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ICT INFO4

(Specification 2520)

Unit 4: Coursework: Practical Issues Involved in the Use of ICT in the Digital World

Report on the Examination

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General Comments

This was the sixth session for the submission of students for INFO4. In general, reports were well presented but centres are asked to ensure that work is secured using treasury tags and the use of bulky folders or ring binding is discouraged.

The administration in most schools and colleges was good and the majority had used the 2012 INFO4 Marking Grid to provide helpful comments which were cross-referenced with page numbers to evidence in the student's work. This is much appreciated, thank you. However, a small number of schools and colleges used Marking Grids from previous series. Each year the Marking Grid is reviewed and revised to provide help to teachers in marking student work. All changes are side barred. It is essential that all schools and colleges use the most up-to-date version of the grid available on eAQA, the secure area of the AQA website.

There are still some very large projects in terms of volumes of work and centres are reminded that detailed evidence of functional testing is not required for this specification, and that marks are awarded for the appropriate nature of the documentation, both for the user and for the project itself.

Students who tackled real or realistic projects were generally able to demonstrate the skills required for this unit, and recognised this as a problem solving exercise and could develop realistic solutions to satisfy client requirements. Where the problems identified were vague, students often struggled to produce solutions that could justify higher marks. Students need to develop a substantial project involving the production of an ICT related system. Sometimes problems identified were not considered in sufficient detail and this limited the ability of the student to demonstrate the knowledge and understanding appropriate to the second year of an A level.

Centres are improving the preparation of students, enabling them to gain marks for criteria that credit the presence or evidence of work being completed. The standard required for understanding the process of developing a solution was similar to previous years however.

Background and Investigation

The background to the organisation was generally tackled well by the students, although some did not always include details of their contact. When describing the current system the student needs to show an awareness of the environment in which the current system operates for 3 marks. This is not the physical environment but should cover any systems or procedures, internal or external, which may affect the current situation or system. When describing clients, users and potential audience for 2 marks there needs to be a clear identification of what they do. Most students justified the required system, and some provided evidence that followed through to the identification of client requirements.

Most students provided evidence of the use of investigation techniques. For 2 marks these techniques need to demonstrate that they have been effective in furthering the development of a solution to the problem. Have the findings been used? There has been an increase in the use of document analysis as a technique but sometimes the inclusion of a blank form without analysis or data could not be considered effective. Some students looked at existing competitor websites and analysed the content and format of these sites. This was good to see. For further marks the investigation technique(s) needs to be appropriate for the situation being investigated. This means that the student needs to relate the technique to the task. If a generic discussion of the advantages and disadvantages of the technique is given then it must link and relate to the task in hand in order to be awarded the higher marks. The discussion needs to be in context. Better students determined a clear set of client requirements, understanding the need to get this right early on in the project. It is significant that students that struggled with defining these requirements struggled later on to analyse the solution and eventually to test it.

Analysis and Deliverables

When identifying the scope of the proposed solution, students need to identify the areas that the solution will cover and if necessary the areas that the solution will not cover. Often these areas are determined by the constraints on the solution, but the scope needs to be stated to be awarded any marks. Often constraints were described but sometimes these were generic. Including the Data Protection Act as a constraint without a reflection of how it related to the solution being developed is not appropriate.

Deliverables should be identified by the student and should include any documentation requirements, such as user or technical guides, if required. By identifying the documentation required then it is possible to reflect on the appropriateness of that documentation in later section/rows. Benefits and impacts of the solution on the organisation were generally tackled well by the better students.

Students need to demonstrate that they understand the need to check and validate processes with their client. Sometimes the evidence of this was not enough to award 2 marks.

When showing a need to consider user skills in designing a solution, simply stating that the solution must be 'easy to use' or user-friendly without explaining these phrases in the specific context is not enough. All solutions should do this, regardless of the user skills.

Evaluation criteria need to be identified which can be used to assess the effectiveness of the solution, and the better students related these to the client requirements. Sometimes students simply copied or re-worded the client requirements without showing the understanding of the need to assess effectiveness.

Design and Planning for Implementation

Often students gave textbook reviews of alternative software features, put into the context of the solution. This is not alternative design solutions, so cannot gain credit. Students need to show they have considered alternative ways of providing a solution to meet client requirements. Better students looked at alternatives and clearly related them back to client requirements.

For the designs, students need to show an understanding of the iterative nature of design work, therefore input and feedback from the user must be demonstrated in order to be awarded the higher marks. Some students used a prototyping method in order to do this – this must be clearly identified as the way in which they are designing the solution. Screenshots of an implemented system cannot be considered design unless they are of a prototype and demonstrated as such.

The plans produced by students often included deadlines and durations, but sometimes concentrated on the deliverables of the project report and plans for student work, not solving the problem. These plans did not consider the overall solution, thus missing tasks such as installing or introducing the system to the organisation.

Test strategies must be relevant to the implemented system. Sometimes these were mechanistic and theoretical, not relating to the solution being tested. Most students demonstrated an understanding of having a test strategy, and the better students justified their chosen testing strategy in context.

Evidence of functional or unit testing is not required in the testing section, therefore these types of testing could easily be summarised in the test plan. Many students did realise the importance of making sure tests covered client requirements but only the best candidates properly linked test plans to evaluation criteria and back to client requirements.

Testing and Documentation of the Solution

Many students provided detailed and comprehensive testing but did not demonstrate that the solution as a whole had been tested. The quantity of testing is not assessed here – what is required is an understanding of the testing of the whole solution, this may include procedures and documentation identified earlier, for instance in the analysis and deliverables section.

Most students provided evidence of testing by their client or user. Sometimes students did not recognise the difference in client testing and user testing. Both third parties have a different focus on the solution and the better students recognised this difference and tailored their testing to reflect this difference.

The documentation provided to the client/user must be suitable and appropriate, and this means that it needs to be identified as a requirement or deliverable. The student needs to show they understand the purpose of documentation for a particular ICT related system. Some better students tested the documentation with the user/client and provided feedback and reflection on this testing.

Evaluation of the implemented solution

Where students realised that they needed to show a critical reflection on the solution generally they did well, however some students still simply stated a yes / no against the list of client requirements and evaluation criteria and this is not a critical review. There was generally some evaluation of the solution but sometimes a lack of justification or linking to test evidence prevented higher marks being achieved. Self evaluation was generally tackled well by most students but sometimes concentrated on the steps taken to develop the solution rather than the approach itself.

The project report

Most projects were marked accurately in this section reflecting the effort that students had put into producing their work. In a small number of cases however top marks were awarded in row 1 where there were significant errors in the use of software and the work lacked essential elements of a professional report such as page numbers.

Mark Ranges and Award of Grades

Grade boundaries and cumulative percentage grades are available on the Results Statistics page of the AQA Website.