Gold - Unit 20 - Using Mobile IT Devices

Relevant LINKS

BACK TO ITQ UNITS **[1]**

Overview

This is the ability to select, use and maintain a suitable mobile IT device to carry out a range of appropriate tasks. It includes understanding the capabilities of the device, the types of applications available, and the types of tasks for which it is suitable, as well as the skills and techniques needed to use the device appropriately and effectively.

This unit is about the skills and knowledge needed by an IT User to use mobile IT devices and techniques appropriately for straightforward or routine information. Any aspect that is unfamiliar will require support and advice from others. **Mobile IT devices and techniques will be defined as 'basic' because:**

- the mobile, tools and functions involved will be pre-defined or commonly used
- the range of inputting, manipulation and outputting techniques are straightforward or routine
- data types and structure will be predetermined or familiar

Example of context: Setting up and maintaining mobile devices for a school as an extension of the IT technician's department

Activities supporting the assessment of this award

Assessor's guide to interpreting the criteria

General Information

QCF general description for Level 2 qualifications

- Achievement at QCF level 2 (EQF Level 3) reflects the ability to select and use relevant knowledge, ideas, skills and procedures to complete well-defined tasks and address straightforward problems. It includes taking responsibility for completing tasks and procedures and exercising autonomy and judgement subject to overall direction or guidance.
- Use understanding of facts, procedures and ideas to complete well-defined tasks and address straightforward problems. Interpret relevant information and ideas. Be aware of the types of information that are relevant to the area of study or work.
- Complete well-defined, generally routine tasks and address straightforward problems. Select and use relevant skills and procedures. Identify, gather and use relevant information to inform actions. Identify how effective actions have been.
- Take responsibility for completing tasks and procedures subject to direction or guidance as needed.

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Requirements

- Standards must be confirmed by a trained Gold Level Assessor or higher
- Assessors must at a minimum record assessment judgements as entries in the on-line mark book on the INGOTs.org certification site.
- Routine evidence of work used for judging assessment outcomes in the candidates' records of their day to day work will be available from their e-portfolios and on-line work. Assessors should ensure that relevant web pages are available to their Account Manager on request by supply of the URL.
- When the candidate provides evidence of matching all the criteria to the specification subject to the guidance below, the assessor can request the award using the link on the certification site. The Account Manager will request a random sample of evidence from candidates' work that verifies the assessor's judgement.
- When the Account Manager is satisfied that the evidence is sufficient to safely make an award, the candidate's success will be confirmed and the unit certificate will be printable from the web site.
- This unit should take an average level 2 learner 20 hours of work to complete.

Assessment Method

Assessors can score each of the criteria L, S, H. N indicates no evidence and is the default starting position. L indicates some capability but secure capability has not yet been achieved and some help is still required. S indicates that the candidate can match the criterion to its required specification. H indicates performance that goes beyond the expected in at least some aspects. Candidates are required to achieve at least S on all the criteria to achieve the unit.

Expansion of the assessment criteria

1. Set up and customise the mobile device to meet needs

1.1 **I can describe the purpose of the different features and drawbacks of the mobile device**

Evidence: Candidate's ePortfolios and assessor observations

Additional information and guidance

There are various devices on the market now that are designed for different users and roles. Candidates need to show a good awareness of these design characteristics in order to support and advise on the right choice of equipment. They could carry out a product survey and testing process and create a tables of results, either written or via a video sequence, to show the range and features. If they work as part of a team they can compare notes with their team members and spread the load somewhat.

1.2 I can describe different methods that can be used to access mobile networks

Evidence: Candidates' working files or portfolio reflections.

Additional information and guidance

Candidate should show that they can describe the choices available for connectivity and how these might affect performance. They should be able to describe the basic features, similarities, differences, strengths and weaknesses of the main data transmission systems such as bandwidth, range and other restrictions.

1.3 I can prepare, set up and configure the mobile device for use

Candidates should be able to demonstrate they can take an un-configured device and get it operational.

Evidence: Assessor witnessing.

Additional information and guidance

Candidates should be comfortable with the initial set up of an out of the box mobile device. They may need help with some of the account details and connection details, but should show general competence in getting a device to work, perhaps using the user guide associated with the device.

1.4 I can select, use and customise interface features and settings to meet needs and improve efficiency

Candidates should be able to demonstrate they know the interface well enough to adjust it for someone else's needs and to make it work better if appropriate

Evidence: Assessor witnessing. Centre set test or task.

Additional information and guidance

The devices used may well be shared among many different groups and candidates should be given the opportunity to demonstrate that once they have the device they can adjust it to work for them as well as others. Some aspects of the device might not work as well as expected, for example for students without the skills to operate it as it is. Candidates should show that they know how to find and adjust features relating to the user experience.

1.5 I can describe any specific health and safety issues associated with the use of mobile devices

Candidates should be able to show a clear understanding and of health and safety issues.

Evidence: Assessor witnessing. Centre set test or task.

Additional information and guidance

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A number of studies recently, such as this one. [2] have shown the dangers of using mobile devices on the neck, which is especially bad in young people given that they are still developing, there are also issues with having a radio devices close, though no hard evidence as yet. A description or explanation of health and safety issues, as well as evidence of best practice here would be clear enough for this criterion at level 2. Schools and colleges may well incorporate this into their AUP so this can be referenced and perhaps critiqued by candidates in blogs and e-portfolios. General issues of RSI [3] related to computer use should also be referenced in some way.

1.6 I can apply guidelines and procedures for the use of mobile devices

Candidates should be able to demonstrate they know the best way to use devices in line with local guidelines.

Evidence: Assessor witnessing.

Additional information and guidance
The school or college will have a policy on the use of mobile devices and students will need to sign off that they understand this and will abide by the guidelines. If possible, they could add to these guidelines by showing their understanding of any limitations that come up as part of the use they experience or witness.

2. Select and use applications and files on the mobile device

2.1 I can select and use applications and files on the mobile device for an appropriate purpose

Candidates should use the devices to carry out tasks and evidence effectiveness.

Evidence: Candidate's work and assessor witnessing the process. Centre set test or task to identify simple problems and fix them.

Additional information and guidance
Candidates will need to show some awareness that they understand the purpose, such as a pre-set task, and show that they can choose the right application to fulfill the task effectively.

2.2 I can define file formats appropriate for mobile devices
Candidates should show an understanding of the file requirements specific to mobile devices.

Evidence: Candidate's ePortfolios.

Additional information and guidance
Depending on the type of device and the size of the working screen, as well as connectivity issues, candidates should show that they understand that large file types or very large images may be more difficult to transmit and receive as well as showing an awareness of the latest trends in responsive designs. Some web sites are still designed using a fixed width template which simply does not work effectively on a small mobile device. A responsive design will adjust automatically to the screen it is displayed on. Other uses such as graphics will introduce the concept of file compression and open standards to make sure there is no restrictions on material used on the devices.

2.3 I can software or tools to prepare or convert files to an appropriate format for mobile devices
Candidates should demonstrate skills in a range of support tools associated with file conversion.

Evidence: Candidate's work and assessor witnessing the process. Centre set test or task to identify simple format and file problems and fix them.

Additional information and guidance
Files created as documents using something that outputs to Adobe PDF file formats is useful for mobile devices, but the documents themselves also need to be carefully considered and the layouts and content as well so that they are actually useable [4]. They also should have a basic awareness of other web based technologies such as HTML5 which allows web sites to run more effectively on low powered devices like mobile phones.

2.4 I can input data accurately into a mobile device

Candidates should show some competence in gathering data using the device.

Evidence: Candidates work and assessor observations

Additional information and guidance
The nature of the data being input to the device will vary as the students could use the device to input numbers into a spreadsheet application for measuring data, but could also use it to record audio, video or graphical data. In each case they will need to show they can choose the correct application and are aware of the needs of the data collection. For example, not being in a noisy environment (if possible) when imputing audio data, or

not being in too light or too dark areas when inputting images and video data.

2.5 I can organise, store and retrieve data efficiently Candidates should use the devices to carry out tasks and evidence effectiveness.

Evidence: Candidate's work and assessor witnessing the process. Centre set test or task to identify simple actions and procedures.

Additional information and guidance
Candidates will need to show some level of skill in managing the data on their device once it has been gathered. This may be creating data folders to organise material and being able to reference where material is, such as images in gallery applications.

3. Use tools and techniques to transfer data to and from mobile devices

3.1 I can describe different types of secure connection methods that can be used between devices

Candidates need to show that they know the different secure connection methods, and be able to highlight some of the main features
Evidence: Candidates demonstration and assessor observations from set task

Additional information and guidance
Most mobile devices come with WiFi as standard and usually also have a Bluetooth [5] capability. More recent phones and devices also have technologies such as NFC [6], derivatives of it such as S Beam and other ways of sharing data. Candidates do not need to show a comprehensive understanding of these technologies, but should show an awareness of how and why they exist and how they can be used, especially in relation to secure data exchange. They might be able to investigate and report on the latest methods for additional security using encryption.

3.2 I can describe software requirements and techniques to connect and synchronise devices

Candidates need to describe the software package and configuration settings needed to carry out this task
Evidence: Candidates demonstration and assessor observations.

Additional information and guidance
Candidate should show that they can choose the right applications and configure the device to allow transmission of files between devices to synchronise them together.

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3.3 I can transfer information to and from mobile device using secure connection procedures

Candidates need to demonstrate the process successfully
Evidence: Candidates demonstration and assessor observations.

Additional information and guidance
Candidate should show that they can use the transmission features of the device identified in 3.2 effectively, such as selecting appropriate applications to get their tasks completed. Users should also demonstrate they know which one to use for which purpose, such as in relation to the level of security. They also need to explain why synchronisation is important and where it might be used.

3.4 I can synchronise mobile device data with source data

Candidates demonstration and assessor observations
Evidence: Candidates demonstration and assessor observations.

Additional information and guidance
Candidate should show that they can use the synch features of the device identified in 3.2 effectively, such as selecting appropriate applications to get their tasks completed.

3.5 I can recognise copyright and other constraints on the use and transfer of information
Candidates should be able to demonstrate their basic acknowledgement of the rules and regulations of using information.

Evidence: Assessor witnessing.

Additional information and guidance
Candidates should be able to reference some of the copyright requirements that come into play when they are using information. Some of this may be part of their signing AUP documents or other discussions at the centre.
3.6 I can explain why it is important to stay safe, keep information secure and to respect others when using mobile devices
Candidates should be able to show a basic understanding of best practice in conjunction with e-Safety principles in relation to mobile devices.

Evidence: Candidate's ePortfolios, Assessor witnessing.

Additional information and guidance
A short guide on how they protect their data and why this is important, as well as their overview of why it is important to respect others. Mobile devices are easily accessible and with the anonymity of the Internet and connection power of mobile devices it is easy to transmit data about yourself and communicate with others. This makes it really important to do this carefully and with extra respect and caution.

3.7 I can keep information secure when using a mobile device
Candidates should be able to show a basic understanding of data security in relation to mobile devices.

Evidence: Assessor witnessing. Centre set test or task.

Additional information and guidance
Candidates could produce a short video on the methods they use to protect their data and why it is important with some examples where possible.

4. Optimise the performance of mobile devices

4.1 I can describe the factors that can affect performance of the mobile device and how to make improvements
Evidence: Candidates demonstration and assessor observations

Additional information and guidance
Mobile devices are dependent on solid state technology, and this can degrade over time due to data being written to and deleted from it. In essence, the hard drive inside does not remove unused space and when the device tries to write to this storage space, it can't so goes slow or hangs. Some recommendations are:

- Keep the device at half full and never go more than 75% full
- Uninstall software that is not wanted or used
- leave it plugged in but idle which will allow TRIM (unused space removal) to take place (if the device has it)

4.2 I can use appropriate techniques to optimise the performance of the mobile device
Evidence: Candidates' working files or portfolio reflections.

Additional information and guidance
Candidate should show that they can use some of the methods and practices identified in 4.1. The key here is that they show that they understand the improvement methods well enough to apply them carefully and not just apply things for the sake of it.

4.3 I can describe problems that occur with mobile devices and what causes them
Candidates should be able to demonstrate they know in some detail the most common problems and can evidence some type of solution.

Evidence: Assessor witnessing.

Additional information and guidance
Candidates should be able to demonstrate some of the problems with mobile devices, with a reasonable amount of understanding, and be able to try some different techniques in order to deal with them. It may be that they can talk about what to do without actually doing this as local policies may not allow this level of access. Some problems might only be cured with administrative privileges, but they may well be aware of how to do this on their own personal devices.

4.4 I can use an appropriate fault-finding procedure to identify and solve problems with the mobile device

Candidates should be able to show an understanding of some of the help in user guides for common fault diagnostics.

Evidence: Assessor witnessing. Centre set test or task.

Additional information and guidance
The candidates can show a good understanding of using problem solving suggestions in the device user guide or being able to search for and use some basic help from on-line forums.

4.5 I can describe when to try to solve a problem and where to get expert advice

Candidates should be able to demonstrate they know when and how to escalate problems they find.

Evidence: Assessor witnessing. Centre set test or task.
Additional information and guidance It is likely that most schools or colleges have dedicated staff available to help with the set-up and maintenance of mobile devices for curriculum areas. Candidates can make notes and reflections on a presentation from these personnel and be advised of how to report problems and other issues.

Moderation/verification

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

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