Cambridge Nationals

ICT

Level 1/2 Cambridge National Award in ICT **J800**
Level 1/2 Cambridge National Certificate in ICT **J810**
Level 1/2 Cambridge National Diploma in ICT **J820**

OCR Report to Centres

June 2013

Oxford Cambridge and RSA Examinations

OCR (Oxford Cambridge and RSA) is a leading UK awarding body, providing a wide range of qualifications to meet the needs of candidates of all ages and abilities. OCR qualifications include AS/A Levels, Diplomas, GCSEs, Cambridge Nationals, Cambridge Technicals, Functional Skills, Key Skills, Entry Level qualifications, NVQs and vocational qualifications in areas such as IT, business, languages, teaching/training, administration and secretarial skills.

It is also responsible for developing new specifications to meet national requirements and the needs of students and teachers. OCR is a not-for-profit organisation; any surplus made is invested back into the establishment to help towards the development of qualifications and support, which keep pace with the changing needs of today's society.

This report on the examination provides information on the performance of candidates which it is hoped will be useful to teachers in their preparation of candidates for future examinations. It is intended to be constructive and informative and to promote better understanding of the specification content, of the operation of the scheme of assessment and of the application of assessment criteria.

Reports should be read in conjunction with the published question papers and mark schemes for the examination.

OCR will not enter into any discussion or correspondence in connection with this report.

CONTENTS

Cambridge Nationals

Level 1/2 Cambridge National Award in ICT J800

Level 1/2 Cambridge National Certificate in ICT J810

Level 1/2 Cambridge National Diploma in ICT J820

OCR REPORT TO CENTRES

Overview (R001 – R011)

General

This was the first June series for this qualification, which was available for first teaching from September 2012, with the first examination series in January 2013. Both examined unit (R001) and moderated units (R002-R011) were available, with repository, postal and visiting moderation options.

External examination (R001)

General

This was the first main series for this examination. Whilst the structure of the paper was in line with the January 2013 paper, the focus of the paper allowed for more technical questions to be asked. Generally, candidates seemed less well prepared for these questions than for those questions that focussed on more general issues, such as the use of software and hardware. However, it was pleasing to note that many candidates had a good grasp of e-safety and were able to deal with both parts of question 9.

Specifically, candidates generally showed that they had little understanding of the way in which GPS and RFID technologies work. It is noteworthy that whilst many candidates are seemingly well aware that their mobile phones have some difficulty with accessing a telephone signal from more than a few miles away. Some candidates missed the point of the question and described how a navigation system may aid a traveller to move from Point A to Point B.

Many candidates also confused Radio Frequency Identification Device (RFID) and Global Positioning System (GPS) technologies and either gave vague answers to questions 6c and 7a or the same answer for both. There was similar confusion with question 6a.

As with the January paper, candidates were asked to complete an extended answer. The specific focus of this question was on the impact on Portland Games of setting up a community section. Whilst there was some evidence that candidates were better able to deal with such questions than in January, a significant proportion of candidates answered in terms of advantages to customer and so wrote an answer that was generally weak. Where candidates did answer the question correctly, many dealt solely with positive or negative impacts and so restricted their overall mark. Centres are advised that where the question requires ‘discuss implications’, candidates should be advised to discuss both positive and negative implications.

Question 1

Part A of this question was intended to provide candidates with a relatively simple question in order to boost confidence. Most candidates correctly identified “keyboard” for this question, although equivalent alternatives would have been acceptable.

Parts B and C were slightly more demanding, although candidates did appear to find the questions slightly more complicated than had been expected. Question B was looking for an answer that demonstrated the role of a user name in identifying individual users, whilst question C required candidates to explain how the online form could ensure that the user only entered a valid country name. Whilst many candidates explained how features such as drop-down lists could be used to good effect here, other candidates slightly missed the point and gave answers that either did not guarantee the country name was valid, or simply stated “validation”, with no attempt at explanation.

Question 2

Part A was, again, a simple question intended to reduce candidates’ anxiety levels. However, unlike question 1A, where many candidates were successful, a significant proportion of candidates gave answers that referred to data storage, rather than the creation of a hard copy.

Part B of the question further developed the use of databases and asked candidates to give features of database software that makes it suitable for storing and analysis of customer information. The mark scheme was structured so that candidates could discuss either analysis or storage and was quite generous in the features that could be discussed. Whilst some candidates were able to deal with the question well, many failed to score above single marks for this question. In most cases, these single marks were awarded for a reference to security or the use of tables.

Question 3

The focus of this question had to be addressed before marks could be awarded. Many candidates failed to address this focus and answered in terms of the customers rather than the business. Where candidates did focus on the actual question; discussing, for example, the benefit to be gained from knowing customers' opinions of new products, they tended to focus on the positive or negative aspects only and so were restricted from accessing the highest mark band.

Question 4

The question paper changed focus at this stage. This range of foci is a feature of the paper and is one with which candidates need to be well practised. Unfortunately, some candidates did not notice this change and answers tended to be somewhat confused.

The specific focus for this question was on collaboration and security. Part A required candidates to identify a method whereby a file could be transferred from the computer of one member of staff to that of another. Whilst many candidates were able to describe the process of transferring as an attachment via email, some simply stated "email" or "use the cloud" and achieved one mark in each case, whilst others described processes where the file could be accessed, rather than transferred and thereby missed the point of the question.

Part B required candidates to identify a security method that could be used. The vast majority of candidates did well in this question.

Part C of the question then developed the issue of collaboration and asked for features of word processing software that could be used to provide feedback. Candidates were split into two distinct camps here, with some clearly missing the point of the question and discussing other forms of software that could be used to give feedback (generally focussing on presentation software and desktop publishing software) and others who attempted to give answers that focussed on the use of word processing software only. This second group was very much in the minority.

Examiners were looking for a clear understanding of features that could be used for a very specific purpose and so wanted answers that would clearly give feedback. As an example, candidates were expected to be able to identify features such as 'comment boxes' and how they might be used, as this is a method whereby clear feedback could be delivered. However, where candidates merely stated that 'text could be added', this was considered to be insufficient, as this would not necessarily be seen by Rakesh and so would not give feedback. It is also worth noting that the question required candidates to describe the feature; many described the use of the feature. In such cases, it is possible for full marks to be awarded where the answer does describe the feature within the description of use, but this is not always the case.

Part D required candidates to identify devices that could be used as part of a video conference. Candidates were generally able to cope with the question, although few identified a device that allowed for connectivity. A small number of candidates confused input and output devices and so swapped their answers.

Question 5

Part A of the question required candidates to have some specialised knowledge of the subject area and to give a wired method by which a computer could be connected to a network. The most frequent correct answer given was 'Ethernet'. However, many candidates either repeated the question (with many writing 'wired method') or gave inappropriate answers.

For Part B, candidates generally had some idea that a security key was somehow connected to protecting the system, but were unable to describe how it would allow users to access the system. Many candidates gave general descriptions of security in answer to the question. Similarly, few candidates were aware of the reasons why a solid state drive was appropriate.

Question 6

As mentioned above, very few candidates were able to give clear answers about how satellites are used as part of a GPS, with slightly more able to describe how a barcode reader captures the data in a barcode.

Part B of the question, however, provided candidates with something of a respite and many were able to give good answers that identified the use of a touch pad and a stylus. Some candidates missed the point here and stated that the signature could be written down and then scanned, whilst one candidate clearly understood the focus of the question, but lacked the technical knowledge and wrote that the signature could be captured by using a "thing like the postman has".

Question 7

Part A was the final technical part of the paper. However, the mark scheme for this question was slightly wider and allowed for more general answers. Candidates were, for example, awarded the mark if they showed awareness that 'a signal would be sent out'.

In some cases, candidates did not seem to appreciate the difference between RFID and GPS systems and answered the question with reference to satellites.

The mark scheme for Part B of this question was also quite wide and, as long as candidates showed some awareness that if the cost was significant, the purchase would not go ahead, or that the cost would be justified if it was less than any benefit, marks were awarded.

Question 8

The focus of this question was on the ability of a driver to communicate with their main depot. Candidates were well able to cope with all aspects of this question, although few gave answers which were worth full marks for part A. Typically, candidates were able to identify issues such as the fact that a telephone could be used to give a two way message, and therefore Jane could clarify any lack of understanding on her part.

For part B, candidates in general showed a good awareness of the possible drawbacks of using a telephone to convey information, with some concentrating on the issue of signal failure whilst others considered issues to do with Jane accessing the call whilst driving. However, as with other questions, some candidates suggested drawbacks which were not relevant to Jane and so were not awarded marks.

Of the three sub-questions within question 8, question 8C was dealt with most successfully. Candidates gave a range of suitable answers. However, of those who failed to give suitable answers, most suggested that one drawback of receiving the information by email would be that a computer was required. As the fact that Jane had a smart phone was established in the scenario, this answer was incorrect.

Question 9

The answers to this question showed a good awareness of the issues of phishing and e-safety in general. Many candidates achieved full marks. However, amongst this success, it is worth reminding candidates that they need precision in their answers. For example, the email address elpprize@czgt.com did not 'look dodgy', but rather was of a form that would not be expected for a company called EPL.

For part B of the question, the mark scheme allowed a wide range of possible answers. Of those seen, the most frequent was to 'contact the police', but a similar number of candidates correctly suggested that the receiver should not do anything. A small number of candidates missed the direction given in the question itself and suggested that a suitable response would be to contact EPL.

Moderated units (R002 – R011)

General

Entries were received for all units from R002 to R011. The majority of entries were for R002, R005 and R007. Many centres were entering candidates for the first time; so many issues identified in January also emerged during this session. For completeness, comments regarding these issues have been restated below, along with other comments that relate purely to this June session.

Attention is drawn to the Appendices within the specification document. These provide guidance on the use of witness statements, the types of electronic files that can be submitted for postal/repository moderation and a glossary of terms used in the assessment grids for each unit.

Administration and Assessment Delivery

Submission of sample to moderator

Once the marks have been submitted to OCR a request for a sample of work is sent by email. For postal and repository options the requested work must be sent/uploaded within 3 days of receipt of this email. Problems were caused this session because some centres' samples arrived late. Where centres have chosen moderation by visit, the moderator will contact the centre to arrange a date but the visit could occur at any time during the moderation period, so centres need to ensure their requested sample can be made available within a similar time frame if necessary. Some centres were disappointed that they could not specify when they wanted the visit to take place, but within the short moderation window this is not possible.

Some centres encountered problems submitting work via the OCR Repository. OCR provides a User Guide for this facility and it is essential that the guidelines contained within are followed carefully, particularly with regard to file names, which must begin with the candidate number. This is so the system can 'map' the file to the correct candidate. This guide can be downloaded from http://www.ocr.org.uk/ocr-for/teachers/ocr-repository/.

Presentation of portfolios

Centres are requested to follow the guidance in section 4.3.1 of the specification document, which clearly lists the information that should be included on the cover sheet for each portfolio. Problems were caused this session where portfolios were not always labelled with centre number/name and candidate number and in some cases did not have the candidates' full names. OCR provides Unit Recording Sheets (URS) and these should be used for this purpose, with annotations added to give reasons for assessment decisions made. Where centres secured paper portfolios by treasury tags, according to the guidance in section 4.3.1 this was helpful. Loose sheets, whether or not they are presented in envelope folders, bulky folders, plastic wallets or presentation files that do not allow pages to be opened out fully should not be used as all can cause problems to the moderator.

Evidence

Where clear evidence was provided for all criteria credited by the centre, moderation generally endorsed the mark awarded. This evidence, for visiting and postal moderation, can be in a variety of formats and centres are recommended to consider making electronic evidence available, particularly where candidates are creating products such as spreadsheets, databases, multimedia products/ games etc. For postal moderation these can easily be sent on CD/DVD or memory stick. Where such files were provided this was invariably helpful. It is important to check that these files are the most recent version, ie, the version that has been marked by the centre, as problems were sometimes encountered when the electronic files did not match the paper-based evidence.

In some units, eg R002, R005, R006 and R007, there is an assessment of file types, file names and/or folder structure. These can be easily assessed if electronic copies of candidates' files are provided. However, if such files are provided in addition to printed portfolios it is essential that clear guidance is provided to moderators to show which criteria the electronic files are provided for and which, if any, files need to be opened by the moderator. In the absence of such guidance, many moderators wasted a lot of time opening up files which merely duplicated paper-based evidence.

Where centres choose postal or repository moderation it is important that files submitted meet the requirements given in Appendix C of the specification. Where centres choose visiting moderation there is no restriction on file types, as the centre provides the resources needed to view the files. Particular problems are encountered where centres submit MS Publisher files and/or use non-standard fonts, as moderators do not all have access to this software and if they do, different versions and different font sets can prevent files being opened as intended by the candidates. Centres are advised that if candidates have produced work in DTP software that electronic evidence is provided in pdf format, which is the preferred format for all documents that may have used non-standard fonts. Although html files are not specifically mentioned in Appendix C they meet the general requirement – 'open file formats or proprietary formats for which a downloadable reader or player is available'. If centres are unclear about the acceptability of any particular file format they can gain clarification by emailing general.qualifications@ocr.org.uk. If databases are created using MS Access for Units R002 and/or R004 then centres are encouraged to submit Access files to supplement paper-based evidence and to clarify the version of Access that has been most recently used by candidates. Where candidates' filing structures and range of file types are assessed, eg in R002, the candidates' original files should be presented, with additional pdf files for viewing by the moderator.

In some cases moderators were unable to confirm centre marks because no evidence was provided to back up claims for one or more criteria. Marks should only be awarded where there is clear evidence that the marking criteria have been achieved. Candidates should be provided with the marking criteria in addition to the Model Assignment, so that they can ensure they provide evidence for all criteria. Teachers may discuss/clarify evidence required with their candidates but must not provide any additional instructions, checklists or writing frames for them to use.

Some centres chose to supplement printed/electronic evidence with witness statements. Where these detailed exactly what had been witnessed rather than simply affirming that particular marking criteria had been met these complied with requirements and were helpful.

Some candidates produced screenshot evidence detailing every stage in the completion of tasks. This is not required, so long as the evidence shows what has been achieved and (where the criteria require this) what tools have been used.

Where centres provided guidance to the moderator to help find the item(s) of evidence that had been taken into consideration for each Learning Outcome (LO) this was invaluable. For paper-based portfolios this was generally page numbers, for which space is provided on the Unit Recording Sheets. Where some evidence was electronic then centres often provided file names and, where there were many files, information to the moderator about which files to open in which order for each LO. The best organised electronic submissions combined all documentation into a single pdf file, provided a hyperlinked index file and/or used filenames which clearly showed the order in which files were to be opened (for example, by prefixing each file name with '01', '02', '03 etc).

It is essential that all evidence can be clearly read by the moderator. In some cases screenshots were too small and/or printed in draft quality so that the essential details could not be read. Similarly, printouts of PowerPoint slides/spreadsheets which provided inadequate colour contrast and/or were too small for the text to be read caused problems for moderators. If evidence cannot be clearly read this may result in disagreement with centre marks. If candidates submit work where evidence cannot be read then centres are recommended to send additional electronic evidence for the required sample, to ensure candidates are not disadvantaged.

Assignments

It is a requirement of this qualification that assessed work must be carried out by following one of the OCR Model Assignments, which can be downloaded from the OCR website. In the case of R002 it should be noted that the Little Theatre Company assignment is provided **for practice only** and may not be used for final assessment. Some contextualisation of the assignments is permitted but the tasks cannot be changed. The nature of the tasks and data files severely limits the extent of any contextualisation that is possible for units R002, R003 and R004. Whilst more adaptations to the scenario/brief are possible for the remaining assignments, the tasks must remain unchanged and additional guidance may not be provided other than clarifications of what a task or marking criterion means or general guidance such as reminders about producing evidence. The extent of permitted modifications is detailed within the Tutor Notes of each Model Assignment. Where any contextualisation/ amendment has been made by a centre to the OCR Model Assignment it is important that a copy of the assignment used by candidates is made available to the moderator.

The Model Assignments currently available on the OCR website will remain live for the life of the qualification. Additional assignments will be added during the academic year 2013-14.

Many centres choose to carry out practice assignments with their candidates, before they attempt the live assessment. This is acceptable but any practice assignment should be sufficiently different from the live assignment that it does not provide candidates with direct solutions to live assignment tasks. The Little Theatre Company assignment is specifically provided for practice in R002. Practice assignments for R002, R003 and R004 must not use the same data files as the live assignment.

Authentication

Most centres provided the Centre Authentication Statement (CCS160) for the moderator, which should be sent with the mark sheet (MS1 or equivalent). Some centres also provided individual candidate statements. Centres are advised to follow the guidance in section 7.4 of the Cambridge Nationals Admin Guide. Centres must obtain a signed authentication statement from each candidate before they sign the CCS160 form. However, individual candidate statements should be stored in the centre with only the CCS160 forwarded to the moderator, with the marks, before the sample request is received.

It is essential that centres follow the guidance provided in section 4.3 of the specification document when candidates complete assessed assignments. The JCQ Instructions for Conducting Coursework, a copy of which should have been forwarded by the centre examinations officer to each subject leader, provides further clarification. In particular this clarifies what can be considered to be the candidates' own unaided work. Worksheets/writing frames, checklists, additional instructions/worksheets and/or providing formative feedback whilst the coursework is being produced constitute help additional to that which is allowed by the qualification and any such help must be considered when awarding marks, and recorded on the unit recording sheet appropriately. The JCQ document also confirms that where documentation is word-processed it should contain the candidate's name in the header or footer.

If guidance and/or feedback over and above that which is permitted is given, in contradiction to the JCQ instructions, this must be documented and taken into account when assessing, so that candidates are not credited with achievement for which they have been given such support. Some confusion is apparent between formative and summative assessment. Whilst formative assessment is integral to teaching and learning and requires regular feedback, summative assessment is designed to test what candidates have learned during this initial process and specific feedback to help candidates achieve higher marks may not be given. It is not expected that candidates will attempt any of the Model Assignment tasks until they have studied the unit content and formative assessment suggests that they are ready to undertake the final assessed assignment. Whilst some review of skills might be appropriate at times during assessment, such reviews must be of sufficiently general nature as not to guide candidates in any way about methods of tackling assessment tasks.

In some areas of assessment, eg R002 LO4 and R007 LO1, some level of guidance/support is covered within the marking criteria. Best practice was found where centres provided clear evidence, in the form of formal witness statements or clear, personalised statements on the Unit Recording Sheet, to support their decisions on this criterion.

Where tasks require candidates to provide written descriptions, these must be their own work, demonstrating their own understanding. Centres must be vigilant to ensure candidates do not simply copy and paste from websites or other sources.

Assessment standards

Whilst many centres' assessment was considered sufficiently accurate to confirm marks awarded, in some cases marks had to be adjusted because centres were either too harsh or too lenient. Where the work fully meets a description for a mark band then the highest mark within that band can be awarded. However, if an aspect is missing or only partially met then this highest mark should not be awarded. When marking work, consideration must be given to the tasks within the Model Assignment, which represent client needs, the subject content from the unit specification, which clarifies the range/depth of knowledge, understanding and skills which candidates should have acquired during the course, also the clarification of key words provided in the glossary in Appendix D of the specification document. Of particular note is the fact that the glossary defines the expectation for terms such as 'limited', 'some', 'most', 'sound', 'detailed' and 'thorough'.

Some centres had devised their own spreadsheets with formulas to calculate marks for individual LOs from marks allocated to individual criteria. Such methods should not be used – assessors should view the work presented holistically and make a professional judgement about which set of statements are the best fit for the work presented.

Comments on the Units (R002 – R011)

R002

Candidates were often credited over-generously for filing structures that were adequate in the context of the assignment but which showed little understanding of how files need to be stored for easy retrieval in a business context, where there are likely to be many more files. It would be appropriate to remind candidates, throughout the assignment, of the scenario and of the role that they have been given within the business. To be considered as meeting the MB3 requirements there must be clear evidence of some file versions, also that candidates have met all of the requirements in Task 6 of the Model Assignment. In many cases insufficient evidence of candidates' filing systems was provided; sometimes only folders were shown but not their content, in others the content of a folder were shown but not the overall structure. Evidence for this criterion can be presented electronically, but if this is done, a comment should be provided on the Unit Recording Sheet, to indicate which, if any, files actually need to be opened by the moderator and if so, for which LO/criterion.

Candidates are expected to generate the email evidence from the tasks in the assignment, which should elicit signatures, out-of-office replies etc that are relevant to MStreamIT. Marks should not be awarded over-generously where generic descriptions only have been given. Many candidates produced evidence of emails that they had sent/received but this was unrelated to the tasks in the assignment. Many produced lists of email etiquette rules, some of which were clearly based on web sources, with minor changes made to the wording. Simply changing a few words does not make a piece of work a candidate's own. To be credited with a thorough awareness of email etiquette this should be evident throughout all the evidence produced for this section.

Some candidates did not provide evidence of the criteria they had entered into search engines, which limited the marks available. To be credited with the use of advanced search pages these must be used appropriately, requiring some thought on the part of the candidate about exactly what information they want to find. The appropriateness of the information found should also be assessed.

The weakest area in LO1 was frequently the copyright requirement. Whilst some candidates noted whether or not items were copyrighted, with varying degrees of accuracy, few actually identified the copyright holder of any item of information found. Some candidates appeared to have been credited for simply writing down the URL, which does not fully meet the requirements even of mark band 1.

Marks were frequently awarded over-generously in AO2 when candidates had met only a limited number of the user requirements in the assignment and/or where the results obtained were not accurate. The glossary in Appendix D of the specification document provides some guidance in interpreting the key words in the assessment criteria.

Choice of software for the data handling tasks is assessed within AO2. It was clear that in some cases guidance had been given by the centre to tell candidates what software to use. If this is done then no credit can be given for this criterion.

Many candidates did not demonstrate a good understanding of modelling within their work in Task 3. The use of spreadsheets as a model, where data can be changed and predicted outcomes obtained, is an important point to be taught within the data handling section.

Where clear evidence of methods used was not provided, eg spreadsheet formulae, database query designs, methods of producing address labels and mail-merged letters, it was difficult to assess the effectiveness of candidates' manipulation of data.

It is not the intention that candidates should be over-penalised for the same errors/omissions. LO2 should be assessed using candidates' responses to data handling, whilst LO3 should be assessed using their responses to those tasks that involve communicating information; this is expected to be largely in the use of the software specified in this LO, but where candidates choose other software to create their advertising solutions then these should also be considered.

Most candidates chose to create flyers for their advertising solution but where candidates chose a more creative option this not only increased the range of file types produced but often resulted in products of a much higher quality, more appropriate for the specified purpose. It was disappointing to note that in most centres all candidates had used the same medium for this task, suggesting some direction from the centre.

Some candidates edited the provided text before including it in their magazine adverts and many produced only simple flyers as their advertising solution, many of which promoted either the company or the top-up cards but rarely both. In such circumstances it cannot be considered that the content 'fully meets the specified requirements'.

The specification for LO4 provides a list of formatting tools that candidates should be taught and it is expected that a wide range of these tools will be evident across all tasks from candidates scoring highly in this area.

R003

If candidates do not provide evidence of formulae it is difficult to award any marks in LO2, as functionality cannot be assessed. This can be provided through formula printouts and/or electronic spreadsheet files. The latter are often easier to understand, avoiding problems of truncation/ multiple page printouts that can occur if several long formulae are used.

The specification lists a range of tools in LO1, many of which can be used to enhance the user-friendliness of a spreadsheet. For high marks in this section it is expected that a good range of these tools will have been used. Some candidates also made good use of macros to make their spreadsheets more user friendly. If candidates have used features such as conditional formatting, which may not be obvious to a viewer, some documentation/annotation is recommended.

The higher mark bands of LO1 require input messages rather than simply error messages. For the highest marks it would be expected that a range of validation methods, with suitable input and error messages, will be set wherever appropriate. In some cases high marks were awarded where evidence for validation was limited to one cell.

Marks were sometimes over-generously awarded in MB3 of LO2, which requires the solutions to be both effective and efficient. The range of techniques that should be taught is listed in the specification and this should be considered when awarding marks. Efficient solutions would make use of references rather than cells within formulas for discount, VAT and postage and would minimise data entry. An efficient solution would also be expected to make some good use of macros.

Whilst many candidates were able to document what their formulae did, few were able to explain why they were appropriate, giving reasons. Where candidates tried to consider alternative (and usually less effective) options they were generally more successful in explaining why their chosen solutions were appropriate. This was most likely to be where they considered ways in which they had ensured their system was efficient.

Most candidates provided good evidence for sorting and filtering the data, with many being appropriately awarded high marks for the first section of LO3. However, the modelling tasks were often less well attempted, with few providing a range of alternative outcomes. The most common complex tool used for modelling was the Goal Seek option, although it was pleasing to see some make good use of the Scenarios tool. Whilst Goal Seek was generally well used, few candidates provided any justification for its use. Similarly, candidates' description of the results of their modelling was often weak. Marks were sometimes over-generously awarded in this LO where candidates had not provided accurate solutions to all user requirements.

R004

Centres are requested to ensure they are using the most recent version of the Model Assignment and associated files for this unit.

Marks were sometimes awarded over-generously in LO1 where the table structures and links were not efficient/ appropriate and/or evidence of validation was limited. An effective database structure would include all fields in appropriate tables, with no duplication, linked by key fields. Mark band 1 requirements regarding structure are fully met where candidates have added all of the required fields to the customer table provided. Where fields were not added to the most appropriate table, and/or where tables were linked only within queries rather than in the overall structure, this best met mark band 2.

For the highest mark, validation rules, with appropriate error messages, should be applied to all fields where this is appropriate. To be considered 'justification', it would be expected that candidates would consider different options for validation and explain why they chose to set the rules that they did. For example, where a range check is added there is often no single 'correct' range. Many candidates simply described what they had done, with no reasons given. This barely meets the MB1 requirements.

Many candidates created effective queries, although they did not always consider which output fields would be most appropriate. The choice of output fields, also formatting, layout and customisation of reports are important differentiators within LO2, as well as the complexity and appropriateness of query criteria. It is advisable to ensure candidates produce some evidence of any customisation they have carried out on reports, so that there can be no confusion with default formatting. This may be in the form of a single 'before' and 'after' printout/screenshot. Some candidates were awarded marks over-generously in mark band 3 of this LO where they had created customised reports which were not fit for purpose, often because of inappropriate/unreadable colour schemes. Such reports clearly required considerable amendment before they could be considered fit for purpose.

Where candidates attempted them, forms and user interfaces were often well designed and effective. The MB3 requirement to provide access to 'forms, queries and reports' from the user interface can be considered met if candidates' interfaces provide direct access to all forms and all reports, so long as there is a report for every query, as this is best practice – access to queries for day-to-day users is through the reports. Candidates from many centres had been taught to create macros to add tables and queries to their user interfaces. Whilst such candidates should not be penalised for this, it is not necessary. To be considered 'effective', as required to fully meet mark band 3 requirements, the user interface should load at start up.

Some candidates provided a detailed testing section at the end, rather than following the guidance in the Model Assignment, which is to evidence testing throughout. This latter approach allows for more accurate assessment of genuine testing and is likely to be more meaningful to candidates. Whilst marks can still be gained for testing tables provided in a separate section, this is not required. Where candidates had modified their systems during the production of their work, and evidenced this, they could be credited with identifying and implementing modifications. However, many candidates provided no evidence of any modifications made. Where candidates analysed user feedback as well as their own testing they were more likely to be able to identify modifications that would further improve their system, rather than simply correcting errors.

Learning outcome 4 assesses candidates on the detail and relevance of feedback given on a user interface, not on the quality of feedback they have obtained from others. Therefore it is essential that each candidate provides evidence of the feedback they have given to others as well as the feedback they have received as part of their testing, and distinguishes clearly between them. Some problems were encountered where candidates did not provide evidence of the feedback they had given and/or did not clearly identify who provided the feedback included within their portfolios.

R005

Although the final products created by candidates were often of a high quality, demonstrating a wide range of skills, the planning and testing were not always of the same standard and these sections were frequently marked leniently. In some cases LO2 was also over-generously assessed, where candidates did not provide evidence of effects and interactivity over and above basic navigation.

Marks were sometimes over-generously awarded in LO1, where candidates had not met all the requirements. At the higher levels a wide range of planning documentation is required, with clear plans for the product, including a clearly defined house style. Candidates should have had experience in the use of all the planning techniques listed in the specification. For example, mood boards might lead well into identifying an appropriate house style and choosing graphic components. Many candidates failed to provide evidence of storing the components sourced and few gave more than basic reasons for choosing particular components, with many comments simply describing the components and/or stating where they were going to be used, rather than any reasons why those particular components were chosen. Candidates from many centres used standard assets tables, designed to encourage crediting of sources, often providing no reasons for their choice and therefore not fully meeting even mark band 1 requirements. Centres are reminded that whilst some candidates might choose to re-use table formats that they have used for similar tasks previously, templates must not be provided for the purpose of completing the Model Assignment.

When showing evidence of storing components it is essential that this clearly shows the file types used. To meet the requirements of the higher mark bands re legislative constraints that apply, candidates' explanations should be specific to the components sourced and should extend beyond copyright. The specification lists the legislative areas that should be taught.

It is expected that candidates will make their own selection of applications software to create their product. In some cases it was clear that the centre had directed candidates to use a particular piece of software. Where this is the case, the requirement to choose appropriate software is not met, even at mark band 1.

The higher mark bands required candidates to consider the software for 'the presentation method of the design'. It is clarified here that this refers to the software needed by the user in order to view the final product.

Some candidates produced specifications which had clearly been created retrospectively, after the product had been created. This does not demonstrate any ability to plan and cannot be credited in LO1. Where appropriate success criteria were evidenced, these were specific, measurable and covered all areas listed in the specification. However, many candidates were over-generously awarded marks where specific success criteria had not been stated or where these were inappropriate, sometimes referring to the entire assignment rather than to the product.

Where centres provided electronic files of candidates' final products, this generally enabled more accurate assessment of LO2, with less effort required from candidates to provide printed evidence. For this LO there must be clear evidence to show the extent to which the combined components work as an interactive multimedia product, which is hard to judge through static printouts. However, in some cases the files sent to moderators did not work properly. Centres are strongly advised to test products on a stand-alone system before sending them to the moderator or uploading to the repository. Problems were most often encountered where candidates had used MS PowerPoint, in which case the 'package to CD' option is recommended. Sometimes problems were also found with websites, often because absolute links to centre network files had been used and/or component files had not been provided.

The marking grid for LO2 refers to navigation system, effects and user interactivity, which are three distinct aspects. There was evidence of some confusion regarding these terms and centres are advised to consult the specification content for clarification of these different requirements. An effective interactive multimedia product, as required for MB3, should demonstrate some creativity.

The higher mark bands in LO3 require evidence that candidates have tested the product both while creating and post completion. This was not always clear from candidates' portfolios, making marks above band 1 difficult to endorse. Evidence of testing whilst creating might be in the form of a log, showing how different elements were tested as they were added, and any changes made as a result of this testing. In order to gain marks for the last section in LO3, candidates must gather feedback and analyse this, making at least limited reference to the success criteria. Some candidates gathered feedback but then simply gave their own opinion of their product, with reference to success criteria, failing to refer to their user feedback. If there is no analysis of user feedback then the requirements of even the lowest mark band are not met.

R006

Comments for R005 above, regarding specification, success criteria, choice of software, choice/storage of components and legislation, also apply to this unit, where marks were often over-generously awarded for LO1. In some cases candidates demonstrated very little understanding of the main implication of the title of the competition – 'the camera never lies' – and had often been over-generously assessed in this LO.

Candidates rarely demonstrated more than a very limited range of research methods to inform ideas. The specification lists methods that should be taught as part of the preparation for this unit. Some candidates produced designs but provided no evidence of any research that had been carried out to inform these designs.

To meet the requirements of the first part of LO2, candidates need to set resolution as well as image size, where this is possible/ appropriate for the type of image and software chosen.

In some cases it was not possible to see which standard and/or specialised software tools/ techniques had been applied, as evidence was not provided. The specification lists tools/ techniques that should be considered under these headings, although additional tools/ techniques can also be credited.

LO3 was often not well evidenced, with many candidates not providing evidence of the files stored. In some cases screenshots confirmed file names but not always folders, and often not file types. As for many other units, submission of candidate files electronically could have provided this evidence. The second part of this LO assesses candidates' presentation of their digital images. This requires some specific evidence that the candidate has clearly considered how to present their final image for the competition. If this is by printing, which is quite likely, this cannot be provided directly for repository moderation, in which case the file to be printed could be uploaded and a candidate statement and/or teacher witness statement used to confirm the presentation method chosen. Many candidates this session provided no specific evidence for this part of LO3, whilst some candidates printed out their final image but provided no evidence or explanation of the choices made.

R007

Comments for R005 above, regarding specification, success criteria, choice of software, choice of components, legislation and testing during production, also apply to this unit. It was clear that some centres had approached this as 'the video' unit or 'the animation' unit, without allowing candidates the choice of final product to be created. Whilst it is accepted that a centre might spend more time on one type of software than others, candidates must not be directed towards any one type of product.

Unlike R005 and R006, candidates' plans for their product, in the form of timelines storyboards, sketches, scripts etc, are assessed as part of the first part of LO1. In some cases high marks were awarded where no planning documentation had been submitted.

Clear evidence is required of the level of guidance and support given to candidates to help them produce their specifications. This may be in the form of a formal witness statement, or a clear description on the Unit Recording Sheet.

When assessing the complexity of the proposed solution, consideration should be given to the range of components and techniques required to produce the final product. This may be, for example, the inclusion of a range of objects being animated within an animation, with sound added; a video clip containing a wide range of different components including video, still images, music and narration, with appropriate transitions and effects or a sound clip containing multiple tracks with a wide range of different components including music, narration and sound effects, with appropriate effects. It might involve the creation and integration of more than one type of dynamic product, eg a video with a soundtrack created by the candidate. Whilst creativity is subjective, candidates working at the highest level should be demonstrating some ideas that make their product distinctive that would elicit positive comments from a viewer.

The higher mark bands required candidates to consider the software for 'the presentation method of the design'. It is clarified here that this refers to the software needed by the user in order to view the final product.

Where centres provided the electronic files for candidates' final products this made it easier to assess the overall quality and creativity of the final product. However, the range of editing/enhancing techniques also needs to be assessed and it was not always possible for moderators to see what techniques had been used by candidates. It is important that these are clearly evidenced. Where candidates import, for example, sound and/or video from external sources these have often already been edited, so it is essential that the moderator can see the editing that has been carried out by the candidates themselves.

Some candidates wrote extensively about different file types and this work showed varying levels of understanding with some being clearly strongly reliant upon source material. The best work here came from candidates who clearly related the advantages and disadvantages of the different file types to the work that they were undertaking.

The highest mark band of LO3 requires candidates to identify re-tests. This was rarely evidenced, with some centres awarding marks over-generously here.

R008

A range of effective programs were seen this session, with candidates demonstrating a good understanding of the programming language used, through clear and thorough annotation of their programs. Where the products were provided electronically this aided moderation, so long as the moderator was able to freely download any software required to open them. Guidance for moderators about how to view programs would be welcomed on the Unit Recording Sheets.

Marks were sometimes awarded over-generously in LO 1 where explanations of programming languages were generic, unrelated to the scenario/candidates' design ideas.

Many candidates wrote about what would happen in their games but did not fully analyse what this required in terms of inputs, processing and outputs. To fully meet MB3 requirements in LO1, inputs, processing and outputs should be analysed in terms of what the program needs to do rather than simply what the user will see on the screen.

Centre marking was generally accurate in LO2, where the range of constructs to be considered is listed in the specification. If candidates choose very simple program outcomes that do not require the full range of programming constructs, variables and operators then they cannot access the higher mark bands.

Centre marks for LO3 were sometimes over-generously awarded where candidates' testing was very limited, often running the program once, without considering the range of different situations that might occur. Candidates should be taught to develop test plans to test the different types of error that might occur, using different test data/methods as appropriate.

R009

Marks were sometimes awarded over-generously in LO1, where candidates had chosen a computer system and written about its advantages, but not explained why this was necessarily the best system. To be considered as 'fully justifying' choices, it is expected that candidates will give clear and specific reference to user needs and explain why their chosen item is the best match to these needs, considering the specification of its components. This invariably requires some consideration of alternatives.

Candidates from some centres selected a wide range of different components, as listed in the specification, but appeared to be unaware that these would not provide them with a working computer system. Where candidates selected systems and considered different aspects of their specifications with specific reference to the user needs they were more likely to meet the requirements of the higher mark bands.

Some candidates tried to apply traditional ring, star and bus topologies to a wireless network. It is important that preparation for this unit covers the topologies listed in the specification.

For marks above band 1 in LO3, candidates' trouble shooting guides need to cover at least some of the more technical aspects listed in the specification, showing how to diagnose and solve problems from symptoms. Some candidates were awarded marks over-generously where guides concentrated on solutions to known problems (eg 'the printer is out of paper'), hence generally providing a single solution for each problem, which is mark band 1 level.

R010

Where candidates had acquired a good understanding of input-process-output and of different sensors and their capabilities they were generally able to produce good designs. However, reasons for choices were generally not of the same quality, often limited to descriptions of what the component would do, rather than why it had been chosen. Where candidates considered more than one approach they were generally better able to explain their reasons for their final choices.

LO2 was generally the most successful part of the portfolio and the most accurately assessed, with many candidates producing effective systems, usually through the use of a virtual control system.

Testing was sometimes over-generously assessed, where candidates often tested each part of their system once, without considering a range of possible situations. To be considered 'thorough', as required for the highest mark band, testing needs to consider all possibilities, to ensure the system will work in all situations.

If candidates do not require any refinements to their system, marks can be awarded in the second part of LO3 on the strength of their justification for this decision, together with an assessment of the accuracy of the decision. In most cases candidates should be able to consider some refinements that could be made to their systems, which do not have to be limited to the correction of errors.

R011

Most centres that entered candidates for this unit had misinterpreted the focus of the unit and provided candidates with a restricted assignment brief, rather than allowing candidates to come up with their own ideas. This severely limited achievement in this unit, where most of the marks are available for the project approach, rather than for the final outcome. Marking was often found to be over-generous, especially in LOs 1 and 3.

Unit R011 is designed to allow learners to develop their planning, research, presentation and analytical skills by undertaking a learner-initiated individual project with an ICT-related theme. The nature of this unit means that each learner should agree an individual project title with the teacher in order to produce evidence that meets the marking criteria. Candidates should be provided with the unit content and assessment criteria only – a detailed assignment and task instructions must not be provided. Some examples of the range of project types that could be chosen by individual candidates can be found in the unit specification. It is not expected that all candidates will choose the same type of project.

LO1 assesses candidates' ability to initiate projects, considering the different forms the project output could take, choosing a project topic, setting objectives, identifying success criteria and dividing a project into manageable stages, using planning tools to create plans.

Project objectives might include:

- Required outcomes
- Completion date
- Specific qualitative criteria that must be met

The project plan should consider the project objectives and divide the task into smaller, more manageable and measurable stages, which should then be considered in the context of the time available and allocated timescales.

Where candidates carried out research using a range of sources, including both primary and secondary, this was generally well done and assessed accurately. However, some centres appeared to misinterpret the requirement for a 'range of' sources as a range of websites. The specification lists the range of sources that might be considered; the World Wide Web is considered one source. To be considered a 'wide range', both primary and secondary sources should be evidenced.

Justification for choices of resources and reliability checks were often quite basic, sometimes reflecting a lack of clarity regarding exactly what information was needed. Justification of choice of resources is more than just stating the content found. Candidates should consider why that resource, rather than alternatives, was the best for the purpose, comparing different types of source as well as looking at what that particular source offers.

Although mark band 3 of LO2 requires candidates to complete their project, meeting their defined project outcomes, the main focus of this Learning Outcome is on the project record, showing how candidates have followed their plan, recorded their progress and reviewed/modified their plan as work progressed. This was generally a weak point in the work of candidates seen this session.

Where candidates had a methodical approach to review, considering each of their objectives in turn, and focused on their approach rather than their outcome, evaluations were more successful. However, in some cases centres awarded marks over-generously where candidates had evaluated/reviewed their product/outcome rather than the process of carrying out the project.

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