SQA Advanced Unit specification: general information

Unit title: Handling Information as a Resource

Unit code: HR8A 47

Superclass:	CY
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Version:	01

Unit purpose

This Unit is designed to allow candidates to identify, source and evaluate the required information for a given task and critically review the process. It is an optional Unit for SQA Advanced Certificate in Computing and various Computing SQA Advanced Diplomas, but may also be of use to candidates following programmes of study in other disciplines.

On completion of the Unit the candidate should be able to:

1   Find and identify relevant information on a given topic from various sources.
2   Evaluate the information obtained.
3   Review the research methodology and results obtained and suggest possible improvements in search techniques and evaluation.

Recommended prior knowledge and skills

Access to this Unit is at the discretion of the centre. However, it would be useful if candidates had good communication skills and prior knowledge of using a computer. This might be evidenced by possession of National Units in Communication and in basic computer use, eg PC Passport.

Credit points and level

1 SQA Credit at SCQF level 7: (8 SCQF credit points at SCQF level 7*)

SCQF credit points are used to allocate credit to qualifications in the Scottish Credit and Qualifications Framework (SCQF). Each qualification in the Framework is allocated a number of SCQF credit points at an SCQF level. There are 12 SCQF levels, ranging from National 1 to Doctorates.

Core Skills

Opportunities to develop aspects of Core Skills are highlighted in the Support Notes of this Unit specification.

There is no automatic certification of Core Skills or Core Skill components in this Unit.

Context for delivery

If this Unit is delivered as part of a Group Award, it is recommended that it should be taught and assessed within the subject area of the Group Award to which it contributes.

Unit specification: statement of standards

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The sections of the Unit stating the Outcomes, Knowledge and/or Skills, and Evidence Requirements are mandatory.

Please refer to *Knowledge and/or Skills for the Outcomes* and *Evidence Requirements for the Unit*.

Where evidence for Outcomes is assessed on a sample basis, the whole of the content listed in the Knowledge and/or Skills section must be taught and available for assessment. Candidates should not know in advance the items on which they will be assessed and different items should be sampled on each assessment occasion.

Outcome 1

Find and identify relevant information on a given topic from various sources.

Knowledge and/or Skills

♦   Information sources, eg books, journals, online communities, articles, benchmarking data, manufacturers' specifications, Internet, people
♦   Search techniques
♦   Creation of an information resource for personal use or sharing
♦   Presentation of findings in an appropriate format

Outcome 2

Evaluate the information obtained.

Knowledge and/or Skills

♦   Techniques for checking information for accuracy and relevance
♦   Critical evaluation of written, pictorial and oral information

Outcome 3

Review the research methodology and results obtained and suggest possible improvements in search techniques and evaluation.

Knowledge and/or Skills

♦   Research methodologies/approaches to research
♦   Qualitative and quantitative data
♦   Primary and secondary data
♦   Referencing sources

Evidence Requirements for the Unit

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can:

♦ find and identify relevant information on a given topic from various sources
♦ evaluate the information obtained
♦ review the research methodology and results obtained and suggest possible improvements in search techniques and evaluation

This may be demonstrated by a single project. Candidates will be allocated a research topic by their tutor and must demonstrate that they can carry out the above and present their findings in an appropriate format.

Candidates must produce a project report, which can be presented in any appropriate format, eg written, audio, video, blog, wiki, etc.

Unit specification: support notes

Unit title: Handling Information as a Resource

This part of the Unit specification is offered as guidance. The support notes are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 40 hours.

Guidance on the content and context for this Unit

This Unit will generally be delivered in the context of a Group Award in Computing. Ideally the chosen research topic should relate to the content of the course, but this is not crucial and some candidates may prefer to research a topic that is of personal interest. Topics should be non-trivial to ensure that there is a reasonable amount of information available.

Guidance on the delivery of this Unit

Delivery should be learner-centred, with the minimum of tutor intervention. Candidates should be encouraged to carry out their own research, using both Internet-based and other resources.

Outcome 1

Candidates should be aware of a whole range of information sources including (but not restricted to) books, journals, online communities, articles, benchmarking data, manufacturers' specifications, Internet and people. In particular, they should realise that the Internet is not the only source of information and that in some cases it may not be the most useful source.

Candidates should know how to use a library catalogue and abstracting journals. They should be able to make use of search engines, such as **Google, Bing, Yahoo** and **Ask.com**, meta-search engines such as **Yippy, Ixquick, Dogpile, InfoSpace, Surfwax** and **Metacrawler** and specialised search engines such as **Haika, Cuil, Kosmix, Yebol, Surf Canyon, Evri** and **DuckDuckGo.**

Candidates should be familiar with the use of keywords in formulating queries, using related search terms, synonyms and phrases and including and excluding keywords by means of Boolean operators. They should also be aware of the 'Invisible Web' and be able to make use of online databases. These are often available via libraries.

Candidates should also be aware of web sites that allow you to ask questions that other people can answer, eg **Answers.com**, **Yahoo Answers, AllExperts** etc.

Candidates should be able to create an information resource, on a specific topic, for personal use or sharing. If information is to be shared due care should be paid to relevant legislation, eg data protection, copyright etc. There are a number of useful online tools for creating such a resource, eg **NoodleTools, Zotero, CiteULike, EndNote** and **RefWorks**.

Findings should be presented in an appropriate format, eg a standard business report format, adapted as necessary for different media.

Outcome 2

All information obtained, whether written, pictorial or oral, should be critically evaluated for

♦ Scope of Coverage
♦ Authority
♦ Objectivity
♦ Accuracy and
♦ Timeliness

Techniques for checking information for accuracy and relevance include the **REAL** strategy, proposed by Alan November.

(http://novemberlearning.com/resources/information-literacy-resources/):

R — Read the URL
E — Examine the site's content
A — Ask about the author/publisher
L — Look at the links

Outcome 3

Candidates should be aware of differing Research methodologies and approaches to research. In particular they should be aware of the differences between qualitative and quantitative data and the differing approaches to collecting and analysing them. They should also be aware of the differences between primary and secondary data.

All material referred to should be cited using recognised referencing format, eg:

APA (http://www.apastyle.org/)
MLA (http://www.mla.org/style) or
Harvard (http://www.emeraldinsight.com/authors/guides/write/harvard.htm?part=2)

Information about these formats is readily available online. One useful source is:

http://www.northampton.ac.uk/downloads/download/207/referencing-guides

There are a number of free online tools that can assist in preparing references, eg EasyBib and BibMe.

Guidance on the assessment of this Unit

Candidates must produce a project report, which can be presented in any appropriate format, eg written, audio, video, blog, wiki etc. This report should ideally be built up as the Unit progresses, rather than written up at the end. Candidates should be encouraged to be innovative in their approach, rather than sticking to paper reports. Web-based tools, such as *Memonic* (http://www.memonic.com/) may be useful for building a portfolio of information which can be referred to in the report.

Online and Distance Learning

This Unit could be delivered by distance or online learning. It should be noted that this type of delivery may require addition scheduling and planning by the centre to arrange supervision of assessment completion and authenticity of evidence produced by candidates.

Opportunities for the use of e-assessment

E-assessment may be appropriate for some assessments in this Unit. By e-assessment we mean assessment which is supported by Information and Communication Technology (ICT), such as e-testing or the use of e-portfolios or social software. Centres which wish to use e-assessment must ensure that the national standard is applied to all candidate evidence and that conditions of assessment as specified in the Evidence Requirements are met, regardless of the mode of gathering evidence. Further advice is available in *SQA Guidelines on Online Assessment for Further Education (AA1641, March 2003).*

Opportunities for developing Core Skills

The Core Skill of component of Written Communication at SCQF level 6 can be developed naturally throughout this Unit, however there is no automatic certification of Core Skills or Core Skill components in this Unit.

Equality and inclusion

This unit specification has been designed to ensure that there are no unnecessary barriers to learning or assessment. The individual needs of learners should be taken into account when planning learning experiences, selecting assessment methods or considering alternative evidence.

Further advice can be found on our website www.sqa.org.uk/assessmentarrangements.

History of changes to Unit

Version	Description of change	Date

General information for candidates

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On completion of the Unit you should be able to:

1   Find and identify relevant information on a given topic from various sources.
2   Evaluate the information obtained.
3   Review the research methodology and results obtained and suggest possible improvements in search techniques and evaluation.

In the first part of the course you will look at the range of information sources available, including books, journals, online communities, articles, benchmarking data, manufacturers' specifications, Internet, people. You will look at a number of search techniques including the use of search engines and meta-search engines and use these to create an information resource for personal use or sharing. You will also learn how to present your findings in an appropriate format.

In the second part you will find out about techniques for checking information for accuracy and relevance and you will learn how to critically evaluate written, pictorial and oral information.

In the final part you will learn about different research methodologies and approaches to research. You will find out about the differences between qualitative and quantitative data and primary and secondary data and find out how to reference your sources using an appropriate referencing system.

The Unit is assessed by a single project. You will be allocated a research topic by your tutor and must demonstrate that you can:

♦   find and identify relevant information on the specified topic from various sources.
♦   evaluate the information obtained.
♦   present your findings in an appropriate format.
♦   review the research methodology and results obtained and suggest possible improvements in search techniques and evaluation.

You will be expected to produce a project report, which can be presented in any appropriate format, eg written, audio, video, blog, wiki etc.