Examiners' Report Summer 2009

GCSE Applied ICT (2331)

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General Comments

For GCSE Double Awards the skills, knowledge and understanding must be applied in vocationally-related contexts and this will generally include a greater degree of involvement with ICT practice beyond the educational environment (extract from the specification).

June 2009 is the sixth moderation session for both portfolio units – 5332 (ICT in Organisations) and 5333 (ICT and Society). It is pleasing to see that the quality of response continues to stabilise and improve. Whilst a few candidates did not apply the necessary skills in the vocational context despite research and investigation, the majority had produced good quality evidence of their ability to apply their knowledge of ICT across both portfolio units at all levels.   There is sound evidence of a good understanding of the specification and its delivery, both on the part of the teachers and the candidates themselves.

Where Centres have done well

Where centres have done well, candidates have covered and learnt much about the application of ICT in business and society (especially when combined with their performance in 5331). These candidates are well deserving of their GCSE Double award.   The most successful outcomes were in centres where the philosophy of both vocational and independent work has been applied.   Centres where candidates were encouraged to visit organisations produced more comprehensive portfolios. Candidates who had looked outside their school/college environment and had visited real organisations gained significantly higher marks as long as they concentrated on a single system rather than trying to investigate and document the whole organisation. These candidates accessed the higher mark bands because their work demonstrated independently a greater understanding of how ICT was used within the functions of the organisational system.   Where candidates chose very narrow or limited systems there was little scope for them to access higher mark bands. In the case of 5333, ICT and Society, when case studies had been used rather than inviting visiting speakers or allowing candidates to interview their own 'live' adult or special needs person, candidates had been able improve the quality of their evidence.   Centres, in general, continue to make sound use of the Unit Marking Guides, which when coupled with detailed page number annotations and an indication of any professional judgment applied, have greatly aided the moderation process.   There has also been an increase within the portfolios of signposting of the evidence by the candidates themselves.

Areas for improvement

A few centres still seem to have little awareness of the grade descriptors found in the specification. These give a general indication of the required standard at grades A, C and F. The skills, knowledge and understanding for this award must be applied in a vocationally related context. This calls for involvement with ICT beyond the educational environment.   Candidates are expected to show knowledge of ICT terms and definitions; explore, develop and interpret information; use ICT to share, exchange and present work; reflect on how they have used ICT and the impact of ICT in the wider world.   Where centres did not do so well, it is because they have

underestimated the demands of the qualification and the GCSE Double award equivalence across grades A*-G.

In 2a, some candidates were limited in some of their responses by their choice of organisation and subsequent restrictions. This meant that opportunities to describe the technology could not be developed, restricting them to lower mark bands. There were fewer cases of candidates choosing an organisation where it was almost impossible to describe a virtually non-existent usage of ICT. There were fewer instances of students basing their investigation on two different organisations for stands 2a and 2b, which in previous series had led to two disparate reports or a comparison of the two; neither of which enabled the student to achieve higher mark bands. There were fewer incidences of candidates using their work experience placements as a basis for this strand; those that did produced evidence with limited success, since most work experience placements are not a suitable basis for the level of investigation and study required by the qualification.

Centres continue to heed earlier advice that candidates should be guided to choose either a spreadsheet or database solution. This increased candidates' chances of securing higher marks.

The key to achieving higher band marks in Unit 3 lies in explanation and evaluation that is based on clear detailed descriptions which show a good understanding of the functions and capabilities of the particular ICT. Some centres gave marks for evaluative statements that did not exist or were too weak.

Many centres had not interpreted the components of Unit 3 correctly and had not guided candidates to use actual, specified individuals and groups. Fewer centres remained unaware of the requirements of the specification, with candidates submitting generic answers on 'IT and candidates' for 3a, 'IT in work' for 3b, 'IT for disabled people' for 3c and 'IT in the community' for 3d. Centres are advised to review the document, which details categories of technology for this unit. In general, strand 3e was more successful when tackled as a discrete component rather than as an integral part of the other four components. It is important that those individuals and groups studied in 3a-3d are linked to the relevant legislation.

GCSE Applied ICT - 5331 – ICT Tools & Applications

During this session approximately 4,500 candidates were entered for the examination which forms Unit 1 of this specification. Responses varied considerably and covered all grades. The examination is now in its 12th series. Many of the issues which have been highlighted in previous series still remain. Some of the issues which were mentioned in previous series are now much less commonly experienced.

The main issue to note is that candidates lose a large number of marks because of the failure to pay attention to detail. For example
- 16 marks on this paper were available to candidates able to accurately copy text from the examination paper or from the data files to the appropriate document. Many candidates lost marks because they failed to check the spelling, the use of capitals and/or the correct punctuation.
- 12 marks on the paper this series were for correct formulae in the spreadsheet tasks. Many candidates lost these marks because they failed to display the formulae in their printouts – though the evidence presented in the printouts suggested that they had obtained the correct values.
- Several candidates lost marks where screenshot evidence was produced. This in itself was generally not penalised but several of the screenshots were cropped so that vital information was not present or the image was too small to read clearly. In database tables and queries, copying and pasting the data into a word document is a more effective way of submitting the response.
- The loss of marks due to failure to type the candidate details on documents (particularly in the database tasks) before printing is less of an issue now than it has been in earlier series of this examination.

Candidates at many centres seem to be poorly instructed in the correct collation of the printouts. Sometimes all the candidates at a centre had pages upside down, back to front or effectively sealed into the folded cover sheet by knotted treasury tags through both the front and the back of the cover sheet. This behaviour common to most candidates at a centre suggests that they have been badly instructed by the invigilators. The instructions for collating are clearly presented on page 2 of the cover sheet.

There is continuing evidence that the applied nature of the qualification is not fully understood by the candidates and many fail to gain fitness for purpose marks. Candidates are expected to follow instructions in the examination paper as though it was a manager giving instruction. Candidates should check their printouts to ensure that they are fit for purpose. This sometimes means modifying column headings or field labels to make the document easier to understand or more fit for purpose. Generally database and spreadsheet tasks, which tend to be more mechanical, gain higher marks than the tasks which require effective business communication such as word processed documents and database reports. However, candidates rarely customise the output from wizards so that data entry forms and database reports are seldom suitable or professionally laid out. Examiners also report that candidates often do not seem able to reproduce standard layouts for business documents such as letters, memos and agendas.

Software

The use of Microsoft products continues to dominate the work seen by examiners. Even so, centres rarely follow the instruction to include within the envelope of scripts details of the software used during the examination. The few issues raised by centres in calls to Edexcel were often due to a lack of understanding that the data files are produced in several versions – one in "Microsoft Office 97", one in "Microsoft Office 2003" and one in "non-Microsoft Office" format. Centres need to check that the data files used by the candidates are appropriately altered for use by the candidates. For example, conversion of the database files to the appropriate version of Access.

The use of software tools such as wizards, templates and the use of spelling and grammar checkers is, of course, legitimate but candidates often place too great a reliance on the output of such tools and do not always pay attention to proof reading. Candidates need to be aware that in a business environment, names do not always appear in the dictionary and that software guidance about misspellings may be inaccurate. Customisation of the output of templates and wizards is rarely done effectively by candidates. This leaves documents poorly presented in many cases.

Support Materials

The Smarts Leisure Park continues to be the basis of the work in this examination, and the Smarts website (www.smartsleisure.co.uk) continues to be a basis for background information about the leisure park and the organisation. In addition, the Activity Booklet and Candidate Kit are still available and provide useful guidance for candidates about the examination and include activities and revision check lists.

Secure Environment

Examiners continue to report a small number of cases where there is a suspicion that candidates have not worked in a secure environment. A few cases have been reported where the cover sheet for one candidate included work from other candidates.

One or two examiners reported that some candidates appeared to have access to data files from previous examination series, for example logos which were changed up to three years ago. Centres are reminded that the candidates should only have access to the software and the current data files and that a separate user area must be set up for use solely during the examination. Further, candidates should not have access to this area except during when they are sitting the examination. It is also worth noting that candidates should not have any access to internet technology during the examination.

Labelling and Printing

There were fewer enquiries about this aspect of the examination during this series. However, it still remains the case that there are some centres where the majority of candidates at the centre had failed to gain marks because they had not included typed candidate details on tasks. Candidates perhaps need to be reminded that tasks which are not correctly labelled before printing will gain zero marks. Handwritten details are not accepted in this qualification. Experience has shown that if candidates are encouraged to label all their documents before printing in the normal classroom environment then this is rarely an issue in the examination.

The instructions are available on the Edexcel website and within the Instructions for Conduct of the Examination ((ICE) document. In addition, the paper includes the instruction "**You MUST enter your name, candidate number, centre number and task name BEFORE PRINTING**" within each task.

Occasionally examiners are raising concerns that some centres have provided candidates with paper that is pre-printed with candidate details. This is not in the spirit of the examination, which aims to ensure that candidates can label printouts produced using a variety of software applications.

Practice for the Examination

At least one full timed practice session is recommended to help candidates appreciate the pressure of a long computer-based examination.

Submission of Work

It is sometimes felt by examiners that the message about correct submission of work is not being passed on to the invigilators who are giving incorrect guidance to the candidates.

Some examiners also reported that some centres had not submitted the candidates' work in the attendance register order and that occasionally a correctly completed attendance register itself was not included with the scripts.

Data Files and Software

Some centres seemed not to be aware that the Instructions for Centres **must** be read when the files have been downloaded. These instructions state what files must be made available to candidates and how they should be formatted. It is not possible to provide data files that can be used directly on the systems of every centre and it is the centre's responsibility to ensure that the files are compatible with their system. A number of formats are provided, in three different folders and centres may need to use files from each of these folders. Not all are intended to be given to candidates. For example, it is not appropriate to give a .csv file containing data for the spreadsheet to the candidate. The data must be transferred into the centre's spreadsheet software and formatted according to the instructions within the Notes for Centres.

Centres, therefore, must test the files to ensure file formats are readable using the software in the centre. This must be done in the weeks **before** the examination window. Candidates may be unnecessarily disadvantaged if they find during the examination that they cannot adequately manipulate the files. Centres should also ensure that only the **current** data files are available to candidates. The data files should **not** be discussed with candidates prior to the examination.

The Instructions for Centres (ICE) document states that centres should include with the scripts a note of the software used and printouts of centre-created files. Very few centres comply with the first requirement.

Data files and Instructions for Centres for the January 2010 series will be available for registered centres to download from the Edexcel website in December 2009.

ACTIVITY 1 – USING DESKTOP PUBLISHING/WORD PROCESSING SOFTWARE

Candidates were required to produce a poster from a given text file and a file of graphics.
Many candidates had used the given text file and added appropriate graphics. However, many candidates included information about winter activities even though the poster was about summer activity weekends. Many candidates failed to produce a poster which would attract attention with little emphasis about what the poster was about. Dates and special reductions were often not highlighted. It was pleasing to note that the use of WordArt was less prevalent than in previous series. Some "posters" were very poorly presented with text too small to read and images chosen which were not relevant to the content.

Key areas for improvement – candidates should:

- combine text and graphics effectively with appropriate text wrapping
- sensible use of spelling and grammar checkers
- choose appropriate graphics for a task
- alignment of text
- make appropriate use of white space
- highlight important information
- check fitness for purpose

ACTIVITY 2 – USING DATABASE SOFTWARE

There continues to be an improvement in the candidates' responses to database tasks although customisation still causes difficulty and few candidates gain maximum marks for this. There is a decreasing number of candidates who lose marks due to failure to include candidate details before printing. The number who add their details into a record or as separate fields also seems to be decreasing. The use of "copy and paste" into a word processed document is an increasingly popular way of presenting tables and queries.

Task DB1

This was designed to be a relatively straightforward database task of entering a new record then sorting the table into ascending order. The candidates were then required to print out the table. Most candidates gained all the marks on this task. However there were a number of candidates who failed to copy the given data accurately into the new record. This was most notable in the spelling of 'Threadneedle'. Occasionally marks were lost where candidates had not used the correct capitalisation of the text in the data entry. Occasionally candidates lost marks for not checking that there was no truncation of the data.

Task DB2

Candidates were required to produce a data entry form for new bookings. The candidates were then asked to take a screen shot of the completed form in data entry view. Most candidates were able to use a wizard to produce a usable form. However the task did require candidates to make the form clear and easy to use. The expectation therefore is that candidates will modify the wizard results and change the field labels to make them easier to understand. For example, changing CustCode to Customer Code. The requirement to make the form easy to use can be met by

using drop down menus (for example in the ApartRef field or CustCode fields) or help messages or navigation buttons.

Task DB3

Candidates were asked to search one of the tables for information using a combined logical operator. Most candidates did not score full marks on this task because they failed to include both the > and the = part of the operator. Quite a number of candidates produced a screen shot pasted into a word processing document and lost marks because they had cropped the image so that it was not clear that only 7 fields were present in the query results.

Task DB4

In task DB4 candidates were asked to do a complex search on one of the tables. They were asked to take a screen shot of the design view of the query. Candidates frequently lost marks because they only showed one of the required criteria. Several candidates lost the final marks because they used a screenshot which had been cropped and so did not demonstrate that only the seven required fields had been selected.

Task DB5

Candidates were asked to produce a database report of the results of the search carried out for DB4. Many candidates seem unable to take the information given in the stem of the question and produce a suitable title for the report. Often candidates would produce a suitable title only to lose the mark for inappropriate capitalisation. Candidates rarely gained the marks for customisation of the field names in the column headers.

Task DB6

Candidates were asked to carry out a simple search on related tables. Most candidates were able to produce the correct fields but did not complete the search effectively and rarely produced the correct records.

Key areas for improvement – candidates should:
- sort tables of data to alphabetic and reverse alphabetic order.
- correctly add new records using data as given
- show and print all records as required
- search on one criterion using the correct combination of comparison operators (>, = and <)
- search on two criteria using appropriate operators
- search on related tables
- produce a data entry form customised for clarity and ease of use
- customise field names in a database report and in data entry forms
- show and print only the required fields of a table/search

ACTIVITY 3 – USING WORD PROCESSING SOFTWARE

Candidates were asked to produce three standard business documents using text and graphics provided.

Task WP1

Candidates were required to produce a memo to inform two colleagues of a meeting. The quality of the memos produced were generally very disappointing. Memos have appeared on five previous examinations for this qualification. Candidates often fail to include labels for the headings, the subject line is rarely appropriate and the text is often poorly written with many errors in the spelling and grammar. Too often, the memo looks too much like a letter with "Dear …" and "Yours sincerely …"

Task WP2

Candidates were provided with a list of items for an agenda and were asked to produce the agenda for a meeting in the future. Again, it seems that the majority of candidates failed to score full marks on this task because of a failure to pay attention to detail. The production of an agenda is a standard task in a business environment and is named in the specification. An agenda has appeared in the tasks to be completed in three previous examinations. Even though similar tasks have appeared regularly in this examination, the layout and structure does not seem to be well completed by candidates. The main points for loss of marks were the inability to provide a suitable title for the document. Usually it is possible to get an idea of what is required from the introduction to the task. Here candidates were informed that the agenda was for a meeting to discuss ideas for the Summer Activity Weekends. Many candidates lost marks for referring to weekend activities rather than Activity Weekends. Many candidates did not include the meeting details (date, time and place) and failed to realise that the order of items given to them was not correct even though they were instructed to put the items into a sensible order. Some candidates failed to number the items consistently and so lost the mark for this task.

Task WP3

Candidates were required to reformat a letter which had been prepared for sending. The draft letter had several errors in the layout and text. The majority of candidates corrected the erroneous logo and relocated the recipients details to the left margin. A large number of candidates only corrected the spelling errors highlighted by a spell checker and ignored the incorrect spelling of board, diving and exciting (which had been included as bored, driving and exiting). Most candidates did replace the text "Stay Smart" with a more appropriate closure but lost the mark for incorrect capitalisation. Few candidates correctly indicated that items had been enclosed with the letter.

Key areas for improvement – candidates should:

- be fully aware of all types of business documents including the use of an agenda, memo and letter
- correctly copy information, especially names, into a document
- apply correct layout for an agenda, memo and agenda
- include an appropriate title for an agenda
- add details of a meeting time and place in an appropriate place in an agenda
- place agenda items in a correct order

- produce a consistent numbered list
- enter appropriate subject in the memo headers
- enter suitable text in a memo message
- use appropriate greeting and closure in a business letter
- proof-read and check for fitness for purpose

ACTIVITY 4 – USING SPREADSHEET SOFTWARE

Those many candidates who completed this task generally gained high marks. Candidates were provided with a spreadsheet and were asked to add title and formulae to complete the spreadsheet.

Task SP1

Candidates were asked to insert a heading into cell A1 and format it in a given way. Most candidates gained the marks for entering the title in the correct location and for the formatting of the label. However a large number of candidates failed to copy the title accurately. They were then required to delete a row and format a column to show currency to 2 decimal places. Several candidates deleted the text in the required row but did not delete the row itself. Most candidates demonstrated the required skill in formatting the column.

Task SP2

In this task candidates had to insert a label, produce formulas and display the spreadsheet in formula view without truncating data or formulas. Many candidates would have gained the marks for the formulas but failed to receive them because they had not displayed the spreadsheet in formula view. That they were capable of displaying formulae was often demonstrated by their responses to later tasks. Some candidates lost marks because in using the AutoSum function they had not excluded the empty cells in F13. Examiners reported that some candidates lost marks due to inaccuracies in copying the label "Income". These candidates had usually used lower case or added extra text.

Task SP3

An IF function was required in this task. The use of this function is increasingly well completed by candidates. Most candidates who showed formulae gained high marks in this task. However many were then let down by errors in the calculation of 20% of the Income. Candidates generally used absolute cell references appropriately.

Task SP4

This task required candidates to enter labels and formulae. They were then asked to print out a section of the spreadsheet in portrait on one A4 sheet showing row and column headers.

Key areas for improvement – candidates should:

- correctly copy and enter headings and labels
- format labels consistently using capitalisation, bold and font size appropriately
- be aware of the need for consistency of capitalisation in labels and headings
- correctly enter functions and formulae
- use absolute and relative cell references appropriately
- create efficient formulae (especially the appropriate use of the SUM function)
- print in formula view and data view
- change page orientation from landscape to portrait or portrait to landscape
- ensure all necessary columns are printed on one page
- enter given data into correct cells
- change row heights and column widths to display labels and data effectively
- create an IF function including correct criterion and messages
- print selected cell ranges on one page
- show and/or hide gridlines and row and column headers

General Administration

In the majority of cases, the OPTEMS forms were correctly completed and submitted with the portfolios for moderation. Centres are reminded that accuracy is essential and that marks annotated on the OPTEMS must match the totals on the moderation grids. It was pleasing to see more evidence of internal standardisation within a number of centres – centres are reminded that this is a requirement.

Only one or two centres used neither mark record sheets nor mark profile sheets which meant the moderator had only the overall mark with no indication of breakdown. Where the asterisked sample requested did not include highest and lowest marks, some centres did not send the lowest and highest marks in addition to the sample requested and had to be reminded. There were also instances of asterisked candidates being absent, but a failure on the centre's part to substitute this with another 'similar' portfolio. Overall, centres coped well with the changes to sampling requirements.

A few centres continued to use file folders and plastic wallets despite clear guidance in the portfolio guidance booklet. Centres must read the instructions for submission of portfolios – work must be hole punched and treasury tagged on the left hand side. Centres must not use plastic or card wallets/folders; neither should the work be sent as a collection of separate sheets, since this increases the risk of problems in the moderation process. Coursework for units 2 and 3 should be separated since it is likely that this will be sent to different moderators. Work should be proof-read to eliminate obvious mistakes; early drafts and centre writing frames or proformae should be removed (unless part of the evidence in the case of strands 2c and 2d) and submitted in component order. All pages should be identified with a header or footer reflecting the candidate name and pages clearly numbered. Page numbers should be annotated on the Unit Marking Guides to assist the moderator in finding evidence rewarded by the centre. Clear evidencing on the portfolio will enable the moderator to agree the centre's decision. Centres are advised that any use of professional judgement should be documented in the space provided on the Unit Marking Guides which may be found on the website. These guides enable an holistic view of the evidence and assist both centre and moderator in agreeing marks.

GCSE Applied ICT - 5332 – ICT in Organisations

The key focus for this unit is **systems**. Candidates are expected to describe clearly the work of the identified organisation in terms of three or four of its main functions or systems, preferably in terms of input, processing and output. They should describe fully how ICT is used in Information, Communication and Functional purposes. The ICT system described in 2b should relate to one of the systems identified in 2a and candidates should consider the five main component groups of hardware (input devices, output devices, processors, ports and cables and storage devices) and software and their function within the chosen system - descriptions should include technical details of components and explain the purpose of the application software. In some centres, candidates are still evidencing strands 2a and 2b together; unless the particular elements are well signposted, this often causes problems with identifying where the criteria have been met.

Strands 2c and 2d are about creating a complex system for a specific user and purpose. Complex problems will involve the use of more complex processes associated with the chosen software. This may include importing data from another package or customising the software for ease of use. Databases should be relational, and include searches, sorts and queries (on multiple fields with multiple criteria for the higher mark bands). Further, candidates may include a user interface such as a menu or switchboard and a mail merge facility based on a query. Spreadsheet systems will include complex formulae and functions, absolute cell referencing, look up tables and macros. Throughout, the emphasis should be on **'fitness for purpose'**. Strand 2c focuses on the **design** of the system - the scope of the project, the objectives of the proposed system and draft/final sketches of inputs and outputs that are fit for purpose. In addition, as part of the design process, candidates should consider which parts of the system will be tested and how, documenting this in a test plan. The focus for 2d is **implementation**. Here candidates should provide full details of how they implemented their designs, how these designs were tested using the plan from 2c, the outcomes of the testing and how they have used the results to modify or improve the initial designs. The evaluation should consider weaknesses as well as strengths of the system and, to access higher mark bands, candidates should document how the system could be improved. The user guide should be detailed enough for an inexperienced user – with instructions how to load the system, add, enter and manipulate data and how to troubleshoot basic problems. The user guide should be about using the system and not the application.

Strand 2a:

Most candidates were able to describe an organisation, identify its main purposes and describe how those purposes used ICT. Some candidates did not achieve the higher mark bands because they were not able to directly link and explain how the use of ICT helped the organisation to achieve its stated purposes, aims or objectives. Many candidates were able to identify the organisation's purposes, aims or objectives in their introductions, which made it easier for them to evaluate since they could refer back to them when explaining the organisation's use of ICT.

Where candidates investigate an organisation, either as part of a formal group or independently, they should be thoroughly prepared for the visit. This can be done through web based research, letters to the company and brainstorming in the classroom. It was pleasing to see some centres use a range of organisations, expanding the candidates' experiences and allowing the student to focus on **one** of them for the purpose of this strand and strand 2b. Some organisations chosen did not include a suitable range of functions and ICT, e.g. a nightclub.

Where centres persisted in choosing their school as the basis for study the evidence lacked detail, as there was simply too little scope in terms of a range of functions. In other cases, those studying other companies gathered the basic information but lacked evidence when it came to the organisation and its purposes, aims or objectives. It is not sufficient to state these alone, they must be linked to the ICT used to perform or support the related functions.

Candidates who just achieved the highest mark band did so on the strength of one evaluative statement only as long as they had given sufficient detail on which it could be based. Generally, candidates at centres which organized visits/guest speakers were able to describe in greater depth and with insight the technologies used and achieved the higher mark bands because they were able to describe an ICT system fully. Candidates who worked from case studies found it much harder to identify an ICT system and often described a basic system that could have existed anywhere. It was pleasing to note that fewer candidates used their work experience placement as a basis for this component. Centres are to be complimented for taking this advice on board since the local organisation in which they are placed is not often sufficiently complex to enable them to describe, explain and evaluate a range of functions and technologies.

Candidates who failed to reach the middle mark range usually failed to identify a wide enough range of purpose or did not explain how ICT was used, e.g. they explained the finance function but did not clearly describe how the ICT was used within that function. Candidates who structured their research into Functions (purchasing, sales, finance, distribution, human resources, etc), Information and Communication tended to score well. This approach showed a greater understanding of how ICT was used and how the organisation functioned as a whole.

Where candidates had used the Internet for research into their chosen organisation (whether an actual visit had taken place or case study had been used) there was clear evidence of copying and pasting from the website, but this had not been credited in a reference or bibliography. Evidence from candidates who had not had an opportunity to visit a 'live' organisation showed a lack of understanding.

Strand 2b:

In this component, candidates addressed most key component groups and actually linked them to the purposes within the chosen system. However, this was not always the case. Some candidates had managed to include images of the actual hardware within the organisation and this formed a useful adjunct to their written descriptions. However, in some cases candidates had not identified a single system within the organisation and concentrated solely on the hardware and software of the organisation or discussed the organisation as a whole. There was often a generic list of components, but no detailed information given on their use in the chosen organisation, e.g. where, when and by whom and how this linked to the objectives. One of the main reasons why candidates failed to gain high marks was because they had not covered all of the five component groups (input, output, processor, ports/cables and storage) and software. Categorisation of the components almost always achieved higher marks. Ports and cables was the most frequently omitted component; where it was included, candidates showed little knowledge. Some candidates remain confused about the difference between processors and processing – explaining how the data was processed rather than giving technical details of the actual processor used (its speed, type and so on). Those missing out a component group did not move beyond the lowest mark band. Higher mark bands required the student to evaluate the extent to which at least one component or some software meet the organisation's purpose. Many candidates found this difficult and relied on descriptions of the component's use rather than exploring its limitations or

alternatives. In a few cases candidates made recommendations about what an organisation could use and this is not part of the specification.

Overall Comments for Strands 2c and 2d:

Many candidates produced a wide range of interesting and innovative applications for 2c and 2d.   Candidates who used real problems had the edge over many of those using case studies because of the opportunity to clarify the problem. Identification of the inputs, processes and outputs is essential if candidates are to be able to break the proposed solution down into logical steps. There were many more instances of before and after screen shots to substantiate the testing. User Documentation was much improved, although some was simply a restatement of some of the "testing" that had gone on. Evaluations, whilst much improved over last year, varied from peer questionnaires to single sentences. This series, there was an increased range of ideas from centres accompanied by some robust design sketches of both inputs and outputs. However, centres are reminded that they must choose a single mark band within the Unit Marking Guide, which should reflect the independence of the work and the complexity of the solution (this is not a 'pick and mix' option).

Strand 2c:

Candidates were required to provide some indication of the scope or purpose of the solution with objectives. In order to gain two marks here, the description should be detailed enough for a third party to understand. Objectives were better constructed which made it easier to assess the extent to which their eventual solution met its original purpose and aided the candidate in identifying associated performance indicators.
As a result of their focus on the design elements and the greater choice of solutions based on spreadsheets and databases, some candidates were able to achieve the highest mark band in these components. Some centres had not fully understood the meaning of independent solution to the problem and there were cases of differentiation occurring only as a result of using a different name for the organisation, business or company for which the system was being created. Fewer centres relied on the video database example from the teacher guide. Centres that had designed their own assignments still gave candidates too much structure by indicating that a database was required or giving too much information about the problem. As a result, candidates were not able to define the scope of the problem themselves and were not able to choose the appropriate software for themselves, thus limiting the candidates to the middle mark band. In some portfolios, there was clear evidence of the use of scaffolding and structured templates to document the proposed solution, especially where candidates had omitted to delete 'instructions'.

Most candidates, who qualified for higher mark bands on independence and complexity, did not achieve all the marks because elements of the design were missing. Some credit was often applied retrospectively from 2d. Candidates submitted copies of tables from databases already created to show table design rather than annotated sketches. This indicated that candidates had implemented first, and then reverted to the design stage. In this section some candidates had included screen shots of the final implemented solution as design evidence, and as such could not be awarded marks for these. Those gaining the highest marks in 2c produced handwritten drafts of input screens and output screens. Some innovative candidates had also used a bitmap application to draw and design their planned screens and indicated processes with handwritten relationship diagrams or examples

of formulae to be used. Candidates had put more effort into the design steps, in that these were detailed and could in many more instances support third party implementation.

Many candidates provided test plans, which ranged from a simple statement of intention to a detailed grid. Often test plans were included only in the implementation section of the project, and not as a separate plan. Candidates still need to develop their ability to identify abnormal or extreme data as part of the testing procedure, which is expected at the higher mark band. Most candidates also provided lists of hardware and software, but referred to packages such as Excel or Access rather than a generic type of software application. A few had actually discussed the pros and cons of each software type in terms of their proposed solution.

The majority of centres managed to use complex processing and more produced a complex solution. However, some candidates were able to produce a basic spreadsheet or database (with some advanced features incorporated into them) but few of these had any idea as to what they were actually doing or why, which is linked to the lack of detail when describing the scope of the project. There was a lack of evidence (e.g. witness statements within the Unit Marking Guide) that the work had been carried out independently.

Strand 2d:

Most candidates provided evidence of implementation, testing, evaluation and some user information. Marks for implementation related to the objectives outlined in 2c. Where objectives were difficult to identify, candidates lost marks. The better solutions had clear objectives, which were then reflected in the implementation and evaluation. Most candidates' solutions included complex processing. Test plans were not always accompanied by suitable evidence as to whether the test was or was not successful. Fewer candidates attempted a complex solution that they were unable to achieve successfully.

Most candidates undertook some form of testing. Higher marks were reserved for candidates who had made some constructive use of the results. Many candidates achieved the lower marks as they used their test plan as a checklist and did not describe or use the results in any way. Evidence in the form of before and after screen shots enabled the candidates to make constructive use of the testing process. Most candidates evaluated their solutions to some extent. A significant number lost out on higher marks because they evaluated how well they had approached and completed the task rather than evaluating the usability of their system. The better evaluations listed strengths and weaknesses of the system and then indicated areas for improvements with some indication of how these could be achieved. Evaluation was sometimes robust – with candidates discussing the strengths and weaknesses but areas for improvement were not valid or fully considered. It was pleasing to see some had evidence from an end-user as to how they regarded the final solution.

Some user guides were of very good quality. The best guides were clear and well laid out with a contents page, screen shots of the actual screens and troubleshooting. Fewer user guides focused on how to implement the system, rather than acting as a guide on how to **use** the system. There were still examples of guides, which showed the user how to create the system for themselves, were complicated and not meaningful. Many guides were focused on users of ICT rather than the novice, making them less helpful and instructive.

Where candidates failed to achieve higher marks, it was because not all elements – construction, testing, user guide and evaluation – were completed. Many assumed

implementation stages with finished forms and reports but provided no evidence of actual construction to show skills and understanding of the software capability. There was some evidence of good solutions, but the lack of annotation and inadequate testing lost these candidates valuable marks.

GCSE Applied ICT - 5333 – ICT in Society

This unit is about ICT in Society and requires students to look at how ICT is used in the wider world by adults, those with special or particular needs and communities as well as themselves. The unit requires an understanding of the legislation surrounding the use of ICT, how does it protect people and what must they do to comply with the law. Substantial descriptions of the ICT used are essential if students are to progress beyond explanatory to evaluative statements.

For strand 3a, students should explain how they use ICT for personal, social and work-related purposes both at home and at school. The explanatory statement must be based on a description that is detailed enough for the reader to have a clear idea of how the ICT might be used, its capabilities and be linked to the student's own needs. Strand 3b requires the adult and effects on their working style to be clearly identified. Two or more categories of technology should be identified (e.g. Internet, communication, entertainment, mobile ICT (laptop, iPod), etc.) with explanatory statements based on a clear description of the technology for personal, social, work related and effects on working style. Strand 3c, relies on the identification of the special needs person, for the ICT to be related to their needs – i.e. what they actually use – and explanatory statements linked to those needs. In the fourth strand, the local community must be clearly identified with some background given to clarify the context and at least two categories of technology explained in detail and in terms of how they meet the needs of the community. The fifth strand concerns legislation. This does not need to be submitted as a separate strand, so students could include reference to relevant legislation within each of the preceding four strands. However, the most successful portfolios separated the legislation from the remainder of the evidence. In order to access the top of mark band 2, students must link at least one item of legislation to each of the individuals and groups within strands a through d.

Strand 3a.

This strand was frequently well addressed with many students gaining their highest marks on this component. Candidates often produced a table to show the technologies they used personally, socially and in their school work. The candidates who scored highly selected three or four technologies, each from a different category and produced clear, detailed explanations and in many cases good evaluative statements. Those who did not achieve high marks tended to only analyse one category of technology and did not include evaluative comments. Candidates appear to have benefited where they had been given some guidance on structuring their work prior to starting the work. Where students wrote in the third person, it was sometimes difficult to determine if they had actually used the technology. Students who did not reach the higher mark bands usually did so because they had not produced descriptions of the technology used or because they did not cover their personal, social or work related uses of ICT. They also, in many cases, did not say how the technology met their own needs. Several candidates also lost marks because they chose inappropriate technologies such as alarm clocks or hair straighteners.

Strand 3b.

Candidates did not always select an appropriate working adult or did not identify an individual and so were placed in the lowest mark band. The candidates who interviewed a person known to them (a friend or parent) generally gave the best evaluations of how technologies met the adult's needs particularly for personal and social use. Where candidates interviewed a person of their own choice they gained far more of a insight into the adult's perception of ICT and its effect on their working style and were able to write a much fuller and reasoned report Candidates who used a member of their school staff as the working adult did not generally score well as it was obvious they had been given brief descriptions of the technologies used and had not always had the opportunity to fully evaluate the effect of the technologies on their working style. Often students identified working style very briefly and with little evaluation.
There were very few cases this series, where the candidates did not specify an actual adult, writing about adults in general. Candidates who did not link a specified adult with technology used by them did not move out of the lowest mark band.
Candidates that lost marks for this strand failed to include enough detail about the individual and why they used ICT day to day. Some candidates did not refer to home use investigation only the working environment which meant they could only achieve marks in the lower mark bands.

Strand 3c.

This was the weakest area of the coursework for many candidates as at times it was obvious that they had not actually studied an individual or talked to them. However there were examples of pleasing work where candidates had used a member of their family, a friend or a member of their school as their identified person. The candidates achieving the highest marks in this strand were those who selected someone from their local community who they could interview and receive detailed feedback on how the technologies used met their needs. It was pleasing to see that some candidates had been told about specific technologies by their identified person and had then used the internet to gather more information on the technology and had used it in their descriptions and evaluations.
There were far fewer candidates using case studies (although Stephen Hawking was still used). However a very few candidates are still producing work about subjects with a range of disabilities. Centres must ensure that the technology studied is assistive technology and not simply the standard technology used by anyone. The focus must be on technology designed specifically to help someone with special or particular needs – visual impairment, limited mobility, hearing impairment and so on.

Strand 3d.

This strand seemed to be covered better this year as candidates identified their community and selected technologies that impacted on the whole community (traffic lights, ATMs and speed cameras). Overall candidates did much better at describing the technologies used by the community and measuring how far they met community needs. However some candidates were still not linking these very well to their own community, not saying where the technologies were placed in the community and why they were there.
Candidates who did not score well did not select appropriate technologies and therefore could not evaluate how these technologies met the needs of the whole community, and many candidates still need to develop their evaluative skills. Those who did score well identified the community needs and then went on to describe and

evaluate the way the technologies met those needs. Where candidates were briefed on the definition of a community and were encouraged to go out and look around the community, the evidence was well presented and meaningful.

A very few candidates described technologies that were not available to the whole community, such as a burglar alarm on a shop or described technologies that met the needs of an organisation within the community, e.g. a bar code reader in a supermarket, but not the needs of the community as a whole. There were a few candidates who wrote about a Cyber cafe as a technology but failed to mention the technologies within the cafe.

Strand 3e.

This strand was tackled better than in past series. Where candidates did not achieve high marks in this strand this was due to not relating the legislation identified to the people/places studied in the previous components. However, there were some good explanations of the legislations and links from some candidates.

Most candidates gained the top of the lowest mark band for describing four items of legislation but then failed to relate the legislation to the people/places they had studied previously and so could not gain higher marks. Some candidates gave too general a link to the people studied and did not relate the legislation specifically to their named adult or person with difficulties. However, there were far fewer candidates doing this than there has been in previous series.

Candidates were much more careful this year in avoiding the selection of legislation that is not connected with ICT (e.g. The Disability Discrimination Act) but there were a few cases where candidates described the Health and Safety at Work Act but failed to link this to the use of ICT equipment.

Grade Boundaries - June 2009

5331	Total	A*	A	B	C	D	E	F	G
Raw Mark	100	95	85	75	65	58	51	45	39
UMS	100	90	80	70	60	50	40	30	20

5332	Total	A*	A	B	C	D	E	F	G
Raw Mark	58	57	50	42	35	29	23	17	11
UMS	100	90	80	70	60	50	40	30	20

5333	Total	A*	A	B	C	D	E	F	G
Raw Mark	58	57	52	45	38	31	24	18	12
UMS	100	90	80	70	60	50	40	30	20