Examiners' Report/
Lead Examiner Feedback

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BTEC Level 1/Level 2 Firsts in
Information and Creative Technology

Unit 1: The Online World (20560_E01)

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Introduction

This report has been written by the Lead Examiner of Unit 1: The Online World. It is designed to help you understand how learners performed on this test. The report provides an analysis of learner responses for each question. You will also find example learner responses, with commentary.

The external assessment for this unit is an onscreen, on-demand test. A number of tests are live within the 'test bank' at any one time and learners are allocated tests randomly. It should be noted that this report refers to the first test retired from the live 'test bank'. Whilst not all learners will have sat this particular test, the Lead Examiner's comments provide valuable feedback, relevant across different tests for this unit.

We hope this will help you to prepare learners for the external assessment for this unit.

Grade Boundaries

Introducing external assessment

The new suite of 'next generation' NQF BTECs now include an element of external assessment. This external assessment may be a timetabled paper-based examination, an onscreen, on-demand test or a set task conducted under controlled conditions.

What is a grade boundary?

A grade boundary is where we 'set' the level of achievement required to obtain a certain grade for the externally assessed unit. We set grade boundaries for each grade (Distinction, Merit, Pass and Level 1 fallback).

Setting grade boundaries

When we set grade boundaries, we look at the performance of every learner who took the assessment. When we can see the full picture of performance, our experts are then able to decide where best to place the grade boundaries – this means that they decide what the lowest possible mark should be for a particular grade.

When our experts set the grade boundaries, they make sure that learners receive grades which reflect their ability. We have awarded grade boundaries for the first time for our new next generation BTECs, so this means that a learner who receives a 'Distinction' grade on a particular test will have similar ability to a learner who has received a 'Distinction' grade on another onscreen test. Awarding grade boundaries is conducted to ensure learners achieve the grade they deserve to achieve, irrespective of variation in the external assessment.

Variations in externally assessments

Each test we set asks different questions and may asses different parts of the unit content outlined in the specification. It would be unfair to learners if we set the same grade boundaries for each test, because then it wouldn't take into account that a test might be slightly easier or more difficult than any other.

The grade boundaries for the first onscreen, on-demand test to be retired from the test bank are shown below.

Grade	Unclassified	Level 1 Pass	Level 2		
			Pass	Merit	Distinction
Boundary Mark	0	18	26	34	43

General comments

This test is the first external assessment to be retired from the live 'test bank'. Following a pilot opportunity for learners in March 2013, onscreen assessment for this unit has been available on-demand since June 2013.

Most learners were able to respond effectively to the questions early on in this test. However, some of the later questions were designed to be more challenging and as such, few correct responses were evident.

The most successful learners scored highly across the whole test including the differential questions where they could demonstrate a depth of knowledge.

The less successful learners tended to give minimal responses and often only answered multiple choice questions. It appeared many learners were not confident in understanding the requirements of the command verbs in open response questions, but were able to use the different mechanisms available to answer line-matching and multiple choice questions.

It was felt that learners were not fully prepared for this exam. Lack of subject knowledge and understanding was evident in some areas and there was also a lack of examination technique shown.

One such example was the way in which learners responded to questions which used 'explain' as a command word (explain one advantage/disadvantage etc). Centres are encouraged to refer to the Mark Scheme for this onscreen test for guidance in terms of mark allocation for questions of this type. The first mark is awarded for identification of the advantage/disadvantage, with the second mark awarded for the expansion as to why it is an advantage/disadvantage.

When responding to such questions, learners tended to either include one advantage without the expansion or two advantages instead of expanding on one – only one mark could be awarded where this occurred.

Another trend recognized when reviewing responses for this test was an absence of learners drawing on their own experiences when answering questions. As is encouraged in the Delivery Guide for this unit, learners' reflection on their 'online life' can be beneficial.

It is important to stress that learners need to not only understand what technologies do, but also how they work by providing examples, where appropriate, to explain.

From having practical experience of these aspects of the unit, learners will be better placed to apply their knowledge and understanding to the applied situations in the assessment and gain credit for their responses.

The responses to open response questions were on occasion rather minimal and it was clear that a number of learners did not make full use of the stimulus material provided in the question. The emphasis in this assessment is on learners' application of their knowledge to a variety of practical ICT-related situations. Stronger responses to extended response questions should demonstrate application along with theory. It is important for learners to have practice in doing this in their preparation for the assessment. Learners that were able to access higher marks for these questions were able to apply their knowledge and understanding to the stimulus and provide realistic and appropriate suggestions.

As Unit 1 is a vocational ICT-related unit, the external assessment seeks to put the learners in applied situations and ask them to respond to these. It is essential that centres stress to learners the need to read the stimulus information carefully before they answer questions, and be prepared to use that information within their responses. Where learners were unable to apply the stimulus in their answer, it restricted the number of marks they were able to access. Generic responses gained limited credit.

Learners appeared to manage their time effectively and appeared to be able to complete the assessment in the time available.

Question 1

Most learners understood that 'commerce' was the service used for online shopping.

Question 2

Most learners were able to indicate the correct line matching responses for both HTML tags.

Question 3

3a
Most learners gained the mark for this question. Learners understood VoIP as being a way of 'talking' over the internet. Other learners used terminology such as 'speaking' or 'video'. Communicating over the internet was not considered an appropriate response as learners need to know what type of communication was used.

The response shown below was awarded 1 mark:

> (a) Give the main use of VoIP technology   (1)

Type your answer in the box.

> Talking to friends/family over the internet

3b
Where marks were awarded for this question, it tended to be the more simplistic response of VoIP being accessible anywhere where there is internet connection. Very few learners understood why VoIP was useful. Although some learners showed some understanding of 'skype' for part (a) to achieve a mark, few understood it enough to gain a second mark in part (b). Learners should review the mark scheme for examples of benefits of using VoIP.

The learner response below was awarded 1 mark:

Reduced cost is one benefit of using VoIP technology

> (b) Identify **one** other benefit of using VoIP technology.   (1)

> Available all around the world with an internet connection

Question 4

4a
Most learners understood that 'wireless' was the appropriate connection method for Isayas and his family. Some learners selected 'fibre optic' as their response for this question.

4b
Most learners identified the correct option for the strongest password to include uppercase and lowercase letters, numbers and a symbol.

Question 5

**Targeted Specification Area: Learning Aim C
Possible threats to data**

Part (b) was answered well on the whole but many learners did not identify that 'https://' was a feature showing a secure website for part (a).

Question 6

**Targeted Specification Area: Learning Aim A
Online Documents**

Most learners were correctly identifying the two correct reasons for compressing files.

Question 7

**Targeted Specification Area: Learning Aim B
Email**

This question was made up of part (a) and part (b).

Part (a) required learners to provide two advantage responses for each part to gain the total of two marks. Part (b) required learners to outline issues with email in a business context.

Learners were awarded marks for recognizing that email/spam filters may cause delayed delivery. A number of learner responses reflected a low level of understanding of the use of email. Centres are advised to refer to the Mark Scheme, which includes a variety of exemplar responses for reference.

The response below achieved three out of the four marks for this question. Question 7a was awarded two marks – one for each advantage.

Question 7b was awarded one mark for reference to 'viruses'. A number of learners responded with 'emails may not be received'. However, this is not a problem caused by email itself, but with the behavior of the reader (for example, not reading their email regularly).

Email is used for business and personal use.
Emails can be sent 24 hours a day, 7 days a week from any internet enabled device.

(a) Identify **two** other advantages of using email.   (2)

Type your answers in the boxes.

Advantage one

The user can apply recipients to the email which could tell the user if the mail has
Been sent, received or read.

Advantage two

The user can BCC (blind carbon copy) a contact into the email so that the other
recipients do not know the email has been sent to someone else.

(b) Outline **two** reasons why using email can cause problems for businesses.   (2)

Email can be unreliable for example, the user may send an email but the recipient
may not receive it until later and can carry viruses and malware

Question 8

**Targeted Specification Area: Learning Aim B
Data exchange**

Few learners were aware that the passing of data between computers in a network, including the internet, was known as 'packet switching'. This is an aspect of the 'Data Exchange' section of the content for Learning Aim B.

Question 9

**Targeted Specification Area: Learning Aim A
Online Documents**

This question required learners to explain one advantage of collaborative working.

Two marks were available for this question. One mark for the identification of the advantage, the second mark for the expansion as to how it is an advantage.

In general terms, learners tended to make reference to 'sharing files', but did not recognise the specific advantages of using online software to work collaboratively.

The response below demonstrates an understanding of working on the same document at the same time (real time). However, the response would have benefited from an expansion as to why this is advantageous.

Jim and Laura use online software to work collaboratively to produce a joint presentation.

> Explain **one** advantage to Jim and Laura of using online software for collaborative working.   (2)

Type your answer in the box.

> They can both work on it at the same time and in some cases be able to see each other's screen and work flawlessly on the same thing.

Question 10

Targeted Specification Area: Learning Aim C
Possible threats to data

Most learners chose 'External Hard Disk' as one correct option but did not identify 'Cloud Storage' as the second correct option. A number of learners incorrectly identified 'USB Key' as the second option. Learners are encouraged to ensure their responses are considered in relation to the specific scenario given in the question.

Question 11

Targeted Specification Area: Learning Aim B
The Internet

Few learners labeled the image correctly. It appeared that learners were not familiar with the infrastructure of the internet and where 'POP' and 'NAP' fitted into it.

Question 12

Targeted Specification Area: Learning Aim A
Online communication

Four marks were available for this question. Two reasons were required to gain full marks. Each reason could be awarded two marks; one for an identification of a reason, the second for expansion of that reason to aid stock control.

This question was generally not well answered.

The response shown below achieved two marks – one for identifying the reason and the second for expanding on it.

The learner shows an understanding of automatic stock reordering and the fact that this would save time compared to ordering stock manually. The learner continued to expand further on the identified reason, achieving a total of two marks.

To achieve full marks the learner needed to identify a second reason, with expansion.

Business may use ubiquitous computing for stock control purposes.

> Explain **two** reasons why a business might use ubiquitous computing to aid stock control.   (4)

Type your answer in the box.

> they can use ubiquitous computing to see how much stock they have . if the stock goes below a certin level the computer will let the company know . the company knows what stock they have to order . this will save them having to manually check stock (this save time).they can uses this extra time to improve other area of the business.

Question 13

13a

Most learners were not able to correctly identify that a 'web crawler' is the component that collects information on web page updates for the search engine.

13b

Most learners identified the correct operator.

Question 14

This question required learners to explain two advantages of using HTTP over FTP for downloading files.

Most learners tended to only provide one advantage of HTTP being faster/quicker than FTP but often, there were no expansion/explanation marks awarded. This reflected a basic understanding of HTTP, but a lack of technical knowledge.

This learner response below was awarded two marks for identifying two advantages of HTTP – the first being that it is faster than FTP and the second that it is more secure. The learner did not provide an expansion of either advantage identified, meaning that no further marks could be awarded.

File Transfer Protocol (FTP) and HyperText Transfer Protocol (HTTP) are examples of application layer internet protocols.
They can both be used for downloading files.

Explain **two** advantages of using HTTP over FTP for downloading files.   (4)

Type your answer in the box.

http is faster than ftp and is also more secure than ftp

Question 15

**Targeted Specification Area: Learning Aim A
Online Communication**

15a

This question required learners to understand the concept and implications of cloud computing.

Many learners did not achieve marks for this question. Typical responses that failed to gain marks often repeated the question or mentioned the use of saving files in the 'cloud'. Few learners showed a technical understanding, and were unable to link the use of a remote server to cloud computing.

The response shown awarded two marks – one for identification (no space taken up on hard drive) and one for expansion (less demand on hard drive so doesn't need to be so big).

15b

Stronger responses recognized the concept of the 'Software as a Service' model and were able to identify advantages. Many learners were not able to demonstrate an understanding of the Software as a Service model and as such, were unable to achieve marks for this question.

The response below was awarded one mark for identifying that with the Software as a Service model you only pay for the software you use which was implied by the statement: 'paying for what you use'.

(b) Explain **one** advantage of the 'Software as a Service' model of cloud computing.   (2)

Type your answer in the box.

the advantage to software as a service is that you only pay for what you use so it could be the cheaper option rather than having your own servers

Cloud computing involves delivering hosted service over the internet.

(a) Explain **one** reason why the use of cloud computing will decrease demands on in-house hardware. (2)

Type your answer in the box.

cloud computing can make in-house computing less demanding by moving the majority of the demands of the in-house hardware to its own server

Question 16

16a

Server-side and client-side processing was a topic that learners appeared to find challenging.

The question asked for learners to explain the search process carried out by a search engine. Most learners stated what a search engine does but did not make any reference to how the process was carried out. Learners mentioned the use of keywords (you enter a keyword into the search engine) but not how the server searches using the keywords, or the fact they are matched against an index of websites.

Although learners understood what a search engine is used for they many did not provide an understanding on how it works.

The response shown was awarded a mark for 'matching some of the words in its database'.

Displaying active web pages to a visitor requires both server-side and client-side processing.
Input may be carried out client-side and data analysis carried out server-side.
Search engines use server-side processing to carry out searches.

(a) Explain the search process carried out by a search engine. (2)

Type your answer in the box.

The client goes onto the search engine and searches for what they want. The search engine then looks for matches in some off the words in its database and sends them back for the client to look at.

16b

This question asked learners to explain one reason why the search is not carried out as a client-side process. Similarly to part (a), few learners demonstrated strong understanding of this.

The response shown was awarded a mark for the reference to the computer's inability to cope with the vast numbers of web pages, which implies the extra demand on the client's computer (shown in the Mark Scheme).

> (b) Explain the search process carried out by a search engine.   (2)

Type your answer in the box.

> It would take too long for the client side computer to process the information and the client side computer would not be able to cope with the number of webpages it would need to search through.

Question 17

**Targeted Specification Area: Learning Aim B
Data Storage**

When responding to this question, a number of learners tended to repeat the question by stating that a relational database can store large quantities of data. However, many learners were unable to expand on this point and were therefore unable to achieve marks.

One mark was awarded for the response shown as there was reference to the primary key linking the tables. Due to a lack of expansion, the second mark was not awarded.

Online retailers need to store large quantities of data.
This data is frequently updated.

> Explain **one** reason why a relational database is necessary for online retailers.   (2)

Type your answer in the box.

> a relational database is necessary for online retailers because if the large amounts of data they have the relational database can split the data into smaller sized sets of different products e.g.computer peripherals, grocerys so the server knows what is in what file and automatically goes to that file

Question 18

Most learners were awarded at least 3 marks for this question and very few gained no marks. Extended writing questions are designed to assess learners' ability to analyse, evaluate, make reasoned judgments and present conclusions.

Many learners made a good number of individual points without expansion and so restricted themselves to Mark Band 1.

Overall, quality of written communication was poor. However, there was good evidence from some learners of the use of connectives to help achieve a logical flow to their discussion, retaining focus and supporting better organisation. This is a writing skill and should be practiced.

This question required learners to understand the impact on a local council and its staff of using tracking devices in vehicles to monitor movements.

There are three mark bands for this question up to a maximum mark of eight marks. Learner responses tended to be in the lower two mark bands with few achieving marks in Mark Band 3.

The response was awarded at the top of Mark Band 2, as the learner has outlined both potential positive and negative impacts, with a few key points described. There is some repetition in the discussion, but there is enough detail to be awarded six marks. More detailed examples would have been required to take this into Mark Band 3.

A local council has a number of vehicles in its fleet.
The council is keen to install tracking devices in the vehicles to help monitor their movements.

> Discuss this proposal considering the impact of the technology on the council and its staff.   (8)

Type your answer in the box.

The technology used on the council and it's staff would be a GPS system which would be installed into the vehicles of the staff. It would allow the council to monitor where the vehicles were being taken, how long they were there for and the amount of fuel that was used. This device could help stop people misusing the council vehicles and it could also stop the staff taking elongated breaks. The staff may dislike the monitoring system as it would be able to track them on their way home or to other private places, they may also try to remove the tracking device to misuse the vehicles. It would safe the council money in fuel if the devices were installed as it would make sure that drivers were taking the shortest route to their destination and they were not using the cars/vans for personal use.

Another learner response is shown below, which lists both positive and negative points. The conclusion provided does not link successfully to the points made. This learner also achieved six marks. In order to achieve Mark Band 3, the learner would have needed to provide some additional detail on each point, with a relevant conclusion.

the impact of this proposal and the technology involved would force the council to put an entire new server up which would cost alot and take up alot of space the cost of this sever alone would mean either staff get pay cuts or taxes get raised and when the prices of te trackers is added to the price of the server it means that staff would lose money out of their pay and that taxes would be forced to go up