies, adopting more efficient or effective methods such as preparing graphics for display so that they look reasonable *and* download quickly. Where conflicts arise e.g. one aspect causes both positive and negative effects, candidates should be encouraged to discuss these and not simply take an accepted view on face value. There is a lot of disagreement about the relative merits of particular tools and methods. At this stage the main emphasis is on making judgements and at least attempting to justify them even if the candidate's level of knowledge is a limiting factor.

2.5 I can review outcomes to make sure they match requirements and are fit for purpose.
Based on describing strengths and weaknesses of outcomes in relation to their planned intentions, candidates should comment on how well they meet the requirements defined in their plans.

Evidence: Evidence from third party feedback, analysis of strengths and weaknesses and any other relevant documented descriptions conforming to the criterion and guidance.

Additional information and guidance:
Candidates should show evidence that they can evaluate completed projects by documenting them appropriately establishing clear links between planning, execution, and evaluation. The evaluation should start with the original aims or intentions, analyse strengths and weaknesses by comparing outcomes to planned intentions. The review should include the views of peers and/or the intended audience for their work. Assessors can provide guidance in the form of headings and ensure that review of outcomes provides the basis of describing ways for making improvements but candidates should provide descriptions of their judgements in their documentation accessible to the Account Manager.

3. Candidates will develop and test solutions to improve the on-going use of IT tools and systems.

3.1 I can review the benefits and drawbacks of IT tools and systems used in terms of productivity and efficiency.

The candidate should be able to identify how IT tools might make achieving ICT based solutions more efficient to increase productivity for themselves and others.

Evidence: Evidence of review through documentation of evaluation in web pages and/or day to day files.

Additional information and guidance:
For example, sending e-mail can be more efficient than talking to someone when all that is required is a specific piece of information. Discussing the details of how to use a new software tool by e-mail or text messaging is likely to be a lot less efficient than a spoken conversation and so review should include discriminating use of ICT. Other factors such as the lack of expression and remoteness of technology can lead to "flame wars" that would reduce efficiency. Tablet on-screen keyboards are less efficient if a lot of text needs to be entered but that could be offset by portability.

Information entered directly into a web page can be much more efficient than making a word-processed file and attaching it to the page. Firstly, there is no need for word processing software, secondly the information is immediately available to users without having to download a file and having software for opening and viewing it. Social networking can be very powerful, but it can also be a major distraction to the focus required for efficient working. A lot of information distributed in pdf and PowerPoint files would be far better in web pages. Collecting data in word processing documents is done regularly when a web form and associated database would be more appropriate.

They might have discussed this in forums or verbally to form their views and so assessors might provide a witness statement to acknowledge this.

3.2 I can describe ways to improve productivity and efficiency.
The candidate should provide evidence that they can describe examples of working methods that improve efficiency.

Evidence: Evidence of descriptions through documentation in web pages and/or day to day files.

Additional information and guidance:

Examples might be to use a typing tutor to improve keyboard efficiency, use of keyboard short cuts, recording a macro to automate a process or getting a web browser to save often used details like name and address. They might describe how they organise their folders so the most often needed files are most readily available or change user interface characteristics. They might use bookmarking for files - note for machines with multiple users, bookmarking web sites are a clear advantage. They might use on-line collaborative tools instead of desktop tools or they might use shared resources such as open clip art and wikipedia on the "Give a brick get a house" principle. If writing a program, they will try to minimise key presses for input and make loops and other iterative processes as efficient as possible. Minimise the size of data files that will be transferred e.g. through file compression.

3.3 I can develop solutions to improve my own productivity in using IT.
The candidate should have adopted some of their own practical solutions for personal productivity as a result of exploring the ways that ICT can be used to communicate, collaborate and share ideas.

Evidence: Evidence through documentation in web pages and/or day to day files of them changing the way they work in response to feedback, evaluation and review.

Additional information and guidance:
They should have some clearly improved ways of working from regular use of keyboard short-cuts, bookmarking useful sites, greater use of web pages instead of word processors to present and organise information. This should be witnessed by the assessor and/or supported by portfolio evidence. Candidates should be encouraged to discuss productivity with peers and share ideas about the most effective techniques, favourite short cuts and working methods.

3.4 I can test solutions to check that they work as intended.
The candidate should routinely check their work to make sure they actually produce the outcome intended as their work progresses.

Evidence: Evidence through documented evaluation.

Additional information and guidance:
There should be few instances of bad formatting, spelling errors, or other obvious errors that could be eliminated by simple checks. Encourage groups to

check and assess each other's' work and to receive feedback graciously when others find errors. Fix errors directly or find out how to.

The candidate should routinely check their work to make sure they actually produce the outcome intended as their work progresses.

Moderation/verification
The assessor should keep a record of assessment judgements made for each candidate and make notes of any significant issues for any candidate. They must be prepared to enter into dialogue with their Account Manager and provide their assessment records to the Account Manager through the online mark book. They should be prepared to provide evidence as a basis for their judgements through reference to candidate e-portfolios and through signed witness statements associated with the criteria matching marks in the on-line mark book. Before authorizing certification, the Account Manager must be satisfied that the assessors' judgements are sound.

Level 1 Unit 2 – Digital Editing and Publishing (4 credits)

1. Select and use appropriate designs and layouts for publications	2. Input and combine information within publications	3. Use software techniques to edit and format publications
1.1 I can identify the types of information needed in my work.	2.1 I can identify copyright on information for import.	3.1 I can identify formatting and editing needs.
1.2 I can identify a suitable structure for presentation.	2.2 I can identify file types suitable for import.	3.2 I can apply appropriate editing techniques to information components.
1.3 I can follow instructions to use the layout in accordance with guidelines.	2.3 I can convert file types to compatible formats.	3.3 I can apply appropriate formatting techniques to information components.
1.4 I can select and use appropriate media for the publication.	2.4 I can import information into a layout manager ready for editing and formatting	3.4 I can evaluate finished work in relation to intentions.
1.5 I can evaluate a design in terms of its suitability for purpose.	2.5 I can combine information to convey meaning to an audience	3.5 I can assign a copyright license to finished work
1.6 I can consider issues related to open systems.	2.6 I can store and retrieve information in line with local guidelines	
	2.7 I can consider issues related to interoperability	

Expansion of the assessment criteria

1. Candidates will select and use appropriate designs and layouts for publications.

1.1 I can identify the types of information needed in my work.

Candidates should show that they can identify particular types of information, e.g. from a provided list or from search results, for documents relevant to their work.

Evidence: From documents produced by candidates and or centre devised tests/tasks.

Additional information and guidance:
Types of information might include text or graphic sources, information that is free to use (relate to licensing and copyright) information that supports a particular view or perspective, information that counters a particular argument or claim. There should be some spread and variation across several documents in work submitted for evidence.

1.2 I can identify a suitable structure for presentation.
Candidates should show that they have evaluated a range of methods in order to determine the best one for their project. This will then determine how they organise the material for the remainder of the tasks.

Evidence: Candidate files and or centre devised tests/tasks.

Additional information and guidance:
Candidates should show that they understand the different options available when editing and producing publishing materials and demonstrate that they can choose the best tools where appropriate subject to guidance in keeping with the RQF level 1 descriptor.

1.3 I can follow instructions to use the layout in accordance with guidelines.
Candidates should show that they have understood the "brief" and that they have designed a template or final piece which meets those design guidelines.

Evidence: Assessor observations and candidate documents.

Additional information and guidance:
A number of examples could be produced to give a range of choices. The candidates must show that they can work to a pre-set guideline in keeping with the RQF level 1 descriptor.

1.4 I can select and use appropriate media for the publication.
Candidates should demonstrate that they can choose paper or card of the appropriate weight for their publication, if it is a paper-based project, or suitable colour, font and graphic choices for a digital project such as a web page.

Evidence: Documents, web-based sites and/or centre devised test or task.

Additional information and guidance:
In most cases desktop published materials go onto paper but publishing generally targeted on producing web pages is just as acceptable. However, flexibility in interpretation should be exercised in keeping with the Level 1 RQF descriptor. Main consideration is whether the learner has the competence to originate material in appropriate software.

1.5 I can evaluate a design in terms of its suitability for purpose.
Candidates should demonstrate that they have a good understanding of what the intended purpose of their publication is and how closely they have met that requirement.

Evidence: Assessor feedback and candidate reflections.

Additional information and guidance:
Candidates should be able to demonstrate how effectively they feel they were in meeting the publication objectives. They can use third party feedback, i.e. from peers, as long as these are based on the original design criteria, they set for themselves. Some level of reflection on the purpose of the publication and what they did to meet this will suffice.

1.6 I can consider issues related to open systems.
Candidates should demonstrate that they understand of open systems in relation to digital editing and publishing and how this may impact their work in terms of meeting requirements.

Evidence: Assessor feedback and candidate work.

Additional information and guidance:
The process of digital editing and publishing involves a great many people along the supply chain. In order for a candidate's design to be published, it needs to be worked on by other organisations. Once they have designed it, it may need to be modified for printing, and then sent to another company for the production. In all of these processes interoperability is desirable and open systems enable this without being locked into particular suppliers. A closed and proprietary system that was used anywhere in this chain could hamper the process and delay the final production. Candidates need to show an awareness of this reality.

2. Candidates will input and combine information within publications.

2.1 I can identify copyright on information used for import.
Candidates should demonstrate that they understand the legal constraints of copyright and protecting other people's intellectual work.

Evidence: Assessor feedback and candidate work.

Additional information and guidance:
The Internet has effectively removed most barriers to plagiarism and candidates need to show that they understand the legal aspects of copyright and that they employ this understanding when choosing material for their project.

2.2 I can identify file types suitable for import.
Candidates should demonstrate an awareness of the file types and their associated applications.

Evidence: Assessor feedback and candidate work.

Additional information and guidance:
The production of the candidate's final work will more than likely entail the use of many different types of files as they research and develop the materials needed. Some of these files will be pre-formatted, for example .jpg files from the internet, and some they will need to produce for themselves, e.g. .svg files from an open application such as Inkscape. Candidates need to show that they can work with these different file formats and begin to be aware of the limitations and restrictions of some types as it impacts on their project.

2.3 I can convert file types to compatible formats.
Candidates should demonstrate the ability and understanding of file types and how to manipulate these effectively for their own purposes.

Evidence: Assessor feedback and candidate work.

Additional information and guidance:
Image files can be notoriously large in terms of bytes (some files being many gigabytes), and some can be so compressed as to be unusable in a publication where image quality is essential. Candidates should be comfortable with a

range of image manipulation software systems and be comfortable choosing the file format they need for the job. If the files are not in the format they need, they should show an ability to convert them by various means into what they require subject to guidance in line with the level 1 RQF descriptor.

2.4 I can import information into a layout manager ready for editing and formatting.
Candidates should demonstrate an understanding of different editing software requirements and content types, as well as layout considerations for purpose.

Evidence: Candidate work.

Additional information and guidance:

Different systems have different ways of manipulating information once imported. Candidates need to show an awareness that importing proprietary word-processed content into a web page will carry with it a huge amount of format information which will be hard to remove and impact on the final publication. Candidates should be encouraged in best practice such as using unformatted basic text files for content and to format in the final system once all of the text and associated files have been collected.

2.5 I can combine information to convey meaning to an audience.
Candidates should demonstrate an understanding of their audience's needs and the best information to meet those needs.

Evidence: Candidate work.

Additional information and guidance:
Information conveys meanings in different ways to different people. Many people are far more responsive to text-based information, others to static images or even moving images. Candidates should show that they are aware of what their audience expects and deliver the material in a format appropriate to this. If the publication is a web site, this could therefore include links to more video-based materials.

2.6 I can store and retrieve information in line with local guidelines,

Candidates should demonstrate an understanding of their local IT systems and use best practices for data handling.

Evidence: Assessor feedback and candidate work.

Additional information and guidance:
In most cases, the candidates would not be able to produce their work if they were not competent and confident in the storage and retrieval of the necessary data. Some evidence of this knowledge would be required, though work itself is also evidence.

2.7 I can consider issues related to interoperability.
Candidates should demonstrate an understanding of their work passing between various systems and the need therefore for interoperability throughout.

Evidence: Assessor feedback and candidate work.

Additional information and guidance:
Some of this evidence will come from the candidate's work and 2.4 above. They need to show that they can appreciate that their work might have to be passed to other people in a supply chain and therefore some type of open standard would be beneficial. A blog on this subject with some reflective writing on their part would be useful way of providing evidence.

3. Use software techniques to edit and format publications.

3.1 I can identify formatting and editing needs.
Candidates should demonstrate an awareness of potential issues related to formatting and editing the various materials they intend to use.

Evidence: Assessor feedback and candidate work.

Additional information and guidance:
Candidates will be working with a variety of different file formats and systems and therefore need to be able to cope with different systems and know how to format and edit the different materials they use; be these text, images or video. As long as they identify that they know some of the issues, this should be enough. Opportunities to reinforce the advantages of agreed internationally recognised open standards as these reduce the complexity of commonly use applications that have converged to be very similar in most cases.

3.2 I can apply appropriate editing techniques to information components.
Candidates should demonstrate an understanding of the needs of different components.

Evidence: Assessor feedback and candidate work.

Additional information and guidance:
Information is conveyed in different ways, so candidates should be able to show that they can edit a textual piece of information for understanding as well as manipulate a digital image in order to make it the right colour; for example, making an image black and white or sepia to convey the impression it is from an older age. Their projects will incorporate an appropriate range of file types and they need to show they can deal with all of these effectively subject to the guidance detailed in the RQF level 1 descriptor.

3.3 I can apply appropriate formatting techniques to information components.
As with 3.2, candidates should demonstrate an understanding of the needs of different components.

Evidence: Assessor feedback and candidate work.

Additional information and guidance:
Information is displayed in different ways, so candidates should be able to show that they can for example, format a textual piece of information for clarity and readability as well as manipulate a digital image in order to make it the right size; for example, making an image 2/3 the original size to fit a frame on a page. Another example is spacing images and text with margins and similar techniques used to improve appearance.

3.4 I can evaluate the finished work in relation to intentions.

Candidates should demonstrate an understanding of the needs of audience and be able to offer evidence about how well that need has been met.

Evidence: Assessor feedback and candidate work.

Additional information and guidance:

The publication should have been planned based on the needs and requirements of the original “customer” and the candidate should be able to show the strengths and weaknesses they have identified as a result of completing the work. Strengths and weaknesses should relate to some of the following: format, layout, accuracy, structure, style, quality, clarity for audience. Getting candidates into the habit of using the strengths and weaknesses method and making an overall comment of judgement about the success of their work is recommended. They should get peers/intended audience to help them review and assess their outcomes.

3.5 I can assign a copyright license to finished work.

Candidates should be able to apply a license to their finished work.

Evidence: Candidate work.

Additional information and guidance:
Candidates need to be introduced to copyright licenses and how to obtain these via the Internet. They should make a declaration that they license their work for free use and that it is their own work and any sources of information are referenced to their owner. They should not use copyright tools or information without first gaining permission (or have it provided directly in the license). Any further local constraints can be included in this work but some description of the AUP and copyright should be present. There is no need to have a detailed understanding of very complex terms and conditions. At this stage an overview of the main purpose and key requirements is sufficient.

Level 1 Unit 3 – Digital Modelling (4 credits)

1. 1. Use a modelling application to edit and organise data	2. 2. Use appropriate tools, methods and feedback to build a model	3. 3. Use of IT tools to present a model to an audience
1.1 I can set up a structure for a model to meet needs.	2.1 I can follow instructions to input information.	3.1 I can select and use appropriate tools and techniques to prepare a model for presentation.
1.2 I can identify what numerical and other information is needed.	2.2 I can select and implement tools that make the model functional.	3.2 I can present a model and explain its purpose.
1.3 I can enter and edit numerical and other data accurately.	2.3 I can obtain feedback on the model.	3.3 I can receive feedback graciously.
1.4 I can store and retrieve models effectively, in line with local guidelines and conventions where available.	2.4 I can use feedback to improve the model.	3.4 I can evaluate finished work in relation to intentions.
		3.5 I can assign a copyright license to finished work.

Expansion of the assessment criteria

1. Candidates will use a modelling application to edit and organise data.

1.1 I can set up a structure for a model to meet needs.
Candidates should be able to create a basic working model to solve a problem or demonstrate a set of functions.

Evidence: from files created by the candidate and documentation in web pages.

Additional information and guidance:
Candidates might describe the type of model they are working towards with some idea about how they can collect the required data to make the model and how it might be presented.

1.2 I can identify what numerical and other information is needed.
Candidates should show an understanding of working with numerical data. The data should be appropriate for the task with the capacity to provide the basis for a realistic model.

Evidence: from spreadsheet files created by the candidate and documentation in web pages.

Additional information and guidance:
Candidates might describe the type of numerical data they require, with some idea about how to collect it and organise it. It might be dimensions in a visual model or prototype, data and formulae in a spreadsheet or database model. At Level 1 the mathematical demand should be in keeping with Level 1 mathematics and pupils might be presented with models using very different tools eg a spreadsheet, a 2D vector graphic diagram or a 3D building design.

1.3 I can enter and edit numerical and other data accurately.
Taking account of evaluation of the data and initial analysis they should show capability of efficiently entering and editing data associated with the model.

Evidence: from spreadsheet files created by the candidate and documentation in web pages.

Additional information and guidance:
This work can be linked to other criteria relevant to finding and eliminating errors and on-going quality assurance. Ensuring the data is fit for purpose in their proposed model, eliminating errors with guidance is expected. In all but the simplest cases at Level 1 structured guidance will be required. if they can handle more complexity largely self-sufficiently it is an indicator of Level 2 performance.

1.4 I can store and retrieve models effectively, in line with local guidelines and conventions where available.

The candidate should organise their files appropriately and self-sufficiently storing them and retrieving them routinely.

Evidence: from observation, their files and web pages.

Additional information and guidance:
Candidates should be able to show that they can both create and retrieve their models and use the local naming conventions and guidelines available, such as creating areas for each piece of work.

2. Use appropriate tools, methods and feedback to build a model.

2.1 I can follow instructions to input information.

The candidate should be able to demonstrate the ability to input data accurately, with instruction, to ensure it is correct for the model.

Evidence: from observation, their files and web pages.

Additional information and guidance:
Candidates should be made aware of the fact that data that is wrong going in, is wrong coming out. The more accurate they are with data input, the better the results will be. They should also use a variety of input methods to show different types of numerical data where possible: for example, dates, times, currency etc.

2.2 I can select and implement tools that make the model functional.

The candidate should be able to demonstrate the ability to use a range of tools within the chosen system to meet the requirements of their specified model.

Evidence: from observation, their files and web pages.

Additional information and guidance:
Candidates should use a range of elements, for example, if using a spreadsheet, they could use some conditional statements, or if using animation software, more sound and movement functions. These will be in keeping with the Level 1 RQF descriptor.

2.3 I can obtain feedback on the model.
The candidate should have some evidence of basic feedback on their model before finalising it.

Evidence: from observation and peer review on their web pages.

Additional information and guidance:
Some level of peer review would be useful for the candidates to get a sense of how effective and accurate their model is, as well as if it is usable by someone else, therefore meeting other design considerations such as ease of use. The

principle of peer review and consensus is important in many aspects of rational approaches to problems.

2.4 I can use feedback to improve the model.

The candidate should show that they have received some feedback and acted upon it to improve their model in some areas.

Evidence: from observation and personal reflection on their web pages.

Additional information and guidance:
Getting user feedback on projects is a vital part of the development process and candidates should be encouraged to get as much feedback as possible into different aspects of their model and show that they can sue this information to improve their design further.

3. Present a model to an audience.

3.1 I can select and use appropriate tools and techniques to prepare a model for presentation.
Candidates should plan the presentation of their models to make the information easy to use by the intended audience.

Evidence: from the files and presentation they produce.

Additional information and guidance:
The model the candidates create should guide them to the best way to present the working model to an audience and they can then work accordingly with the tools to show off their work in the best way. This might be by logically structuring eg spreadsheets to summarise different views of the data or providing different views of a visual prototype.

3.2 I can present a model and explain its purpose.
Candidates should be able to present their working model and explain to an audience what it does and why.

Evidence: from the files and presentation they produce.

Additional information and guidance:

Candidates need the opportunity to present their model and allow for some questions from the audience to allow them to highlight the best features and explain the purpose for their chosen functions and features. At Level 1 they will need some support in rehearsing their explanation.

3.3 I can receive feedback graciously.

Candidates should be able to accept feedback from an audience in a gracious way and take on board anyone's legitimate criticisms of their work.

Evidence: Assessor observation and from reflections on their portfolio or blog.

Additional information and guidance:
It is generally not easy to take criticism of something you have worked hard at, but candidates need to understand and accept that everyone tackles problems differently and they need to respect other people's comments and expect other people to respect theirs. At Level 1 this might require constant reassurance and support. At Level 2 they should be becoming more routinely able to accept criticism.

3.4 I can evaluate the work in relation to intentions.
Candidates should be able to show clearly that they can see the strengths and weaknesses of their model and match these to some initial design intentions they set themselves.

Evidence: Assessor observation and from reflections on their portfolio or blog.

Additional information and guidance:
Candidates should be able to offer some evaluation of their work, although they may need a framework to use as reference until the master this skill. The evaluation should help them design the system more effectively next time. There is no such thing as a perfect system, so they should be encouraged that they got theirs working to a certain standard.

3.5 I can assign a copyright license to finished work.
Candidates should be able to apply a license to their finished work.

Evidence: Candidate work.

Additional information and guidance

Candidates need to be introduced to copyright licenses and how to obtain information about these via the Internet. For example, they should make a declaration that they license their work for free use and that it is their own work and any sources of information are referenced to their owner. They should not use copyright tools or information without first gaining permission (or have it provided directly in the license). Any further local constraints can be included in this work but some description of the AUP and copyright should be present. There is no need to have a detailed understanding of very complex terms and conditions at Level 1. At this stage an overview of the main purpose and key requirements is sufficient. They should appreciate that copyright is automatically assigned to them for any original work and that they can license their work in any way they please as a result.

Level 1 Unit 4 – IT Security (1 credit)

1. Use appropriate methods to minimise security risks to IT systems and data
1.1 I can identify security issues that may threaten system performance
1.2 I can take appropriate security precautions to protect IT systems and data
1.3 I can take threats to information security associated with the widespread use of technology
1.4 I can take appropriate precautions to keep information secure
1.5 I can follow relevant guidelines and procedures for the secure use of IT
1.6 I can describe why it is important to back up data securely
1.7 I can ensure personal data is backed up to appropriate media

Expansion of the assessment criteria

1. Use appropriate methods to minimise security risks to IT systems and data

1.1 I can identify security issues that might threaten system performance.

Candidates should be familiar with common security issues that could affect the way their computer performs.

Evidence: Assessor observations and day to day document files

Additional information and guidance:
A simple risk assessment can be used to identify the issues, for example selecting and prioritising risks from a provided list, sorting and classifying security issues. Relate this work to safety and security issues in the other units.

Examples of risks are:

- Using an operating system that is the target of most malware. Is it necessary?
- Unsolicited e-mail (spam) and associated attachments that could be intended to damage the system or applications software.

- Running anti-virus and spyware programs slows down other operations.
- Viruses and malware that consume resources without the user being aware.
- Web browser pop ups and advertising.

They should also realise that most information sources, web sites, USB keys and discs are potential sources of virus infection especially on computers running older versions of the Windows operating system that are not now supported with security patches. Physical security of hardware is also important. If a memory module is taken from inside a computer the computer might still work if it still has some memory but performance will be affected.

Virus checkers significantly affect performance when running too. Early versions of Windows allowed programs to install themselves without reference to the user and there was a resulting explosion in the proliferation of viruses with internet connectivity making things worse. The vast majority of malware (viruses, spyware, etc) are targeted on Windows. Since a virus is a program, it will only run on a specific operating system (although in principle it is possible to devise cross-platform viruses in practice this does not seem to be a problem) Opening a file with a Windows virus on a Linux computer will not normally do damage. Virus checkers for Linux are targeted on servers that provide information to Windows client machines. The virus checker then strips out the virus on the server before it reaches the Windows client.

With most up to date operating systems, in order to install a program, you have to enter the system password so unless you actually go ahead and install something you are not sure about you won't accidentally install a virus. For this reason, viruses are much less likely to proliferate and so there is little incentive for virus writers. Some people say the reason there is no practical virus issue with Unix based computers (Linux, Mac, BSD) is that there are fewer of them so virus writers target the big numbers. It is also true that on average the IT literacy of Unix users is probably a good bit higher than for the average Windows user. Overall, Windows users are currently much more at risk from viruses than Unix users.

The latest versions of Windows have better security but there are still masses of viruses that will infect them if inexperienced users do silly things! There are massive commercial interests at stake so be careful about sources of information. A vendor of a particular system is going to talk up the benefits and

talk down the risks related to security for their system and currently too few people are technically capable enough to give reliable advice even though many think they are. Improving the general technical knowledge of the population will reduce the risk to that population as a whole.

1.2 I can take appropriate security precautions to protect IT systems and data.

Candidates should show practical capability and a responsible attitude in relation to basic security in their everyday work.

Evidence: Assessor observations and day to day document files.

Additional information and guidance:
They should not be awarded this criterion if they do any of the following.

- Swap passwords with others
- Fail to keep their passwords secure
- Use ineffective passwords (eg the word "password" or a single key stroke)
- Download or attempt to download information that is either against local policies or is not known to be secure.

They should know that on Windows Systems up to date anti-virus software and regular checks are essential. If connected to the internet check there is a firewall between the client machine and the wider internet. Back up data and ensure backups are in a physically separate place from the source.

1.3 I can identify threats to information security associated with widespread use of technology.

Candidates should be able to identify some specific key threats relevant to their circumstances. Relate this to safety and security in other units.

Evidence: Assessor observations and recording in day-to-day document files.

Additional information and guidance:
Technologies with very widespread take up that are directly related to communications are very likely targets for people that want to breach security. A good example is Outlook address books which can use e-mail addresses in a

sort of pyramid spam. Particular care needs to be taken when using such applications. Other threats include:

- The use of insecure passwords, sharing of passwords, storing user name and passwords in public web browsers
- Leaving computers logged in while unattended especially in public places
- People who pretend to be trusted entities in order to get personal information from users. (Phishing). Providing personal information on public networks that could enable criminals to access individuals' personal data.
- Note that a lot of the technological solutions are in place and the human factor of inexperienced and under-educated users is probably more important than flaws in any particular technology. In general, the better the technology is understood the less likely the individual is to be a victim of technologically expert criminals.

1.4 I can take appropriate precautions to keep information secure.
Since information is organised data, keeping data secure will keep any associated information secure. (see 1.2 above)

Evidence: Assessor observation and secure user accounts in practice.

Additional information and guidance:
Since information can make immediate sense to a candidate whereas data need some sort of processing, greater care is needed to keep information secure. Candidates should also take particular care if entrusted to carrying sensitive information on discs, laptops and memory sticks. Such physical devices can be lost or misplaced. If sensitive information exists on a secure network, it will increase the security risk every time that information is copied to another device or server so making backup copies has a downside as well as a benefit. Candidates can use security as a focus for identifying the benefits and limitations of using ICT. Being able to copy information quickly and easily is useful but also a potential security risk.

1.5 I can follow relevant guidelines and procedures for the secure use of IT.

Candidates should demonstrate that they conform to any local acceptable use policies and procedures related to security. This can be related to other units and criteria related to safety and security.

Evidence: Assessor observation and secure user accounts in practice.

Additional information and guidance:
All that is required is evidence of conformity with procedures and guidelines.

1.6 I can explain why it is important to backup data securely.
Candidates should be able to explain that digital data is easy to corrupt and delete and that hardware on which the data is stored can be stolen or fail. For this reason, backups should be taken and stored on a physically separate device from the original.

Evidence: Assessor observation and spot checks of candidate backups where relevant.

Additional information and guidance:
Since data can be come corrupt without the user knowing it is possible to inadvertently destroy a good backup by overwriting it with corrupt data. For this reason, especially with important data, relying on a single backup is risky. There can also be a penalty in the time taken to get work restored from a backup. Even on systems that centrally backup your work on a server, you are then dependent on other people to get it back. It is worth considering taking a separate backup eg to a USB key of important and often used work simply because it makes it quick and convenient to restore. This has to take into account how sensitive the information might be. One change that is taking place globally is the shift from desktop systems to the internet. Cloud computing, where all important files are stored remotely on the internet, offers the possibility of centrally backing up thousands and maybe millions of user files. This means that IT users don't have to worry about backups and restoring files because the service provider will take care of this administration for them. They still might want to back up important and often used files personally. Systems like Dropbox provide a system for synchronising files on a local computer to an internet-based file store. This is useful if you have several computing devices but it also provides an effective backup. Typically, 2Gb or more of free storage is provided. Dropbox is also a collaborative technology because it can be used for sharing files with other people.

1.7 I can ensure that my personal data is backed up to appropriate media.

The candidate should be able to show that the backup(s) applied to their work are effective

Evidence: Assessor observation and spot checks of candidate backups where relevant.

Additional information and guidance:
It might be that the local network is backed up with tapes on a regular basis with the tapes taken off site. They should show that they are aware that their work is included and that they backup important files to USB or similar media on a personal basis. They might upload their files to a cloud storage such as Dropbox where backups are taken by the service provider.

Moderation/verification
The assessor should keep a record of assessment judgements made for each candidate and make notes of any significant issues for any candidate. They must be prepared to enter into dialogue with their Account Manager and provide their assessment records to the Account Manager through the on-line mark book. They should be prepared to provide evidence as a basis for their judgements through reference to candidate e-portfolios. Before authorizing certification, the Account Manager must be satisfied that the assessors' judgements are sound.

Level 1 Unit 5 – Digital Design and Graphics (4 credits)

1. 1. Plan the use of appropriate IT systems and software to source content for designs.	**2. 2. Use IT systems and software efficiently to organise the content of the design.**	**3. 3. Use of IT tools to export to suitable finished states.**
1.1 I can identify design needs.	2.1 I can use a range of techniques to manipulate design components.	3.1 I can export vector graphics to raster graphics.
1.2 I can identify copyright license constraints on resources.	2.2 I can use space and colour effectively.	3.2 I can follow instructions to scale images to set dimensions.
1.3 I can find images suitable to support the design.	2.3 I can use appropriate precision in designs.	3.3 I can follow instructions to trade off image quality for reduced file size.
1.4 I can originate information in appropriate formats.	2.4 I can use appropriate scale in designs.	3.4 I can evaluate finished work in relation to intentions.
1.5 I can originate information that meets the design needs.		3.5 I can assign a copyright license to finished work.

Expansion of the assessment criteria

1. Candidates will plan the use of appropriate IT systems and software to source content for designs.

1.1 I can identify design needs.
Candidates should be able to show a reasonable plan about how they intend to solve a particular problem and what IT systems they intend to us.

Evidence: will be provided directly from the presentation of work in web pages that has clear purpose and describes the purpose of the work.

Additional information and guidance:
Candidates need to show a plan of their work and that they are aware of some of the design implications with different IT applications they are considering. They show also show some sense of the time constraints that may exist with the different options they are considering.

1.2 I can identify copyright license constraints on resources.
Candidates should be able to show an awareness that some of the materials they will use in their design may be subject to license and copyright restrictions and some semblance of how they will deal with these constraints.

Evidence: Assessor feedback and reflective work on a portfolio or blog.

Additional information and guidance:
Candidates should show some understanding of the ownership of other people's work that they may use and the value of using free resources where appropriate. Note that free means freely licensed, copyright is still maintained by the owner even if the terms of the license is to use the work freely. The exception to this is putting the work into the public domain. Some idea of plagiarism and legal issues, though not in great details, should be clear from their work and planning.

1.3 I can find images suitable to support the design.
Candidates should have evidence that the images they find or create are suitable in terms of the quality and size of the images, or the meaning conveyed.

Evidence: Assessor feedback and candidate work.

Additional information and guidance:
Candidates working on something like web pages need to show that they clearly understand the implications of the graphics they choose or create. If they are embedding graphics and other media such as audio, they need to evidence that they know that particular formats may only be accessible by specific browsers or operating systems. Other aspects of suitability might be in relation to the image meaning, in order to avoid offending elements of the intended audience with insensitive image content.

1.4 I can originate content in appropriate formats.
Candidates should have evidence that the images they find or create are suitable in terms of the format.

Evidence: Assessor feedback and candidate work.

Additional information and guidance:
For example, candidates should have evidence that if the design is for a potential audience with a low bandwidth Internet access, large file size graphics

would not be appropriate. Some reflective work by the candidates on aspects of file formats would be useful to underpin the material they are producing. As with other aspects of file creation, there should be some understanding from the candidates that open and accessible formats will be far more suitable for a wider and more varied audience, especially if they want to encourage re-use of their work.

1.5 I can originate content that meets the design needs.
Candidates should have evidence that the images they find or create are suitable in terms of the specified needs of the project.

Evidence: Assessor feedback and candidate work.

Additional information and guidance:
Candidates should show a good awareness that they should not just make graphics or audio files for the sake of it. They must make material or find material which meets the needs of the project as stated in their original plan. This will then show a clearly that they understand and appreciate the needs of their identified audience and that they are working closely to this end. At Level 1 structure and prompts will be needed to scaffold this process.

2. Organise the content of the design.

2.1 I can use a range of techniques to manipulate design components.
Candidates should have evidence that the materials they create show a suitable range of techniques which evidence a certain skill level with design systems.

Evidence: Assessor feedback and candidate work.

Additional information and guidance:
Candidates should show a good level of skill in operating design systems to show that they can use a range of the built-in tools. For example, they should be able to create images using elements such as changing the saturation levels or rotating aspects of the image by varying degrees, rather than just adding some shapes and colours.

2.2 I can use space and colour effectively.
Candidates should have content that shows a good awareness of the use of space and colour.

Evidence: Assessor feedback and candidate work.

Additional information and guidance:
Candidates should show that they have thought carefully about the required materials and have tried aspects of the design system to enhance the content to that end. For example, some images have more impact with large areas of empty or white space, while other images require a complex array of shapes and patterns. Some evidence of testing these elements would be useful to show they are working through this process by elimination of unsuitable content based on colour and space usage.

2.3 I can use appropriate precision in designs.
Candidates should have content that shows a good amount of skill in aspects of precision.

Evidence: Assessor feedback and candidate work.

Additional information and guidance:
Many design systems come with a variety of tools to allow great precision in the final outcome of the design. This could be in terms of the placement of elements in a design, such as shapes, down to the precise amount of colour gradient applied to objects. Candidates need to show how they have used some of these tools in order to complete their design to the required quality level.

2.4 I can use appropriate scale in designs.
Candidates should be able to scale raster images and vector graphics.

Evidence: Candidates finished products and their documentation.

Additional information and guidance:
Some design systems use file formats that do not allow a smooth scaling of images and candidates need to show that they understand this in principle and in practice. The use of scalable images would be a suitable choice. SVG - scalable vector graphics - should be used to design logos, diagrams and illustrations. Indeed, just about anything that is not a photograph or scanned image. Any svg image is likely to be small in file size and can be scaled to any

output device from high resolution images for paper to large screen TVs. The files stay the same size and the images will be as crisp as the display device is capable of producing. At Level 1 support will need to be provided in dealing with some effects of scaling eg pixelation in raster graphics.

3. Export to suitable finished states.

3.1 I can export vector graphics to raster graphics
Candidates should be able to work with a number of different image formats and be able to move their work between these systems as required.

Evidence: Candidates finished products and their documentation.

Additional information and guidance:
Raster graphics are files also known as bitmap files. They are not good for scaling and if they are scaled, they will become blocky and unclear. The advantage is that they can be easily converted from one bitmap format to another and they are easily sourced from digital cameras eg in mobile phones. There are a large number of proprietary and incompatible vector graphic formats. For photographic images that are to be displayed in web pages .jpg should be used. Jpg (Jpeg) trades off quality against size of file. If a large high-resolution image is required for professional photographic work on paper .jpg files will still be large and once reduced in file size cannot be brought back to the original size and quality without the original file. Another disadvantage of jpg is that it does not support image transparencies such that the background can show through. This means logos can be left with undesirable borders around them if they are on a background that is a different colour from the main display background. .png can be used to get around this problem because png does support transparency. Although .png files are compressed that always keep all the original data so that you can get back to the original but jpg files can be made smaller in size. This means in situations where it is critical to make the file size as small as possible e.g. when the image has to be transferred over a low bandwidth connection or storage space is at a premium, jpg will be better. GIMP can edit and convert a very wide range of images between proprietary and open formats and it is free. On-line converters are also freely available. Vectors tend to be more difficult to convert between proprietary formats and it is difficult to convert a bitmap graphic such as a jpg into a vector. It is easy to convert a

vector image to either a jpg or png at any chosen quality. For this reason, it is best to originate designs in vectors and keep the images as vectors and only convert them to bitmaps when there is a specific need to do so. Increasingly web browsers will support vectors in the .svg format so it is good to give children and understanding of why there are important advantages in using them.

3.2 I can follow instructions to scale images to set dimensions.
Candidates should be able to show that they can manipulate designs based on certain criteria set for them.

Evidence: Candidates finished products and their documentation.

Additional information and guidance:
In many cases, designs will be presented to candidates from companies with vary particular needs. Most companies have very detailed branding requirements which have to be met on any public facing designs. This might be something like the range of colours to be used or the dimensions of any logos for different purposes. Candidates need to show that they can manipulate designs to these requirements when necessary. Level 1 candidates will need structured instructions and support to carry out these operations.

3.3 I can follow instructions to trade off image quality for reduced file size.
Candidates should be able to show that they can work to a design's needs, even if this means sacrificing quality.

Evidence: Candidates finished products and their documentation.

Additional information and guidance:
Candidates should be able to see that their designs sometimes are the result of a trade-off. If a design is destined for the Internet, then issues relating to portability and transfer can become much more important than quality issues. The candidate may have produced a stunning image for the brief, but that image may be many MB in size and therefore unworkable on many Internet connections. Furthermore, there might be no visible improvement in the image quality on particular displays. The file will need to be compressed, which may lead to a reduction in quality but that might not be noticeable in which case there is no disadvantage in doing it. Candidates should be able to reflect on this and understand that compromise is often important in design situations.

3.4 I can evaluate the work in relation to intentions.
Candidates should be able to show clearly that they can see the strengths and weaknesses of their model and match these to some initial design intentions they set themselves.

Evidence: Assessor observation and from reflections on their portfolio or blog.

Additional information and guidance:
Candidates should be able to offer some evaluation of their work, although they may need a framework to use as reference until the master this skill. The evaluation should help them design the system more effectively next time. There is no such thing as a perfect system, so they should be encouraged that they got theirs working to a certain standard.

3.5 I can assign a copyright license to finished work.
Candidates should be able to apply a license to their finished work.

Evidence: Candidate work.

Additional information and guidance:
Candidates need to be introduced to copyright licenses and how to find the details of these via the Internet. They should make a declaration that they license their work for free use and that it is their own work and any sources of information are referenced to their owner. They should not use copyright tools or information without first gaining permission (or have it provided directly in the license). Any further local constraints can be included in this work but some description of the AUP and copyright should be present. There is no need to have a detailed understanding of very complex terms and conditions. At this stage an overview of the main purpose and key requirements is sufficient.

Annexe E - Examples of unit combinations to achieve 17 credits at Level 2.

The Level 2 qualification requires 17 or more credits. The Level 1 qualification requires 16 or more credits. A majority of the credit must be at the level of the qualification for Level 2 and all credit is at Level 1 for the Level 1 qualification. The examples below are possibilities for Level 2 and assessors are free to use any combinations of units that include IPU and ITS at level 1 to provide sufficient credit. There are more details in the qualifications section of the web site and assessors are encouraged to discuss choices with their Account Manager. At Level 2, 4 credits can come from a different sector opening up the possibility of contextualising IT learning in a particular subject area. (See example 6 below). Learners can add more credit to achieve an extended certificate or diploma but only 1 GCSE subject equivalent will count in the headline performance points.

Example 1 - Level 2 - Computing emphasis

Improving Productivity using IT	- 4 credits
Specialist Software (e.g. Scratch, Greenfoot, Python)	- 3 credits
IT Security for users (Level 2)	- 2 credits
Using the Internet	- 4 credits
Imaging software	- 4 credits

Example 2 - Level 2 - Media emphasis

Improving Productivity using IT	- 4 credits
Video Software	- 3 credits
IT Security for users (Level 1)	- 1 credits
Audio Software	- 3 credits
Imaging software	- 4 credits
Using collaborative technologies (Level 1)	- 3 credits

Example 3 - Level 2 - Internet emphasis

Improving Productivity using IT	- 4 credits
IT Security for users (Level 1)	- 1 credit
Using the Internet	- 4 credits
Website Software	- 4 credits
Imaging software	- 4 credits

Example 4 - Level 2 - Mobile and collaborative

Improving Productivity using IT	- 4 credits
Using mobile technologies	- 2 credits
Using collaborative technologies (Level 1)	- 3 credits
Using the Internet	- 4 credits
IT Security for users (Level 1)	- 1 credits
Web site software (Level 1)	- 3 credits

Example 5 - Level 2 Generic IT

Improving Productivity using IT	- 4 Credits
IT user fundamentals	- 3 Credit
IT communication fundamentals	- 2 Credits
IT software fundamentals	- 3 Credits
IT security for users	- 2 Credits
Using e-mail	- 3 Credits

Example 6 - Level 2 Design and Technology

Improving Productivity using IT	- 4 Credits
Understanding social and environmental impact of architecture and engineering construction	- 4 Credits
Imaging Software	- 4 Credits
IT Software fundamentals	- 3 Credits
IT security for users (Level 2)	- 2 Credits

These examples are just examples to illustrate the flexibility for assessors to use their professional judgement to best fit courses to the needs of their learners.

Annexe F - Useful links and supporting information

These qualifications are based on the national occupational standards for IT Users (NOS). eskills designed a framework for qualifications based on the NOS called ITQ. There is more information on e-skills web site under ITQ. The link to this is
http://www.e-skills.com/standards-and-qualifications/it-user-qualifications---itq/

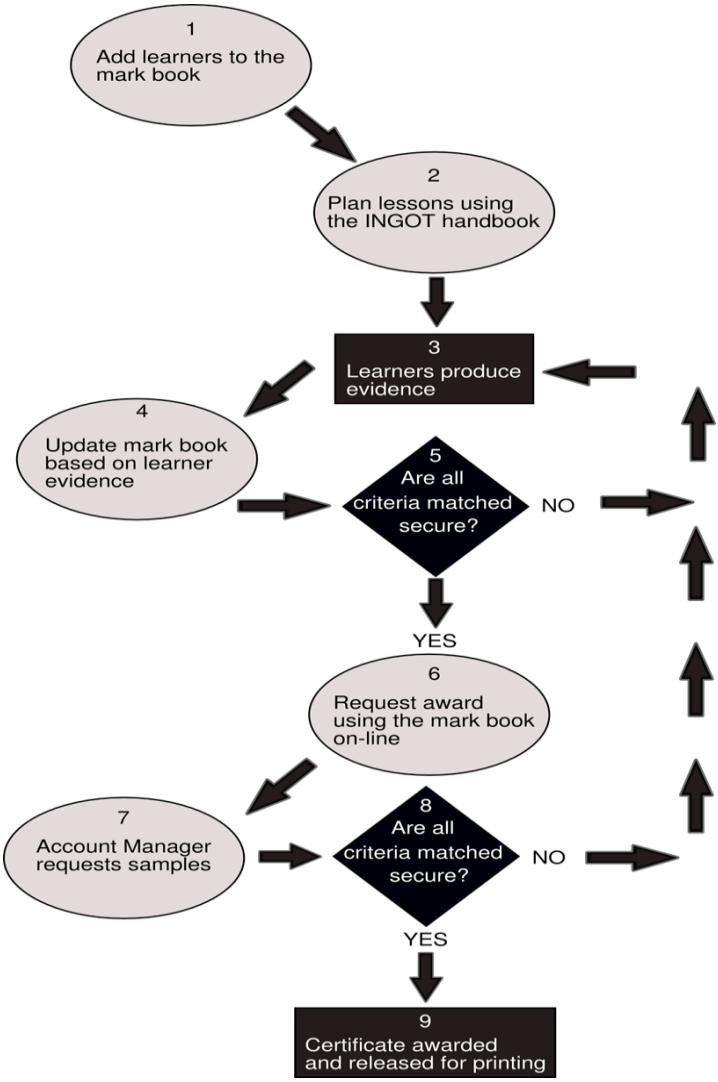
The TLM learning site www.theTLMs.org has a wealth of supporting information and practical tools for managing evidence, progress tracking and reporting. These are all free for participating schools. Contact TLM for further details or training if required.

The TLM web site supports multiple languages and it is not very difficult to provide new translations. If you want to teach in the context of a modern foreign language, it is possible and we will provide support where we can.

Making the transition from existing qualifications

It is rarely necessary to abandon all of the courseware of existing courses. The flexibility of the ITQ approach means that most centres find they can map current learning to the ITQ criteria or at least a great majority of them. This means that you can start gently and at more or less any time in the year. All we are interested in is the assessment outcome, the process to get there is up to the Principal Assessor and colleague assessors in the centre. So we can start by using evidence already available or in existing systems and you can decide for yourself how quickly you transition to TLM's evidence management if at all. We are not a software company trying to sell you technology, we are simply providing tools to make administration of our quality assurance service more convenient to users. If you think a different system is better for you, you are free to use it. All we need is ready access to evidence supporting the assessment criteria.

Annexe G - Coursework assessment flowchart


1
Add learners to the mark book
2
Plan lessons using the INGOT handbook
3
Learners produce evidence
4
Update mark book based on learner evidence
5
Are all criteria matched secure?
NO
YES
6
Request award using the mark book on-line
7
Account Manager requests samples
8
Are all criteria matched secure?
NO
YES
9
Certificate awarded and released for printing