

Higher National Unit Specification

General information for centres

Unit title: Applications of ICT in Libraries: Carrying Out the Net Navigator Role

Unit code: DP5H 35

Unit purpose: The purpose of this Unit is to guide candidates to work logically through the steps of a complex reference enquiry, typical for a public library, using a complex search strategy, a wide range of Internet resources and current awareness and alerting services.

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

- 1 Define the detail of a complex enquiry in conjunction with the client.
- 2 Describe search logic, search engines and search strategies.
- 3 Create and implement a complex search strategy.
- 4 Evaluate websites located in a complex search.
- 5 Review effectiveness of search strategy.
- 6 Use ICT to set up current awareness and alerting services.

Credit points and level: 2 HN Credits at SCQF level 8: (16 SCQF credit points at SCQF level 8*)

**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 Access 1 to Doctorates.*

Recommended prior knowledge and skills: Access to this Unit will be at the discretion of the Centre. There are no specific requirements but candidates would benefit from core skills in Information Technology at Intermediate 2 and Communication and Problem Solving at Higher level. These may be demonstrated by the possession of relevant National Units. Unit SLIC 1, Locating Information on Behalf of Clients, is a useful pre-cursor to this Unit.

Core Skills: There may be opportunities to gather evidence towards Core Skills in this Unit, although there is no automatic certification of Core Skills or Core Skills components.

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.

Assessment: Evidence for the knowledge and/or skills for the entire Unit must be produced from:

- 1 A set of 40 short questions to assess the candidate's knowledge and understanding.

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and

- 2 Annotated records of two complex searches where:
 - ◆ the sources to be searched for information are not obvious at the outset of the enquiry
 - ◆ the precise nature of the topic requires to be teased out in some detail with the client
 - ◆ a minimum of three variables are linked in a Boolean search

The two activities will have equal assessment weighting. The short questions cover all Outcomes. However, Outcomes 2 and 6 require more wide ranging knowledge and skills. The questions therefore should be allocated to the Outcomes as follows:

- ◆ Outcomes 1, 3, 4, 5 — 5 questions for each Outcome
- ◆ Outcomes 2, 6 — 10 questions for each Outcome

The questions may be administered as a single end of unit test or as several sub-tests, each covering one or more outcomes. Candidates must answer at least 70% of the questions correctly in order to obtain a pass. If sub-tests are used, they must also score at least 70% in each sub-test.

Testing must take place in a closed-book environment where candidates have no access to books, handouts, notes or other learning material. Testing may be done in either an electronic or print-based format and must be invigilated by a tutor/mentor. There must be no communication between candidates and communication with the invigilator must be restricted to matters relating to the administration of the test.

If a candidate requires to be reassessed, a different selection of questions must be used, with at least half the questions being different from those used in the original test.

For the two complex searches, the candidate's evidence should be in the form of a log book recording his/her actions, decisions and the progress of each enquiry, supplemented by a record of the results of the search, as presented to the client. The logbook may be in print or electronic format and must be authenticated by the tutor or mentor.

For each enquiry candidates should present evidence to prove that they have addressed the skills and knowledge in each of the six Outcomes. Specific guidance on this is found in the logbook instructions in Evidence Requirements from which a template for the logbook structure may be produced for the candidate.

An assessment exemplar and guidelines on the delivery of the unit have been produced to indicate the national standard of achievement required at SCQF level 8.

As a number of Outcomes are assessed together an assessor must ensure that each Outcome has been achieved by the candidate to successfully achieve a pass in this Unit.

Higher National 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.

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

Define the detail of a complex enquiry in conjunction with the client

Knowledge and/or skills

- ◆ Reference interview techniques for complex enquiries
- ◆ Techniques for eliciting information and advice from knowledgeable clients
- ◆ Nature of the detailed information to be provided — quantity, level, format
- ◆ Constraints — deadlines for completion, currency of information and language
- ◆ Special needs of the client

Outcome 2

Describe search logic, search engines and features of the internet

Knowledge and/or skills

- ◆ Boolean logic
- ◆ Truncation and wildcards
- ◆ Non-obvious search terms
- ◆ Grammar of the Internet
- ◆ Search engine operation
- ◆ Search engine syntax
- ◆ How ranking works
- ◆ Ownership of the web
- ◆ Dark internet and invisible web

Outcome 3

Create and implement a complex search strategy

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Knowledge and/or skills

- ◆ Design of complex search strategy
- ◆ Reviewing search terms in the light of results — broader/narrower/related terms
- ◆ Collection and presentation of results

Outcome 4

Evaluate websites located in a complex search

Knowledge and/or skills

- ◆ Suitability of a website resulting from a search in terms of:
 - authority
 - credibility
 - accuracy
 - bias
 - emphasis
 - currency
 - clarity of presentation
 - use of multimedia
 - ease of use for visually impaired clients

Outcome 5

Review effectiveness of search strategy

Knowledge and/or skills

- ◆ Effectiveness of search strategy in terms of producing comprehensive, relevant information timeously
- ◆ Cost of a search

Outcome 6

Use ICT to set up current awareness and alerting services

Knowledge and/or skills

- ◆ Current awareness requirements of clients
- ◆ News services
- ◆ Website alerting services
- ◆ Website updating services
- ◆ Current awareness system for own organisation

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Evidence Requirements for the Unit

Evidence for the knowledge and /or skills for the entire Unit must be produced from:

- 1 A set of 40 short questions to assess the candidate's knowledge and understanding.
and
- 2 Annotated records of two complex searches where:

The sources to be searched for information are not obvious at the outset of the enquiry.

The precise nature of the topic requires to be teased out in some detail with the client.

A minimum of three variables are linked in a Boolean search.

In order to achieve a pass in the unit candidates must pass both of the above components in accordance with the standards outlined below.

Short Question Test

The knowledge and skills components of the six Outcomes must be examined by questions broken down as follows:

Outcome 1: 5 questions, with 1 question related to each of the following topics:

- ◆ communication skills (body language, open/closed questions, use of appropriate language)
- ◆ importance of determining nature of information to be provided
- ◆ importance of determining constraints on enquiry
- ◆ distinction between dynamic and static information
- ◆ implications for search if client has special needs

Outcome 2: 10 questions with 1 question related to each of the following topics:

- ◆ Boolean logic
- ◆ truncation and wildcards
- ◆ non-obvious search terms
- ◆ grammar of the internet
- ◆ search engine syntax
- ◆ ranking
- ◆ ownership of the web
- ◆ dark internet and invisible web

and two questions on:

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- ◆ search engine operation

Outcome 3: five questions, with one question related to each of the following topics:

- ◆ choice of search terms
- ◆ choice of search engines, portals, directories, bibliographic databases
- ◆ order of use of search engines, portals, directories, bibliographic databases
- ◆ reviewing search terms
- ◆ presentation of results

Outcome 4: five questions, related to any five of the following criteria for evaluation of web information:

- ◆ authority
- ◆ credibility
- ◆ accuracy
- ◆ bias
- ◆ emphasis
- ◆ currency
- ◆ clarity of presentation
- ◆ use of multimedia
- ◆ ease of use for visually impaired clients

Outcome 5: five questions, with one question related to each of the following topics:

- ◆ comprehensiveness of information
- ◆ relevance of information
- ◆ meeting deadlines
- ◆ speed of search
- ◆ cost of search

Outcome 6: 10 questions, with two questions related to each of the following topics:

- ◆ establishing current awareness requirements of clients
- ◆ news services
- ◆ website alerting services
- ◆ website updating services
- ◆ in-house current awareness systems

The questions may be administered as a single end of unit test or as several sub-tests, each covering one or more outcomes. Candidates must answer at least 70% of the questions correctly in order to obtain a pass. If sub-tests are used, they must also score at least 70% in each sub-test.

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Logbook

The logbook must record successful completion by the candidate of two complex searches where:

- ◆ the sources to be searched for information are not obvious at the outset of the enquiry
- ◆ the precise nature of the topic requires to be teased out in some detail with the client
- ◆ a minimum of three variables are linked in a Boolean search

Both complex searches must be undertaken in a real environment with real clients.

The tutor/mentor must take steps to authenticate the logbook evidence as the unaided work of the candidate. This could be done most easily by direct observation and/or questioning of the candidate once the searches have been completed.

For each search the logbook must record successful completion of ALL of the tasks listed below:

1 Reference interview

- ◆ Determining the nature of information to be provided:
 - quantity
 - level
 - format
- ◆ Determining constraints of the search:
 - deadlines for completion
 - currency of information
 - language restriction
- ◆ Determining prior research on the topic by client
- ◆ Seeking advice from knowledgeable clients
- ◆ Recording contact details for client

2 Search strategy:

- ◆ Choice of search terms
- ◆ AND, OR, NOT
- ◆ Truncation and wildcards
- ◆ Choice of search engines, metacrawlers, portals, directories, bibliographic databases (as appropriate for the search)
- ◆ Use of search facilities with chosen search terms
- ◆ Ranking

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- 3 The search:
 - ◆ Flexibility as search progresses
 - ◆ Broader, narrower and related terms
 - ◆ Collection and presentation of results

- 4 Evaluation of information:
 - ◆ Validity of information
 - authority
 - credibility
 - accuracy
 - bias
 - emphasis
 - currency
 - clarity of presentation
 - use of multimedia
 - ease of use for visually impaired clients

- 5 Evaluation of search strategy and results:
 - ◆ Meeting client requirements
 - sufficiency
 - format
 - language
 - currency
 - meeting deadline
 - ◆ Cost
 - ◆ Speed

- 6 Updating of results:
 - ◆ Use of updating services external to own library
 - ◆ Use of internal current awareness services

Record of Search Results

The actual results of the search as presented to the client.

Assessment guidelines for the Unit

The short question test may take the form of restricted-response questions, short-answer questions, oral questions or any other suitable format. The skills and knowledge related to this test should be presented, explained and developed in the context of current real world situations in public libraries.

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The suggested time allocation for a short question test is two minutes for each question plus five minutes starting up time and five minutes finishing off time. Thus a total of 90 minutes should be allocated for a 40 question end-of-unit test.

Candidates may present the logbook in print or electronic format. The record of search results should be in the format in which it was presented by the candidate to the client.

As a number of Outcomes are assessed together an assessor must ensure that each Outcome has been achieved by the candidate to successfully achieve a pass in this Unit.

Administrative Information

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History of Changes:

Version	Description of change	Date
02	Added: As a number of Outcomes are assessed together an assessor must ensure that each Outcome has been achieved by the candidate to successfully achieve a pass in this Unit	8/9/06

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Higher National Unit specification: support notes

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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 80 hours.

Guidance on the content and context for this Unit

Outcome 1 relates to the initial definition of information required by the client in a complex enquiry. A typical “complex” enquiry would involve:

- 1 The sources to be searched for information are not obvious at the outset of the enquiry.
- 2 The precise nature of the topic requires to be teased out in some detail with the client.
- 3 A minimum of three variables are linked in a Boolean search.

The candidate may conduct the reference interview with the client face-to-face, by telephone or through an exchange of e-mails. Whichever means of communication is used, the reference interview is a two-way interaction, with the candidate taking full responsibility for the efficiency of the communication process. At the end of the reference interview the candidate should be confident that the exact nature of the enquiry has been fully explored and that information required by the client has been specifically defined.

Each of the knowledge and/or skills statements is now described further.

◆ Reference interview techniques for complex enquiries

Good communication skills are key to the reference interview. This Outcome provides a good opportunity for candidates to practise and refine their communication skills.

Candidates are expected to use language which is appropriate to the client. In complex enquiries it is probable that the client has some degree of expertise in the field and may use specialist vocabulary when describing the search topic. Candidates must ensure that they fully understand the meaning of any specialist terms or jargon, requesting elucidation from the client where necessary.

In face-to-face situations, candidates should also demonstrate appropriate body language designed to set the client at ease and promote effective communication. In telephone communication candidates should use appropriate feedback techniques to ensure their understanding of the client’s responses, in the absence of clues from body language. Written communication in e-mails should demonstrate the use of clear, grammatical and, where appropriate, specialised language in well structured communications.

Candidates should understand the purposes of open and closed questions and the circumstances in which it is appropriate to use them. Open questions encourage longer answers and their main uses in the reference interview context are to:

- ◆ establish rapport with the client
- ◆ set the scene for the enquiry
- ◆ gain background information which is relevant to the enquiry

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Closed questions prompt yes/no or short factual answers and their main uses in the reference interview context are to:

- ◆ elicit specific pieces of information from the client
- ◆ gain confirmation that the candidate's understanding of what the client has said is correct

The reference interview provides the opportunity to establish any special needs of the client eg visual or auditory impairment.

◆ **Eliciting information and advice from knowledgeable clients**

While recognising that some clients may be unwilling to give this information, it is helpful if candidates can establish in some detail the reasons why the client wishes the information requested. It is important for the candidate to ascertain the "starting point" of the enquiry in order to avoid time being wasted on finding information which the client already knows. This is particularly important with complex enquiries for knowledgeable clients where it may be relatively easy to access information at a simple level when the client actually requires more sophisticated results.

In a complex enquiry from a specialist enquirer it is likely that the enquirer has already undertaken some basic searching on their own behalf. Equally a well-informed enquirer may well be familiar with some or all of the sources of information in their field. Candidates should therefore seek to determine what research the client has already undertaken on the topic and what results were obtained. The candidate may also seek the client's opinion on the usefulness or otherwise of particular sources. The client may also be able to give guidance on successful and unsuccessful information searching approaches. However the candidate should recognise that he/she is the information-searching specialist (while the client is the subject specialist) and so it is incumbent on the candidate to critically evaluate the advice on sources and information searching techniques provided by the client.

◆ **Determining the nature of detailed information to be provided– quantity, level, format**

Quantity — Candidates must clarify the scale of information required by the client in order to fully satisfy their needs. If the search produces a large amount of information, candidates should determine whether the client wishes them to undertake any filtering on their behalf before presenting the information or whether they wish to see the full search results. If filtering is requested, the candidate must establish with the client the criteria which are to be applied. Conversely, if the search results are meagre, candidates should seek guidance from the client as to the possibility of broadening out the search.

Level — may be determined by client's education, specialist knowledge, experience in the field, linguistic ability.

Format — may include information to be viewed on screen by client, printouts, audio or video. The search results may be bibliographies or lists of website references for the client to follow up. If the search is not carried out with the client present, candidates must ascertain if the client can visit the library at a later time to access the search results or if the information must be in a format which can be e-mailed or posted to the client.

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- ◆ Constraints — deadlines for completion, currency of information and language

Candidates should understand the importance of gauging the urgency of the enquiry. This can range from enquiries where information is required instantly through to those where the results may be presented after some time has elapsed. The candidate should agree with the client on the deadline for completion of the enquiry and also on the action to be taken should this deadline fail to be met for any reason.

The candidate must distinguish between two types of information — dynamic information to be found from regularly updated sources (eg current information on news, weather, government policy, share prices) and static information which could come from sources which have not recently been updated (eg historical dates, biographies of deceased persons). The candidate should also ensure that the client is aware of the need to use recently updated sources for dynamic information and the implications which this may have in terms of the timescale and cost of the search. Complex enquiries often relate to dynamic information: this may have implications regarding the validity of any information which the client has found prior to the enquiry and may necessitate repeating part or all of the client's previous search.

Some information may only be available in languages other than English. The candidate should be certain of the client's fluency in these languages before embarking on the search.

Outcome 2 relates to the ability to choose and combine search terms for use in a sophisticated Internet search. It also covers features of search engines and other aspects of the Internet which affect search strategy.

- ◆ **Boolean logic**

Candidates should demonstrate understanding of how to use the Boolean operators AND, NOT and OR. They should use Boolean operators in search engines.

Candidates should appreciate that the "Advanced Search" facilities in search engines and websites rarely use the Boolean terms AND, OR, NOT. Candidates should be able to translate the terms used into Boolean terminology. For instance:

With all of the words = AND

With at least one of the words = OR

Without the words = NOT.

- ◆ Truncation and wildcards

Traditionally on-line database searching allowed the use of truncation of search terms. This used a symbol such as ~ to represent one or more letters at the beginning or end of a word. For example, ~fuse could lead to *refuse, defuse* or *infuse*: *refus~* could lead to *refuse, refuses, refused, refusing*.

In Internet searching this symbol would be called a Wildcard. Two types of Wildcard exist, commonly represented by ? and *.

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? indicates the replacement of one character

* indicates the replacement of any number of characters.

Wildcard symbols can be used in the middle of a word, not just at the beginning and end eg *familiari?e* for *familiarise* and *familiarize*.

Most search engines use complex algorithms to produce their results and so use of wildcards or truncation is inappropriate. Sites which permit wildcard and/or truncation searching will indicate in their Help section which symbols are to be used for these.

◆ Non-obvious search terms

The candidate should explore with the client whether there are any search terms which might be used which are not immediately obvious from the nature of the enquiry. An example might be the name of a researcher whose work the client considers relevant to the search topic, although the researcher works in a different field.

◆ Grammar of the Internet

This term, as used by Alan November, broadly means using the URL of a site to yield as much information as possible to gain an impression of the possible usefulness of the information on a website. (This is also relevant to the validation of website results — Outcome 4).

Candidates should understand that the domain name itself may offer some clues. Is it a well-known name; is it a 'personal' site giving the opinion of only one person; is it an educational or government site and under which nationality is it registered? It is often possible to find the owner/publisher of the site by doing a *whois* search on the domain name.

www.archive.org allows previous versions of websites to be browsed so that the history of a site may be viewed. Candidates should however be aware that this site is by no means comprehensive.

It is possible to check which sites link to or reference the website being validated simply by searching on its URL.

◆ Search engine operation

This is a continuously developing area, of which candidates would be expected to have some in-depth knowledge, including:

- how the websites are collected and indexed for search engines
- use of metadata
- operation of spiders/web bots
- how to notify a search engine about your website

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◆ Search engine syntax

Although there is some general agreement in syntax between different search engines, there are differences. So the advanced search options should be examined. Candidates should take three search engines as examples and cover in detail the syntax of entering search terms in each of these. The candidate should appreciate that in order to get the best out of a search engine, the searcher must be fully aware of its syntax. At this more advanced level of search, the syntax should be the first thing explored when meeting a new search engine.

◆ How ranking works

Ranking is the process by which a search engine orders the results of a search. Candidates should understand what is meant by a search algorithm. They should be aware that each search engine uses a proprietary search algorithm and that these may change with time. Thus the same search on different engines, or at different times, will rank the results in a different order. Candidates should be aware that commercial sites can buy a place near the top of a list of websites in a search engine's results. The implications of this are that the "best" sites do not necessarily appear at the top of the list.

◆ Ownership of the web

Candidates should have a basic understanding about the physical structure of the Internet and appreciate that the Internet cannot be owned by any one entity. The original idea of Tim Berners-Lee, of having simply a cooperative space for the sharing of information has long been overtaken by commercial interests.

Candidates should be aware of the very different forces influencing what is seen in the search results. There are individuals, organisations and companies attempting to present their own version of the truth, often in an even-handed way, but sometimes in an insidious and very dangerous manner. The concepts of the 'grammar of the internet' can be put into practice here. An excellent example is the American site <http://www.martinlutherking.org/> this site is not what it might seem.

◆ Dark internet or the invisible web

Candidates should understand that a search carried out by a particular search engine will return only a sub-set of all the possible results. This is because, due to time and financial constraints, the engine cannot index all the pages available in the web. An issue here is also how quickly the engine reacts to new or altered web pages. Thus it is worth using several different search engines for any particular reference enquiry. Of course, there are sites returned in a search, which when clicked upon do not appear at all because the website has been rearranged or removed.

However there are areas of the web which are never found at all by the searching spiders. A current problem is with search engines being unable to index databases and other websites generating dynamic content. Websites with some content not in HTML also causes difficulties. Examples are proprietary text formats or multimedia. PDF files have been problematic. Candidates should also be aware that access to some information may be limited by filtering restrictions on public access PCs.

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There are specialised portals to ‘invisible’ websites. One example is www.invisible-web.net which includes a directory of some of the best resources the Invisible Web has to offer.

Candidates should also be aware that not all information on the Internet is available free-of-charge and that in some cases subscribed resources will be the best in their class, e.g. products from OUP (<http://www.oup.com/online>) or high quality business sources like <http://www.keynote.co.uk>. Pages on these will not be located via search engines.

Outcome 3 relates to the candidate’s ability to devise a complex search strategy and to carry out the search, incorporating a continual review and revise technique at every stage.

◆ Design of complex search strategy

The candidate should utilise the knowledge from Outcomes 1 and 2 to devise a search strategy which is logical in terms of its choice of search terms and search methods (choice of search engines, portal, directories, bibliographic databases and the order in which these are accessed.)

◆ Reviewing search terms in the light of results — broader/narrower/related terms

Candidates should be able to define broader, narrower and related terms. For example where the initial search term was *Great Britain*, a broader term is *United Kingdom*, narrower terms are *England*, *Scotland*, *Wales* and a related term is *Northern Ireland*.

Candidates should know when it is appropriate to change the search terms. Where the key terms selected initially are not yielding sufficient information, the candidate should move to the use of broader or related terms. Candidates should also be aware that some search engines and websites have an “Inflate” or “Relate” facility which can be used to suggest broader or related search terms. Where too much information results from a search, the use of narrower search terms is indicated.

◆ Collection and presentation of results

The results of the search should be presented in a structured way which facilitates understanding by the client. This may require the candidates to extract or summarise information from (a number of) sites.

Here, it is important for the client to be informed of the source(s) of the information found so that the client may explore the information further if they wish. The result of the search might be a bibliography of web references or references to information sources in print, audio or video formats. The candidate must quote any such references using a recognised format, for example, as in ISO 690.

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Outcome 4 relates to evaluating the information found on a website which is the result of a complex information search.

- ◆ **Estimating the suitability of a website resulting from an enquiry in terms of:**
 - authority
 - credibility
 - accuracy
 - bias
 - emphasis
 - currency
 - clarity of presentation
 - use of multimedia
 - ease of use for visually impaired clients

As in Unit SLIC 01: Locating Information on Behalf of Clients, candidates must understand that information on the Internet presents greater problems regarding reliability than information found in reference books and other materials in public libraries which have undergone a rigorous selection process. So all information found must be critically evaluated. The more complex the search, the more necessary it is for candidates to apply sophisticated evaluation techniques. Criteria which may be applied to establish the reliability of a website include:

- ◆ Expertise and reputation of the organisations or individuals connected with the website. Some pointers on this have already been covered in Outcome 2. Candidates can also check on the expertise and reputation of individuals or organisation by carrying out a search on their names.
- ◆ Bias. While such information need not necessarily be excluded from the results presented to the client, the candidate should indicate any identified bias and, if possible, provide information from another source which presents opposing points of view. This is particularly important when the client is seeking information on potentially contentious matters such as politics, religion, race or issues related to pressure groups.
- ◆ Emphasis towards one aspect of the search topic. For example, US sites may devote little space to British developments. Another pertinent example is that sites for UK government departments may include information only for England on devolved issues. This differs from bias in that it is omission of information rather than deliberate over-emphasis of one point of view. Candidates should be aware that emphasis can be more difficult to detect than bias and apply the technique of cross checking more than one site. Again a search on an individual or organisation's name may yield useful information.

Accuracy of factual information can usually be assumed to apply to reputable sites but candidates should cross check using more than one site wherever possible.

Candidates must be aware that the "Last updated" date on a website merely indicates the last time a change was made to any part of the website and that it does not imply that all the content was updated on that date. Candidates must therefore use other indications as to the currency of the information. These indications might include publication dates of documents referred to on the site, references to recent news items, dates quoted within text.

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When the results of a reference enquiry consist of a list of websites as opposed to information extracted from websites, and then further points have to be considered as to its suitability for the client:

Clarity of presentation

The candidate should consider:

- ◆ how straightforward is it to glean specific information from the site
- ◆ ease of navigation within the site
- ◆ avoidance of gimmicks such as unnecessary and obscuring graphics

Use of multimedia

The appropriate use of multimedia can enhance understanding and indeed provide additional information. However, some sites include multimedia such as Flash introductions, which at best are annoying and at worst put off the client due to the delays caused. If the connection to the Internet is not fast broadband, then the delays can be intolerable. Consideration has to be made for sound files or sound tracks of movie clips, which may require loudspeakers to be available or, especially in libraries, headsets to be used. Clearly sites where essential information is presented audibly are not appropriate for the hearing impaired.

Ease of use for visually impaired clients

There are two levels of consideration for the visually impaired client. It may be that a client can use text on the monitor screen if it is very clear and perhaps large size. Here it is necessary to check that the website text is not partly obscured by background graphics such as a quasi watermark effect. Other considerations are whether the text size can be increased by the user and if there is a text only version of the website.

At the level where the client is unable to read text from a monitor screen a text to speech accessory must be used. For this to be a successful experience, the website must be clearly laid out. Also it is important that all graphics have text descriptions. This is vital when it comes to the use of graphics in navigation through the website.

Outcome 5 relates to evaluating the search strategy and its results in terms of validity of information found, client satisfaction and efficiency of search practice.

- ◆ **Estimating effectiveness of search strategy in terms of producing comprehensive, relevant information timeously**

The client's requirements should have been clearly specified during the reference interview. At this point the candidate must review the results of the search against these requirements and review the success of the search against these. It should be recognised that it will not be possible in all cases to fully satisfy the client's requirements. If this is the case, the reasons for this must be explained to the client eg information does not exist in the format specified. The candidate should propose some alternatives if this is possible.

Higher National Unit specification: support notes (cont)

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A key word is “timeously”. The candidate should appreciate that given enough time an unskilled searcher could probably produce the required results, but an information professional should be able to produce the requested information as quickly as possible. Candidates should consider whether their search strategy produced the results in the minimum possible time or if any modifications of the search strategy would yield speedier results. Key to this is the choice of search engines, directories, search terms and logic.

◆ Measuring the cost of a search

The main cost is likely to be in the candidate’s time. The candidate should be able to see the relationship between effective search strategies and both client satisfaction and library efficiency. Other aspects which the candidate should consider are telecommunications charges and any fees for subscription sites, downloading, or costs of “pay per view” commercial sites.

Outcome 6 relates to providing clients with information on an on-going basis. The information must match a specified profile agreed by the information professional and the client. Use should be made of both internal and external current awareness services.

◆ Establishing current awareness requirements of clients

The candidate should establish an information profile for the client. This uses essentially the same skills and techniques as in Outcome 1. However, as well as establishing the nature of information required it is also essential that the candidate agrees with the client how frequently the updates will be provided. The candidate should take into account the costs (in staff time or subscriptions to commercial services) of providing updates and should be realistic about their frequency.

◆ News services

The candidate should be aware that News is a distinct category for current awareness because of the need for immediate notification of breaking events as well as periodical summaries. There are many sites from which to choose and two or three should be investigated.

Three methods of delivery may be distinguished. Firstly the daily digest via e-mail, secondly breaking news events similarly sent by e-mail more or less as they break and finally an online news ticker permanently visible on the computer monitor.

All three have their own advantages, however the candidates must be understand that users may not like a deluge of e-mails which may result from frequent breaking news items. An obvious starting point in the UK is the BBC news e-mail service. Currently Google has started offering a similar service.

Regarding news tickers, they are somewhat platform dependent so that currently the BBC version has restrictions on operating systems on which it can run. (eg not Windows XP).

One relatively recent development is the use of news aggregators, using an XML format such as RSS, to receive relevant news headlines. There is a useful introductory article at: <http://www-106.ibm.com/developerworks/library/w-rss.html?dwzone=web>

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For e-mail delivery services, it is possible to include filters, which give an element of choice of news topics delivered.

Another way to make the topic choice more focused is by the choice of provider. The FT ticker would be a good choice for stock market data. In fact if the candidate carries out a simple search on Google, an array of sites providing specialised news will be found, eg www.bunkerworld.com has both an e-mail delivery service and a news ticker devoted to the happenings in the world of bunker fuel.

◆ **Website alerting services**

Some commercial websites offer an alerting service detailing new products. Of particular interest are the alerting services of journal and book publishers. For journals, it is possible to get the table of contents and sometimes abstracts of the articles. The candidate should get some exposure to finding and using these services. An example is the content alerting feature in <http://www3.oup.co.uk/jnls/> for Oxford University Press Journals.

For book publisher alerting services it is possible to include filters to receive information on particular types of books. An example is the Mailing List feature on www.heinemann.com Booksellers also offer alerting services, with www.amazon.co.uk being an obvious example.

◆ **Website updating services**

The candidate should realise that the contents of websites change and often do so at unpredictable intervals. If an alert can be set up it can solve two problems. Firstly if there is a substantial change to an often-recommended site, the candidate is warned to check up to see if must be re-evaluated for recommendation. Secondly, if data contained in a site is updated at say annual intervals, it is useful to know when the new data becomes available. This is similar to knowing that a new edition of a reference work has been published and needs to be purchased.

◆ **Creating current awareness system for own organisation**

Internal current awareness systems have traditionally involved the physical circulation of print materials to clients. Candidates should operate electronic versions of such services. This will include identification of relevant materials which match the client's information profile. The materials might include internal documents in electronic or print format. Similarly the candidate can identify relevant print or non-print materials from journals, reports etc. Where such are available only in print format, the candidate should scan these into the computer. The candidate should operate a system for e-mailing information to clients within the organisation at agreed intervals. The candidate should also set up web-sourced current awareness services for internal clients. Candidates must be careful not to breach copyright in the course of creating current awareness bulletins. Advice on how to avoid this can be found at <http://www.jisclegal.ac.uk/> and <http://www.cla.co.uk/>.

Higher National Unit specification: support notes (cont)

Unit title: Applications of ICT in Libraries: Carrying Out the Net Navigator Role

Guidance on the delivery and assessment of this Unit

This Unit is part of the Certificate/Advanced Certificate on Applications of ICT in Libraries. This Unit provides advanced knowledge and skills on complex information searching on the Internet. The skills in SLIC 1 (Locating information on behalf of clients) underpin the more advanced searching skills required for this Unit. It is therefore recommended that candidates should undertake SLIC 1 before SLIC 6.

Candidates must have free access to the Internet in order to undertake this unit. Broadband access is preferable but not essential.

The assessment consists of a 40 restricted response questions plus two complex information searches, each of which provides evidence for all six of the unit outcomes. There are no obvious opportunities to integrate the assessment for this unit with that for other units in the Certificate.

With the two complex information searches, the conditions for assessment are lightly controlled. It is therefore important that assessors take steps to authenticate the assessment material as the candidate's own, unaided work.

Open learning

If this Unit is delivered by open or distance learning methods, additional planning and resources may be required for candidate support, assessment and quality assurance.

A combination of new and traditional authentication tools may have to be devised for assessment and re-assessment purposes.

For further information and advice, please see *Assessment and Quality Assurance for Open and Distance Learning* (SQA, February 2001 — publication code A1030).

Candidates with additional support needs

This Unit specification is intended to ensure that there are no artificial barriers to learning or assessment. The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments or considering alternative Outcomes for Units. For information on these, please refer to the SQA document *Guidance on Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs*, which is available on the SQA website www.sqa.org.uk.

General information for candidates

Unit title: Applications of ICT in Libraries: Carrying Out the Net Navigator Role

The purpose of this Unit is to develop skills in working logically through the steps of a complex reference enquiry, typical for a public library, using a complex search strategy, a wide range of Internet resources and current awareness and alerting services.

The Unit is suitable for staff in public libraries who deal with complex information enquiries from clients.

On completion of the Unit you will be able to:

- 1 Define the detail of a complex enquiry in conjunction with the client.
- 2 Demonstrate knowledge of search logic, search engines and features of the Internet.
- 3 Create and implement a complex search strategy.
- 4 Evaluate websites located in a complex search.
- 5 Review effectiveness of search strategy.
- 6 Use ICT to set up current awareness and alerting services.

You will gain hands on experience of interacting with library clients and establishing their complex information needs and using the Internet to search for the required information. This will be done in a real library environment.

The Unit is assessed through:

- 1 40 restricted response questions which test your knowledge, understanding and skills
and
- 2 Two complex information searches. These will be searches related to typical information needs of public library clients.

Some examples of the type of information search are:

- ◆ comparison of attitudes towards EU membership in the old and new accession countries
- ◆ effects of the fluctuations in oil prices on UK manufacturing industry
- ◆ recent literacy initiatives with primary school children in the UK
- ◆ effectiveness of counselling of victims of post-traumatic stress disorder
- ◆ how has the UK tourist industry recovered from the foot and mouth epidemic