CARDIFF UNIVERSITY
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Handbook for Information Literacy Teaching (HILT)

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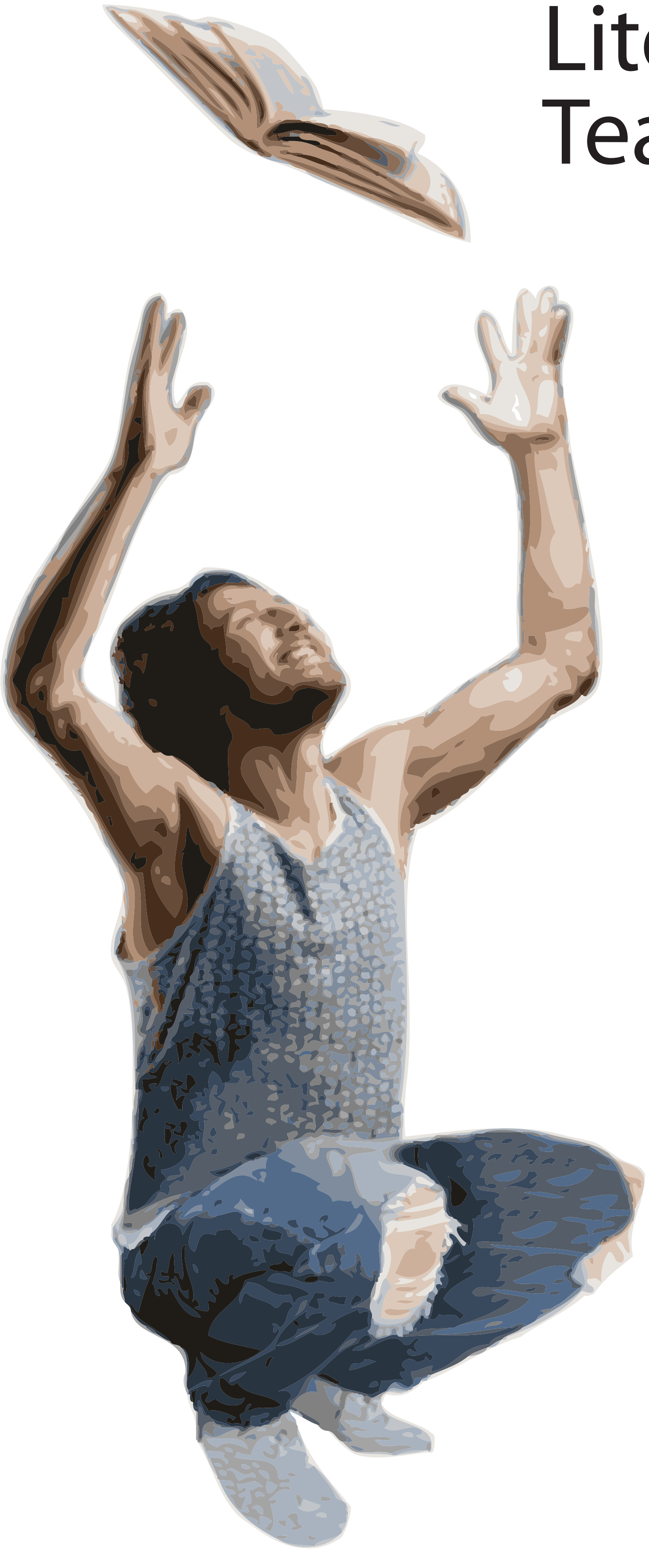

The cover illustration and its insert companion were inspired by Stanley Kubrick's 1968 film 2001: A Space Odyssey. The moment when prehistoric man discovered the use of simple tools was a milestone in the history of civilisation. The ability to use information as a survival tool has had an equally profound impact. The pairing of these images conveys a sense of the evolution and progress of the human race, from a manual to an intellectual dexterity; they emphasise the liberating effects of information on the human spirit. We believe that these images encapsulate many of the principles of information literacy described in this Handbook; they motivate, inspire and demand attention. We hope that you agree.

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Handbook for Information Literacy Teaching (HILT)

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Foreword by Janet Peters

"Information Literacy encompasses knowledge of one's information concerns and needs, and the ability to identify, locate, evaluate, organize and effectively create, use and communicate information to address issues or problems at hand; it is a prerequisite for participating effectively in the Information Society, and is part of the basic human right of life long learning".[1]

Information Literacy has been a key topic in academic library circles for many years, building on the User Education and Information Skills which went before it. The challenge has been to persuade colleagues in academia and education in general that the sacrifice of some teaching hours to demonstrate the importance of being able to identify, locate, retrieve, evaluate and use information effectively is well worth while in developing learning techniques which can be used throughout life. Although this is still not universally achieved, Cardiff University is at the forefront of UK Universities in promoting the value of information literacy to the academic community in various ways. The University has adopted an information literacy Guidance Note for display on its web site; several innovative learning and teaching projects which promote the use of information literacy have won University funding; and this year the Higher Education Academy (HEA) subject centre for Computing and Information Science awarded one of the team the prize for Teaching Excellence.

Naturally, if such a high profile approach is to be taken, the quality of the teaching of information literacy must be excellent by everyone involved. This handbook has been tried and tested by staff both in Cardiff University and now internationally in countries such as Finland, where a locally adapted version has been written in Finnish. It has proved its worth already in providing a consistent and pedagogically sound foundation both for teaching sessions and for one-to-one advice and guidance, and it is extensively updated regularly to include new developments such as Web 2.0. As the product of the work of many experts among the Subject Librarians at Cardiff University, who are acclaimed nationally and internationally for the development of innovative techniques such as the Cephalonian Method, a resource bank of learning objects on Information Literacy and in their involvement in peer review of their own teaching, I commend this handbook to you in the strongest terms. You will wonder how you ever managed without it.

Janet Peters, Director of Libraries and University Librarian, Cardiff University

[1] US National Commission on Library and Information Science. 2003. The Prague Declaration: *Towards An Information Literate Society* [online] Available at: http://portal.unesco.org/ci/en/files/19636/11228863531PragueDeclaration.pdf/PragueDeclaration.pdf [Accessed 23rd July 2009].

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Section 1: Information Literacy - key issues

Summary
The concept of information literacy is introduced with reference to Cardiff University's *Information Literacy Guidance Note*. The key issues covered in this section are:

- IL: concept and strategic context (p. 1)
- IL standards: charting your progress (pp. 1-2)
- Embedding and integrating your teaching into curricula (pp. 3-4)
- Promoting IL (pp. 4-6)
- Keeping up-to-date (pp. 6-7).

Information Literacy: concept and strategic context

Cardiff University places great emphasis on the acquisition of information literacy (IL) skills by staff and students. You will be pleased to know that you work for an institution which has acquired an international reputation for excellence in this field!

IL is defined, and its strategic context at Cardiff explained, in the Information Literacy Guidance Note (see Supporting Document 1, pp. 79-86). It is essential that you are familiar with its contents. See also the INSRV Information Literacy Strategy 2008-2011 (Supporting Document 2, pp. 87-89). Further, one of the key messages identified in the Library Review [1] was that more IL training would be broadly welcomed (see Section 7.7 of the Final Report).

IL Standards: charting your progress

According to the Association of College and Research Libraries' (ACRL) competency standards for IL in higher education, the information literate student:

1. Determines the nature and extent of the information needed
2. Accesses needed information effectively and efficiently
3. Evaluates information and its sources critically and incorporates selected information into his or her knowledge base and value system
4. Individually or as a group uses information effectively to accomplish a specific purpose

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[1] Cardiff University Directorate of Information Services. 2005. *Review of the University Library Service 2004/05 – 2014/15* [online]. Available at: http://www.cardiff.ac.uk/insrv/resources/libraryreview/library_review_final_report.pdf [Accessed: 6 August 2009].

5. Understands many of the economic, legal and social issues surrounding the use of information and accesses and uses information ethically and legally.[2]

To help you assess your teaching against these standards, below are the categories of provision used by the IL audit, conducted at intervals in the University Library Service (ULS). This monitors progress towards the goal of embedding IL into taught programmes of study.

A Orientation. An introduction to library facilities, procedures and arrangement of material. Include in this category training in the use of Voyager and how to find books and journals in the library.

B Achieves outcomes in competency standard **2**. Mainly includes training in the use of specific databases or indexes and/or searching and evaluating the authority of web sites.

C Incorporates competency standards **1** and **2**. In addition to the competencies which will be achieved in category B, the training is focused on identifying and finding information for a specific topic, using a range of information types (books, journals, web resources etc).

D Encompasses competency standards **1, 2** and **3**. In addition to the training in category C, training includes evaluation of the information found, such as the relevance, reliability, objectivity and weight of authority of the content, e.g. critical appraisal. [3]

E Encompasses competency standards **1, 2, 3** and **4**. An IL framework is used to integrate skills teaching. Information searching sessions are fully integrated with sessions on "using information effectively" through, for example, using the information found in the searching session in later sessions in the module.

Subject librarians should aim to achieve at least category **C** in their IL teaching, though it is recognised that this will not always be possible.

INSRV wishes to ensure that you are confident and able to fulfil your IL teaching role. The Instructor Training procedures (Supporting Document 3, pp. 90-91) were approved by the ULS Board in 2005 to ensure that staff are suitably qualified and experienced, and also have the necessary confidence to deliver training of high quality.

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[2] American Library Association. 2000. *Information Literacy Competency Standards for Higher Education* [online]. Available at: http://www.ala.org/ala/mgrps/divs/acrl/standards/standards.pdf [Accessed: 6 August 2009].

[3] Critical appraisal is '[t]he process of carefully and systematically examining research to judge its trustworthiness, and its value and relevance in a particular context'. See: http://www.medicine.ox.ac.uk/bandolier/painres/download/whatis/What_is_critical_appraisal.pdf [Accessed: 6 August 2009] (from which the above quote is taken).

Starting out: embedding and integrating your teaching into curricula

Where possible, IL training should be embedded within the subject curriculum to maximise relevance, timeliness and student motivation. Stand-alone sessions are less effective; it can be difficult for a learner to transfer a skill practised in a generic environment into a subject-specific context.

Ideally, your session(s) will be timetabled within the module. IL should be included in the learning outcomes of the module and any assessment should incorporate an element of testing IL skills (see Section 7 Assessment, pp. 63-67).

Preparing and reviewing your teaching

- **Get the content right:** try to ensure your session content flows from what the students have just been doing in the module into what they will be doing next. Ensure that your teaching is relevant and timely, that the learning will address real needs and that the context is authentic. If possible, try to sit in on a module session preceding yours.

- **Get the academics on your side:** academic staff are best placed to develop certain aspects of IL; they can help students evaluate and analyse critically the information identified in your session. Liaise with lecturers to design the curriculum so that students need to find and read the information and use it for a specific purpose (e.g. for an essay, report or presentation). The School may integrate your undergraduate teaching into its activities to prepare students for academic writing, critical analysis and research skills to meet Quality Assurance Agency (QAA) standards.

- **Opportunities for reinforcement:** students need the opportunity to repeat the process of finding, evaluating and using information for an assessment as soon as possible after your session. If the assessment is for another module, the links between your teaching in the one module and the expectations of the tutors in the other need to be expressed very clearly.

- **Assessment:** use assessment tools which are integrated, such as research trails or i-maps accompanying an assessed essay, rather than non-embedded assessments, such as the creation of a bibliography on a set topic (see Section 8: Assessment, pp. 63-67).

- **Personal Development Plans[4]:** Consider whether it is appropriate to include reflections on IL in the PDP structure suggested by the School.

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[4] The QAA requires that all HE students be given the opportunity for Personal Development Planning (PDP). Schools are required to provide opportunities for students to reflect upon their learning, performance and achievement and plan for their personal, educational and career development. See the University's Personal Development Planning page at http://www.cardiff.ac.uk/learning/themes/pdp/index.html [Accessed: 6 August 2009].

Don't forget – Rome (or Cardiff, for that matter) wasn't built in a day! It takes time to forge relationships with academic staff and to get your teaching fully embedded into modules. Prioritise and plan your strategy carefully – possibly by concentrating your efforts on just one or two courses per academic year. If successful, you can then move on to embedding your teaching in other modules / courses.

Promoting IL

It is vital that you promote IL to your School. Indeed, you may already have established an IL teaching partnership. However, if you have not yet managed to get your teaching embedded, you need to emphasise the importance of IL and generate support. Gauge the method most appropriate to the style and personality of the School.

Strike while the iron is hot! Successful promotion depends largely on your ability to take advantage of available opportunities. If you are well informed and involved with the work of the School, you will be at an advantage.

Promotion to Schools

- Don't be shy! Make contact with key members of School staff, e.g. those on research, teaching and library committees, course directors, the skills co-ordinator and leaders of skills or other modules. Find out which lecturers have an interest in IL and develop these contacts.

- Make links, where appropriate, to IL when attending School meetings and/or staff and student panels. Reciprocate by inviting School staff to IL events.

- Alert relevant staff (such as library representatives, course directors, Heads of School) to the strategic documents noted earlier in this section

- Show examples of instruction materials you have used for other courses and/or those being used by colleagues at other sites. However, make sure you get permission from the originator! Alternatively, consider showing the materials later in this Handbook (pp. 99-166).

- Offer to train lecturers in an aspect of IL, e.g. the use of a particular electronic resource, and then use this as a selling point. If possible, integrate your session into existing staff training programmes in the School.

- Offer to deliver a session in partnership with an academic, e.g. in a session on plagiarism and referencing you could offer to demonstrate and explain the advantages of EndNote. This can effectively reinforce the relationship between your teaching and that of the academic staff.

- Tie-in discussions on IL with other School priorities such as combating plagiarism or PDPs

- Draw attention to Cardiff's IL web pages at http://www.cardiff.ac.uk/insrv/educationandtraining/infolit/index.html and/or to the Information Literacy Guidance Note. These pages provide a digestible definition of IL and explain its benefits. In addition, the IL elevator speech (Supporting Document 4, p. 93) illustrates how you can quickly communicate the importance of IL.

- Keep track of the views and reports on IL instruction of professional or vocational bodies in the subject field, and draw these to the School's attention. In addition, the QAA benchmark standards may be relevant.[5]

Promotion to students

When IL sessions are embedded in curricula, students have a strong impetus to attend. Nevertheless, some well targeted publicity will not go amiss. In order to maximise attendance:

- Get involved in induction / registration week events. Give a lively 10 minute presentation to the whole cohort within the School's orientation programme. This is an ideal opportunity to introduce yourself and highlight the importance of the IL sessions students will be attending.

- If held in induction / registration week, ensure that the library orientation session is included in the student's timetable and handbook and mentioned in the course introductory lecture

- If your orientation session is in week 1 and you have had no prior contact with the students, arrange with lecturing staff to advertise and promote your session through an announcement at the start of a lecture. Better still, drop by and make the announcement yourself (but obtain permission first!).

- Use the orientation session as a promotion opportunity to advertise further events tailored to the particular needs of the student group

- You may want to avoid the term 'information literacy'; 'research skills' may be more readily accepted and understood.

- Be friendly, be approachable, **BE YOURSELF!**

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[5] The Quality Assurance Agency for Higher Education. No date. *Subject benchmark statements* [online]. Available at: http://www.qaa.ac.uk/academicinfrastructure/benchmark/default.asp [Accessed: 6 August 2009].

Promoting IL – a Subject Librarian's perspective **Case study 1**

For me, the best promoters of embedded IL sessions are actually my students. Try to collect as much feedback from your sessions as possible and use that in discussions with academic staff. Nothing surprises academics more than students asking for your sessions to be made compulsory!

When you are talking to lecturers, show your enthusiasm and demonstrate flexibility as well as knowledge of IL theory. Above all, go prepared with plenty of ideas so they are given a choice about how to implement IL in their specific School setting.

And finally, never give up – just be persistent and flag IL skills in all appropriate meetings (preferably without getting on people's nerves!) until you get an agreement for a trial session.

Sonja Haerkoenen, Arts and Social Studies Library

Keeping up to date

IL is an exciting and evolving field. It is important to be aware of the latest developments and thinking in both IL and teaching generally by:

- **Attending IL events and conferences.** Apart from the prestigious Librarians Information Literacy Annual Conference (LILAC), there are excellent regional events organised by CILIP's University College & Research Group[6]. If you are unable to attend, it is worth checking at a later date to see if presentations have appeared on the web. In addition, the IL briefings, ULS briefings and QUILT seminars held in the University are an excellent way to keep abreast of local developments.

- **Networking.** Conferences and events are ideal opportunities to acquire and develop useful contacts and to become part of the wider IL community - they are not simply about attending presentations. These events are usually more informal and friendly than you imagine. Regard networking as an integral part of your attendance.

- **Using mailing lists.** There are some excellent mailing lists which facilitate discussion and the exchange of ideas:
  - Lis-infoliteracy is the main UK IL list. Subscribe at http://www.jiscmail.ac.uk
  - ILI-L is the Information Literacy Instruction Discussion List of the ACRL. This US-based list is lively, dynamic and thought provoking.

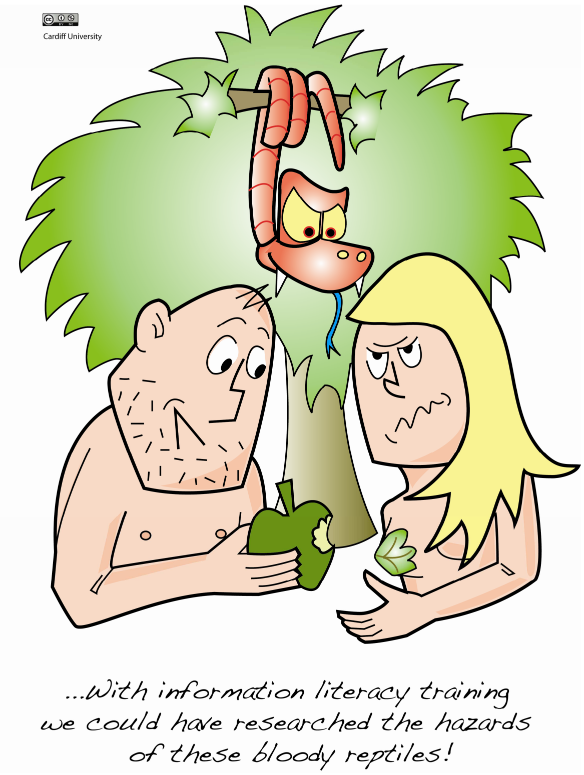
[6] UC&R Group [online]. Available at: http://www.cilip.org.uk/specialinterestgroups/bysubject/ucr [Accessed: 6 August 2009].

Subscribe at http://lists.ala.org/wws/info/ili-l

- **Keeping up to date with the literature.** We all have a busy schedule and this is easier said than done! To assist you, the Further Reading list, pp. 167-174 suggests some excellent recent material. You may want to consider setting up alerts on ZETOC and other services for information on the latest articles in particular aspects of IL e.g. Web 2.0. In addition, websites such as *The Information Literacy Website*[7] are invaluable for drawing attention to the latest influential reports.

- **Thinking globally.** Some of the most exciting IL developments are happening outside the UK so it is well worth keeping abreast of international practice. There are some superb international conferences such as LOEX[8] and LOEX of the West[9] (US). Check out their respective websites to view recent presentations.

- **Keeping your colleagues up-to-date.** We all have a responsibility to share our initiatives with colleagues within the University. You will also acquire *kudos* for yourself and the University by sharing your ideas externally via conference papers and articles. If you have something innovative, don't keep it to yourself – your colleagues want to hear about it! Also, why not contact a member of the HILT Group so that we can incorporate your innovation in the next edition of this Handbook?



[7] http://www.informationliteracy.org.uk/ [Accessed: 6 August 2009].

[8] http://www.loexconference.org/ [Accessed: 6 August 2009].

[9] http://library.mtroyal.ca/lotw/ [Accessed: 6 August 2009].

Section 2: Library Orientation

Summary

Library orientation is an important precursor to IL teaching. This section includes:

- Library orientation: the key issues (p. 9)
- Short orientation sessions (pp. 9-10)
- Longer orientation sessions (pp. 10-12)
- Interactivity – including the Cephalonian Method, Library Bingo and Library Jeopardy (pp. 13-16).

Whilst many of the techniques covered elsewhere in the Handbook are relevant to library orientation, this section gives specific advice on this area. If you are a Library Operations Manager this section may be of particular interest, or if you are a new Subject Librarian you should find this material helpful when planning your first orientation sessions. If you already have substantial experience of delivering library orientation, you may be interested in the suggestions for incorporating interactivity at the end of the section.

Library orientation: the key issues

- The aim of library orientation is to inform students about the services provided by ULS and when, where and how these can be accessed
- Library orientation should always be offered with the agreement of the course co-ordinator and you should check with the School's disability contact to ensure that the needs of any disabled students can be met
- Library orientation is typically the first contact a new student will have with a member of library staff. For this reason, it is vital that students leave the session with a positive impression of the library and its inhabitants!
- The timing of a library orientation session is crucial. Although it is sometimes difficult, try to negotiate with the School to arrange a slot which is timely and of a suitable duration.

A short orientation, e.g. at the start of the first semester

If you are allocated a slot at the very start of semester (possibly within a wider School induction event), don't be tempted to overload students with detailed information: a precise run-down of borrowing entitlements, detailed Voyager demonstrations and information on the number of photocopiers in the library will overwhelm. Students are bombarded with new information at this time and will find it impossible to take all this in!

Keep it friendly, relevant and short. Give a good first impression by being welcoming and approachable; students should feel positive about contacting you when they require help.

Keep the learning outcomes modest and give basic information only. Give relevant handouts such as the library site guide and Voyager guide which students can read in their own time.

Suggested content

Elements could include:

- The location of the library and opening hours
- How to understand a reading list and find the items on it
- Where the library IT rooms can be found
- Accessing library resources and email via the MWE

At this stage, students' requirements may well be more IT- than library-related: check with the School to find out if an IT representative has already covered the key points below, or will be doing so imminently. If not, consider addressing these yourself:

- How to access the internet to email home (students may not be registered to use the network yet, and provisions are made annually for international students to access the internet prior to registration)
- How to log on to the network and also the MWE, for on- and off-campus access
- Where to go to hire a laptop
- How to access Cardiff University E-learning (Blackboard)

Check if there are any questions before you finish. If you cannot provide an immediate answer, offer to pass a response via the course organiser or, if you have instructor access, post a message on Blackboard.

If you are allocated a short orientation slot, try to negotiate an additional session nearer to an assignment deadline at which more detail can be given.

A longer orientation, e.g. near the first assignment deadline

Library orientation should ideally take place at the point of need, i.e. when the first assignment has been set and students need to make use of the library and its resources. This might take the form of a slot within a compulsory 'study skills' module in the first semester.

At this point, students will be starting to think seriously about study and are likely to be more receptive to what you have to say. The lesson plan can be more ambitious; by the end of the session students might be expected to be able to:

- Find library buildings and services
- Recognise different material formats (book / journal / photocopy / other specialist types)
- Locate these materials in the library
- Use Voyager to find materials from their reading list

- Borrow, reserve, renew and return material and manage their Voyager account
- Show awareness of the existence of electronic books and electronic journals
- Show awareness of photocopying / scanning / printing facilities and the laws associated with their use
- Observe library regulations relating to responsible and safe conduct in library buildings
- Show awareness of the availability of services for disabled users and know how to access / arrange these if required.

Suggested content

Elements could include:

- Cardiff University libraries
    - concept of the home library and other libraries
    - opening hours *
    - other instruction / training offered
    - availability of help from service points

- Your University I.D. card
    - how to get it if not yet received
    - your library barcode number
    - responsibility for the material borrowed on it – report loss immediately
    - only you can borrow material against the card

- Voyager demonstration and / or practice exercise
    - understanding a reading list
    - keyword, author browse, title, journal search options
    - electronic resources available via Voyager
    - online renewals and reservations
    - viewing your library account
    - point out that library communications will be sent to University email addresses

- Material types and their locations
    - short loan, main, reference, special collections, journals, folios
    - purpose of classification and filing order of classmarks

- Borrowing
    - procedure (including self issue where applicable)
    - loan periods
    - charges for overdues *
    - regulations

- Printing and photocopying / scanning
  - how to use *
  - networked payment account for printing and photocopying
  - awareness of copyright law *

- Studying
  - different types of study area e.g. silent, quiet, group discussion (and booking procedures for group study)
  - availability of laptop points, wireless network points

- Information Technology
  - locations
  - logging in procedures
  - accessing the MWE
  - understanding passwords
  - sources of help and training
  - availability of Wireless network

- Safe and responsible use of the library
  - where eating and drinking are permitted
  - noise (mobile phones, personal stereos)
  - care of personal valuables
  - location of fire alarms and exits

- Availability of facilities and services for disabled users
  - extended loan periods
  - book fetching service
  - software to assist with grammar and spelling and visual impairments
  - hardware to assist with mobility impairments
  - whom to contact to arrange or access the above services

* Points marked with an asterisk might be best conveyed by referring to printed or online guides rather than by verbal recitation!

Interactivity in library orientation

A more detailed, timely library orientation needs to sustain interest and students should be enthused by the experience! You may find it beneficial to engage students in some kind of activity.

Using the Cephalonian Method for library orientation **Case study 2**

I've been using the Cephalonian Method for my first year undergraduate library inductions. It makes the presentations a lot more interactive, interesting, humorous and attention-grabbing – for the student as well as the librarian. It puts the fun back into inductions and motivates the Subject Librarian again, increasing the students' willingness to participate in future information literacy sessions. Use background music, colour-coded cards with questions about available information services and lively presentations to introduce INSRV to the students – I can highly recommend it!

Sonja Haerkoenen, Arts and Social Studies Library

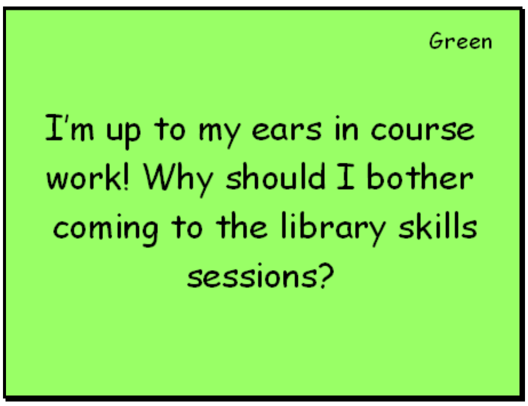
For further information see:

Morgan, N. and Davies, L. 2004. Innovative induction: introducing the Cephalonian Method. *SCONUL Focus*, 32, pp. 4-8.

Cephalonian Method

This is a world-famous method of library orientation, invented at Cardiff University. If you feel inspired to try it, here's how:

- Organise your orientation material into themed areas such as 'Finding reading list items', 'Facilities and services' and 'Miscellaneous information'
- Devise a series of questions for each theme and prepare an answer slide for each question
- Colour-code your answer slides using a different colour for each theme, and produce coloured laminated question cards to match



- Hand the cards randomly to students as they arrive. Print the colour on the card to avoid excluding students with colour perception impairments.
- Work through your colour-coded themes inviting your audience to deliver their assigned questions. For each question, select the corresponding PowerPoint slide. Bear in mind that you will not know the order in which the questions will be asked within each section.

For examples of typical Cephalonian Method slides, see Example 1, p. 99. Alternatively, a link to a complete Cephalonian orientation presentation can be found on the INSRV IL web page.

HILT Pick

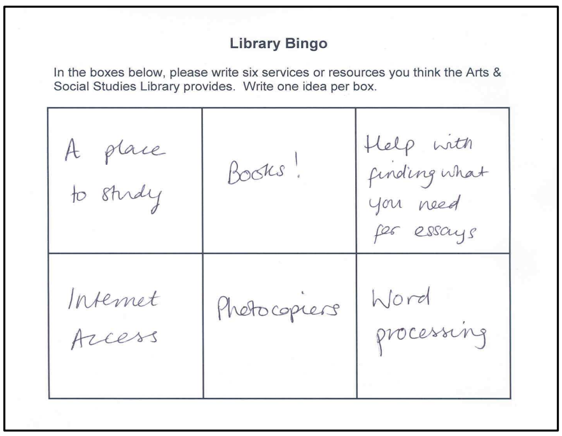
Why not try combining the Cephalonian Method with 'clickers' technology for students to vote on answers to questions? This will involve your audience to an even greater extent!

Library Bingo

Pioneered by Andy Jackson (University of Dundee)[1], this is another way of confounding students' expectation that they have just arrived at a 'boring library talk'.

How to play:

- Give each pair (or small group) of students a blank 'bingo card'. This will have a grid of, say, 6 empty boxes printed on it.
- Ask each pair to write in the boxes six services or resources they think the library provides



Library Bingo

In the boxes below, please write six services or resources you think the Arts & Social Studies Library provides. Write one idea per box.

A place to study	Books!	Help with finding what you need for essays
Internet Access	Photocopiers	Word processing

[1] Jackson, A. 2007. Are we having fun yet? Interactive lecturing techniques for librarians. *ALISS Quarterly* 2(4), pp. 35-39.

- Begin the bingo session by calling out items from a prepared list of library services, e.g. 'Printing & Photocopying', 'Borrowing Books' and 'Getting Help'. Ask the students to strike off items whenever they have a good match. After you call each item, give an explanation of that service or resource. You may call from your list at random for a true 'bingo hall' experience or follow the more measured advice of Andy Jackson:

  > to sustain this process, the presenter should start with less 'guessable' resources (e.g. thesis binding, self-issue) at the beginning, with featured resources becoming more general in nature (e.g. books, photocopying facilities) towards the end.[2]

- A prize could be awarded for the first group to cross off all the items on their bingo card
- Round off the game by asking the remaining students to call out any other services they had entered on their cards. Explain whether these are offered and, if not, why this is so. This is a great way of starting a dialogue about the purpose of the library and its services.

Jeopardy

Library Jeopardy is a variation on a US TV quiz show and was developed by library instructors at Georgia State University Library[3]. It is also extensively used by Billie E. Walker[4] at Penn State University.

How does Library Jeopardy work?

- The instructor creates a bank of questions and answers, grouping them under various categories with one of a range of notional 'prize values' attached to each question.

Citation Basics	Go To Jail	Format Frenzy	Caught In The Web
$200	$200	$200	$200
$400	$400	$400	$400
$600	$600	$600	$600
$800	$800	$800	$800
$1000	$1000	$1000	$1000

Image provided by Nichole Berry, Reference Librarian, Collin College, Texas.

[2] Ibid, p. 36.

[3] Leach, G. J. and Sugarman, T. S. 2005. Play to win! Using games in library instruction to enhance student learning. *Research Strategies* 20(3), pp. 191-203.

[4] Walker, B. E. 2008. This is jeopardy! An exciting approach to learning in library instruction. *Reference Services Review* 36(4), pp. 381-388.

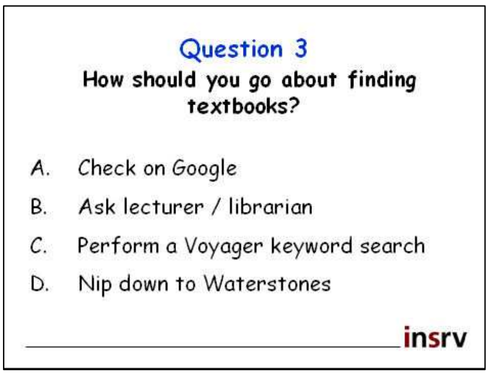
- The category grid is shown on the projector screen and teams of 3 or 4 students take turns to select a category, e.g. Citation basics, and a prize value
- In each case, the instructor reads out the corresponding question giving the team a set time in which to answer. The answer is then displayed on the screen and discussed / illustrated as required.
- If the team gives a correct answer, they are awarded points according to the prize value of the question. If they get the answer wrong, these points are deducted from their score.
- The next team is invited to choose a category and prize value, and so on until the questions have all been covered
- A prize of some kind could be awarded to the winning team.

Library Jeopardy can be used in other contexts. Why not try it to test understanding at the end of a session covering search techniques and databases?

Other suggestions

- **Hold an open discussion:** for small groups, try initiating a discussion at the start of the session by asking students what they expect from the library service
- **Invite written questions:** for larger classes, leave cards and pens around the room. Ask students to form groups and to come up with an appropriate question, then ask as many groups as possible to read out their suggestions.
- **Audience Response Technology (aka 'clickers'):** if you are feeling slightly more adventurous, why not consider giving 'clickers' a try? This enables you to pose questions to your audience which they can answer electronically via handheld devices. Instantaneous feedback is delivered to your PC and hence the projector screen! (See Section 5: Teaching Technologies, pp. 39- 40 for further information.)
- Alternatively try the *Ready Steady Cook* approach if technology is unavailable. Give your audience sets of coloured or labelled cards which can be held up in response to the questions you have prepared. You could use a PowerPoint slide to present the question and the available options.

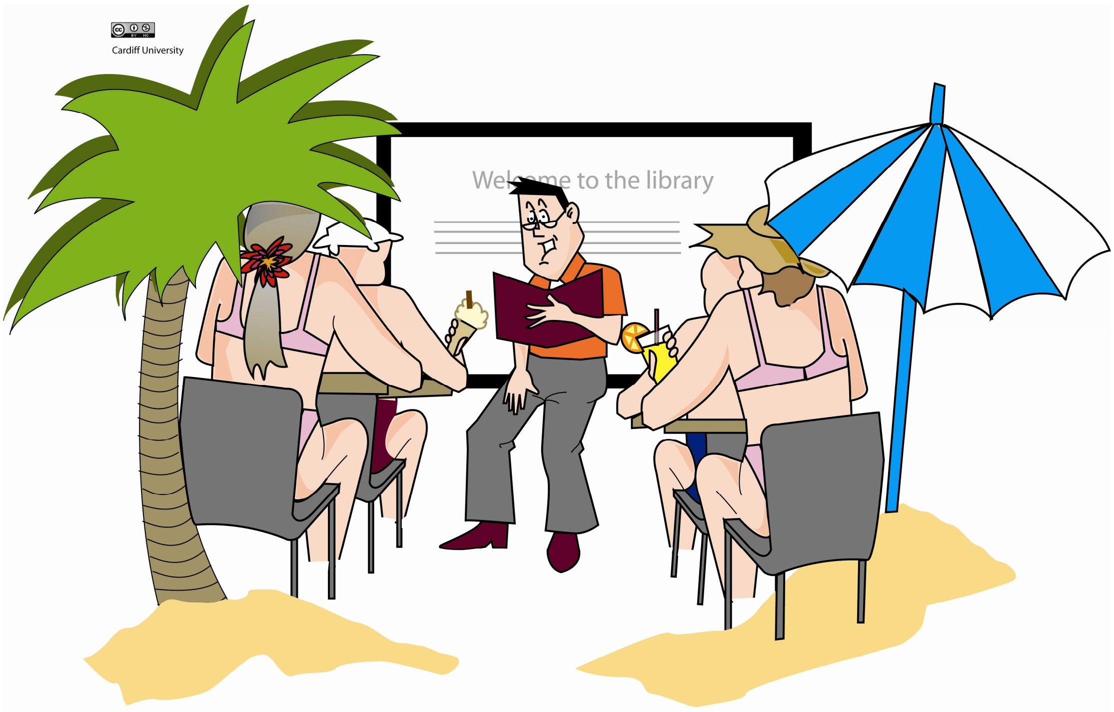
  For example:



  Students will hopefully hold up the card labelled 'C' in response. This can be a useful way of gauging student understanding.

What next?

Library orientation is the start of what should be a rewarding relationship between students and the library. In consultation with the School, follow this up with more in-depth IL training. Your aim should be to equip students with the full range of skills they need to get the best out of the library and its resources throughout the course of their studies.



...I've heard that the Cephalonian method can transform library orientation, but this is ridiculous!

Section 3: Lesson Planning

Summary

The lesson planning process is discussed. Key features of this section include:

- Writing learning outcomes (pp. 19-20)
- Creating lesson plans (pp. 20-21)
- Preparing instructor notes (pp. 21-22)
- Handouts (pp. 22-25)
- Sharing training materials (p. 26)
- Considering your learners (pp. 26-28)
- Being flexible (pp. 28-29)
- Planning and reflection (p. 30)
- Teaching overseas students (pp. 30-31).

Starting to plan your teaching session

Effective planning is key to successful teaching. Consider the following when you start to plan your session:

- **Allow enough time.** The time involved in the preparation of a new session will be several times the amount spent delivering the training. Even when a session has been run previously, experience suggests the ratio will be at least 2:1.
- **Avoid making your session too content-heavy.** Think about how much your students can learn rather than how much you can teach. You can actually teach at least three times as much as they can learn!
- **Think innovatively.** If you are running a session which has been delivered previously by colleagues, it is tempting to leave the content and format as it is. Instead, take a fresh look and see if you can find a better approach.

Writing learning outcomes

Your first step is to identify learning outcomes for the session. Learning outcomes are clear, precise statements of what the learner will know or be able to do as a result of attending your session.

Ideally, your session will be embedded in a module. Each module or course of study will have a set of learning outcomes so use these as a basis for developing learning outcomes for your session. Discuss with the module leader.

Learning outcomes can be aimed at different learning levels. For example, a learning outcome beginning with the word ‘evaluate’ will involve a higher level of learning than one beginning with the word ‘identify’. They can be:

- Task-based e.g. ‘at the end of this session students will be able to make efficient use of Voyager to find journal articles from reading lists’
- Generic e.g. ‘at the end of this session students will be able to perform effectively in small-group work’.

Ensure the learning outcomes are stated in student-centred terms. They should focus on what the student will be able to do rather than what you will have taught them. In theory, there are three parts to a learning outcome:

- **task:** an observable action stated in active terms such as to ‘list, identify, state, select, solve, calculate, write, demonstrate, match, translate or distinguish between’. Avoid passive terms such as ‘understand’ or ‘appreciate’.
- **standards:** indicate the proficiencies which the student must achieve; they should be measurable. They can be of three main types: accuracy, speed, quality, e.g. ‘without error’, ‘within ten minutes’, ‘in a coherent and well-organised fashion’.
- **conditions:** describe how the task will be carried out, such as the range of problems to solve, the tools or equipment to be used, any special aids or manuals provided, environmental conditions, special physical demands, e.g. ‘without reference to a manual’, ‘by checking the provided chart’, ‘by using the evaluation checklist’.

In practice, while it is important to set the **task** and the **standards** in your learning outcomes, you may find that in the context of IL teaching it may not always be appropriate to set **conditions** for the activities. Examples of learning outcomes are given in the lesson plan in Example 2, p. 100 and in the instructor notes in Example 3, pp. 101-102.

Creating lesson plans

Lesson plans set out the learning outcomes, content and structure of a session. They are intended for the benefit of the learner. They provide a useful tool to manage the expectations of learners and can help them prepare for the session. Together with instructor notes, they should help a colleague deliver a session in your place should the need arise.

Lesson plans: items for inclusion – checklist

- Course title (e.g. MBA, Year 1 Medicine), session title, and date and time of session and your name
- The learning outcomes of the session
- Details of the session content including a description of any activities indicating if these will be assessed
- Details of any required preparation such as pre-session reading or the completion of online tutorials
- Sources of help outside the session

Lesson plans can be in different formats:

- Use a lesson plan template or devise your own. A template is available at S:\TEMPLATE\INSRV Templates\Internal Templates but there are many other good examples in the literature.
- If you are distributing the lesson plan to learners and the sessions are embedded within a module, you may be required to use the School's template.

See Example 2, p. 100.

Whichever format you use, your lesson plan will need to be clear and accessible. The recommendations for the preparation of handouts on pp. 23-24 and the guidelines in Supporting Document 6 pp. 96-97 are also applicable to lesson plans.

Where possible, distribute lesson plans prior to the session; this will be essential if any advance preparation is required of learners. There are a number of options:

- Hand them out at the start of an IL programme
- Hand out plans at the start of each session
- Ask academic staff to distribute them at an appropriate lecture before the session.

As an alternative to a lesson plan handout, you may wish to use the first few slides of your PowerPoint presentations for the purposes outlined above. It is good practice to distribute a handout of the presentation.

Preparing instructor notes

Preparing good instructor notes is an important element of your planning. They should provide a practical framework for the session and will assist you during delivery. They can also enable a colleague to deliver a session in your absence.

Instructor notes should include two elements:

- **Information on the session content:** i.e. the core points including examples to be used in demonstrations
- **Information on the process by which that content is to be delivered:** for example, whether the content is to be delivered only by the instructor (instructor-led learning) or through the instructor asking the group questions and developing the content through the responses (student-focused learning). Will the questions be put to the whole group (global questioning) or to named individuals in turn (specific questioning)?

Instructor notes: items for inclusion - checklist

- Course title (e.g. MBA, Year 1 Medicine), session title, and date and time of session (if applicable)
- Checklist of items to bring or things to set up at the start of the session, including:
    - Handouts to be distributed
    - Evaluation sheets
    - Equipment that needs to be set up
    - Any other special instructions
- Sub-headings together with timing guidelines
- Details of example searches or demonstrations
- Details of activities / how the students will learn
- Your initials, filename given to the document and date of last revision. These should be at the end of the document.

A template is available at: S:\TEMPLATE\INSRV Templates\Internal Templates.

The precise format and design of instructor notes inevitably depend on the nature of the session and your own preferences. When using PowerPoint, instructor notes may be added to each individual slide and printed off using the Notes Pages output format (see Section 5: Teaching Technologies, p. 49 for further information).

To assess whether your notes are sufficiently clear, you may wish to ask a colleague to read them and consider whether he / she would be able to use them to deliver the session.

Example 3, pp. 101-102 illustrates a useful approach whereby the instructor notes take the form of a detailed plan, including learning outcomes.

Handouts

Handouts are useful:

- as a memory aid - students will have information to refer to after the lesson
- to encourage good note-taking practice - students are more likely to be engaged in the presentation when not preoccupied with taking down the main points
- to allow students to recap on key points during a presentation.

They may take various forms:

- **Directly related to session content**, e.g. a PowerPoint-generated handout of a slide presentation. See Example 4, pp. 103-105.
- **As an information sheet or permanent source of reference**. See Example 5, p. 106 and Example 6, pp. 107-114.

- **As a worksheet / workbook to be completed by the students as a session progresses**. See Example 7, pp. 115-118, Example 8, pp. 119-120, Example 9, pp. 121-122 and Example 10, pp. 123-126.
- **As a combined workbook and permanent source of reference**. See Example 11, pp. 127-133 and Example 12, pp. 134-138.
- **As an activity sheet to spark discussion amongst students**. See Example 13, pp. 139-140.
- **As an evaluation aid / checklist**. See Example 14, pp. 141-142 and Example 15, pp. 143-144.

Preparing handouts

Consider identification and layout:

- Include your name or initials, your library and the date of preparation, and also the **course** of study, the **module** and the **title** of the session
- When sessions are embedded within a teaching module the School may require the handout to follow its house style
- Handouts must conform with the requirements of the current INSRV Communication and Style Guidelines which are available on the Communications section of insrvSpace.

Bear in mind the requirements of the Disability Discrimination Act (DDA).[1] This places a duty on all educational institutions to make reasonable adjustments so that disabled learners are not put at a substantial disadvantage. Learners who are dyslexic, have concentration difficulties, or are visually impaired will benefit from the following measures:

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[1] *Disability Discrimination Act 1995* [online]. Available at: http://www.opsi.gov.uk/acts/acts1995/1995050.htm [Accessed: 6 August 2009] as amended by the *Special Educational Needs and Disability Act 2001 (SENDA)* [online]. Available at: http://www.opsi.gov.uk/acts/acts2001/20010010.htm [Accessed: 6 August 2009] and the *Disability Discrimination Act 2005* [online]. Available at: http://www.opsi.gov.uk/ACTS/acts2005/20050013.htm [Accessed: 6 August 2009].

Accessible handouts – checklist

- ✓ Prepare handouts using at least 12pt Arial font
- ✓ Use bold text for headings and avoid feint text at all times
- ✓ Avoid excessive use of capitalisation, underlining and italicisation
- ✓ Leave plenty of space between blocks of text
- ✓ Left justify text and leave the right margin jagged
- ✓ Use matt finished paper in cream or pastel colours
- ✓ Keep an up-to-date electronic copy for advance circulation, if requested

For more information refer to Supporting Document 6, pp. 96-97.

Testing

Whichever type of handout is used, it should be well-structured, well-designed and checked rigorously for errors. It is good practice to ask a colleague to check it, to ensure that the information and any instructions given are clear and correct.

Creative use of handouts

Handouts can be used to provide opportunities for active learning during the lesson by, for instance, leaving blanks for students to fill in or by inserting a ‘question’ slide and asking them to make appropriate notes on the handout. This helps students engage with the material and encourages critical thinking.

If you are distributing copies of your slides at the start of the session, don't necessarily include them all. You may hold students' attention more effectively if you include a few surprise elements in your delivery!

HILT Pick

Use word clouds to liven up your teaching materials. Word clouds are visual representations of text giving greater or lesser prominence to words depending on how often they appear in the source text. They can be produced in a wide variety of styles and colours. An example word cloud (based on text from this section) is shown below. For an example which was used on a handout, see Example 16, p. 145. Free software for creating word clouds is available at http://www.wordle.net/

Sharing training materials: the Training Materials Repository

The Training Materials Repository has been created to facilitate the sharing of training materials within INSRV. Everyone is encouraged to upload their own materials which they would like to share with other teachers in the Division. You can also make use of the materials already on the repository and adapt them for your own needs.

The repository is available as a Blackboard module at http://blackboard.cf.ac.uk (log in to Blackboard using your usual network username and password). The Training Materials Repository module is visible to registered users only, so please email Blackboard@cardiff.ac.uk if you are a member of INSRV and would like to be registered.

A structure has been created to make it easier to organise the materials. Categories include:

- Orientation and Voyager
- Finding Information
- Evaluating information / critical appraisal
- Plagiarism and Referencing

Notes on how to add your own materials, and how to download files from the repository to adapt for your own purposes, are included in the 'Guidelines' section of the module.

Considering your learners

Learners will already have developed strategies for finding information, for example, using a search engine. You will need to design lessons which build on existing experience but create opportunities to assimilate or accommodate new techniques to old understanding.

HILT Pick

Challenge existing practice by using an activity which asks students to evaluate resources they rely on such as Google and Wikipedia; see Example 10, pp. 123-126 and Example 13, pp. 139-140.

Also think about the following issues:

- **Skill levels.** Within any group, skill levels will vary. Your planning will need to recognise and accommodate the variations in skill levels across the group. Consider auditing skills through a pre-session questionnaire.
- **Motivation.** The most effective learning takes place when it is based on real needs and placed within authentic contexts. Try to optimise relevance and timeliness, for example by basing the session on a forthcoming assignment.
- **Learning preferences**.
    - People learn in different ways. Some learners like to look at the big picture then fill in the details later; others prefer to learn in a logical sequence achieving a complete overview at a later stage. Try to appeal to different preferences by offering a choice of activities.
    - Different formats such as worksheets or online tutorials can also cater for different preferences
    - You can cater for a number of learning preferences within the same session. For example, if you are defining ‘plagiarism’, you could use more than one of the following methods:

Method	**For students who prefer to learn by…**
Use a PowerPoint slide with a text definition	reading the detail themselves
Verbalise the concept using alternative words to the slide	hearing a concept explained
Give an example of plagiarism	applying a concept to real life
Ask the learners to suggest definitions of plagiarism themselves	exploring a concept in an open-ended way and taking part in discussions
Use a PowerPoint slide featuring a cartoon about plagiarism	engaging with visuals and humour
Give a personal account of a plagiarism incident	relating to concepts in a personal way

- **Support needs.**
    - Check with the School’s disability contact to find out if there are learners with additional support needs and, if necessary, seek advice on how best to include them

- o The Disability Discrimination Act (DDA)[2] places a duty on all educational institutions to make reasonable adjustments so that disabled learners are not put at a substantial disadvantage
- o When designing activities, consider the demands on all learners' capacities such as vision and hearing, concentration and stamina, social skills and awareness
- o General principles for planning accessible teaching sessions include:
  - Creating a logical structure
  - Making handouts available in advance, either electronically or in paper form
  - Using multiple modes of communication
  - Varying methods of presentation
  - Planning mini-breaks or changing activity types
  - Incorporating checks on learner understanding so you can monitor the effectiveness of your communication
  - Ensuring your plan is flexible so you can offer options to learners.

For further information see Supporting Document 5, pp. 94-95

Being flexible

Your learning outcomes can be achieved in a variety of ways. Build some flexibility into your plan so that you can react to the situation on the day.

- **Allocate free time.** If your session is 90 minutes long, plan for 70 minutes of lesson content. Allow 5 minutes at either end for students to arrive/leave and save the remaining 10 minutes to be used elsewhere in the session. This might be used to:
  - o Give the students a break if necessary
  - o Review progress with the class: are you meeting the learning outcomes?
- **Prepare extra material**
  - o To have further activities available for quick learners if they complete the scheduled work

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[2] *Disability Discrimination Act 1995* [online]. Available at: http://www.opsi.gov.uk/acts/acts1995/1995050.htm [Accessed: 6 August 2009] as amended by the *Special Educational Needs and Disability Act 2001 (SENDA)* [online]. Available at: http://www.opsi.gov.uk/acts/acts2001/20010010.htm [Accessed: 6 August 2009] and the *Disability Discrimination Act 2005* [online]. Available at: http://www.opsi.gov.uk/ACTS/acts2005/20050013.htm [Accessed: 6 August 2009].

  - To be able to choose appropriate material in response to the way in which the lesson is unfolding. If you take this approach, ensure that you are still able to cover the learning outcomes.

- **Put yourself 'on the spot'.** Instead of demonstrating a model search example, ask learners for a topic during the session. This takes confidence as you will have to think on your feet. However, students will see you work through an authentic search and get a flavour of the kinds of problems they may encounter. Avoid putting yourself under too much pressure by having an example search prepared as a backup, and do not be afraid to amend any search suggestion to suit your purposes.

Using a flexible approach **Case study 3**

A small group of research postgraduates is likely to have a diverse range of subject interests. How can you cater for this? A good way to start is to let them introduce themselves and say a bit about their research. This acts as an ice-breaker. It also offers you the opportunity to use some of their topics in your demonstrations rather than preparing your own topics in advance.

Question the group to check for prior familiarity with a database. You can then adjust your demonstration if needed. A PowerPoint presentation with links to the sources you are demonstrating usually works well. It gives your sessions structure but still allows you to vary the depth of coverage and time spent on individual sources.

For the hands-on part of the session, allow them to explore their own research subjects, using a variety of information resources. Use an exercise sheet with a variety of topics which will give them a chance to pick and choose according to their own interests. Mark at least one of the exercises 'Research topic of your choice'.

Our feedback indicates that postgraduate research students welcome the opportunity to try out their own research subject using the sources you are demonstrating. Your lesson will still need to be mapped out in advance, but its structure and content will be sufficiently flexible to cater for their individual interests.

Jane Sparks, Science Library

Planning and reflection

It is important that students become reflective learners. A fuller appreciation of the learning process will enable them to learn more effectively. Reflection can take a variety of forms:

- **Reflecting on past experiences.** Allow time in your lesson plan for learners to reflect on their previous experiences when searching for information. Alternatively, ask them to search for information on their current topic using their preferred methods, then get them to discuss in pairs the validity of their results.
- **Reflecting on what they have learned in the session.** Towards the end of a session, ask learners to engage in some reflective thinking. This could involve writing down three things they will do differently as a result of attending the session or three questions which have been raised in their minds.

It is equally important for **you** to be a reflective teacher. See Section 8: Evaluating your Teaching (pp. 69-75) for further information.

Teaching overseas students

You are unlikely to find yourself teaching groups of students who are exclusively from overseas; a typical class is likely to comprise a mix of home and overseas students. It could be helpful, however, to check on the number of international students by contacting the School in advance.

- **Speaking**
    - At the start of semester, remember that some overseas students may have just arrived in the country. They may still be adjusting to speaking and listening exclusively in English and may need time to 'tune in' to your accent – try chatting informally with them as they enter the classroom.
    - Don't slow your delivery but speak clearly, facing your audience. Try not to use long, complex, rambling sentences.
    - Avoid colloquialisms and idiomatic speech. Try to define any library jargon as you use it.

- **Checking understanding**
    - Smiling and nodding from your audience may be a sign of politeness rather than comprehension! Ask open questions to check understanding.
    - When asking questions, give students sufficient time to answer. Don't pre-empt their answers by answering the question for them should they hesitate. Instead, offer a word or two to help them along.

- **Working together**
    - Working in pairs can help students who lack confidence in English
    - Getting students to write answers on post-it notes or on whiteboards might encourage those who are nervous about speaking.

- **Other considerations**
    - Don't 'dumb down' for overseas students. Pitch the content at the same level as you would use for an exclusively native-speaking audience.
    - Provide written versions of all teaching materials you are using
    - Avoid obscure cultural references or those which may be very specific to your own background. Avoid topics which, though they may be generally familiar, could be culturally contentious[3].

[3] A number of these tips were adapted from Amsberry, D. 2008. Talking the talk: library classroom communication and International Students. *The Journal of Academic Librarianship* 34(4), pp. 354-357.

Section 4: Lesson Formats

Summary

Different lesson formats are discussed and planning tips are given for each. This section includes:

- Planning a lecture (pp. 33-34)
- Planning a workshop, including small group discussions (pp. 34-37)
- Planning one-to-one teaching (pp. 37-38).

Planning a lecture

Circumstances may require you to deliver a session to a large number of students in a lecture hall, offering you little choice of teaching method. The lecture format is popular and widely used but it can be a challenge to retain interest and enable learning. When starting to plan a lecture ask yourself:

- **Can I try a team approach?** Short contributions by a number of lecturers can help sustain student interest.
- **Am I using PowerPoint effectively?**
  - Ensure the slides are supporting your lecture rather than leading it. Decide on content first and then create your slides.
  - For tips on designing slides see Section 5: Teaching Technologies, pp. 48-49.
- **How should I pace my lecture?** Try and change pace frequently. Don't dwell too long on drier sections and insert something light-hearted from time to time. Another way of changing pace is to move from talking to showing a video, or from demonstrating a database to playing an audio clip.
- **How can I make the lecture more interactive?** Techniques such as quiz formats can be used to involve learners (see Case Study 4, p. 34). Other techniques include getting students to discuss something in pairs followed by feedback to the group or asking them individually to write down a question related to the content of the lecture. You could then respond to these questions. Consider adopting these approaches for orientation sessions (see Section 2: Library Orientation, pp. 9-17).
- **How should I plan the timing of my lecture?** If your slot is 50 minutes, plan for 40 minutes of content. Remember that it will take a while for a large cohort to file in and out of the lecture hall.

- **How can I maintain interest right to the end of the lecture?**
    - Plan to end with an activity rather than inviting questions, which can be a cue for students to start packing up. Try to incorporate opportunities for questions throughout your lecture.
    - The closing activity could involve asking each student to write down the three most important points from the lecture and then share them with their neighbour. This helps students reflect on what they have learned.

Structuring a lecture in a quiz format **Case study 4**

This is a simple and effective method of introducing variety and interaction into this traditionally passive format. Students are handed an engaging multiple choice quiz sheet at the start (see Example 17, pp. 146-147) and have a few minutes to complete this. About eight or nine questions are sufficient. The lecture is structured in such a way that the answers are revealed at appropriate points and act as catalysts for the presentation of related material.

In the accompanying PowerPoint presentation (see Example 17, pp. 148-149) the correct response to the question *"How important is it to use the World Wide Web for your academic research?"* is C. When the answer is revealed (a few PowerPoint tricks can be used to increase suspense!) the lecturer can move on to explore quality issues on the web and evaluation criteria. This format is great for providing opportunities to interact with the audience (*"which option did you go for?"* or *"why did you choose that answer?"*). Also, students can tot up their score at the end to gauge their success – a fun way to finish!

Nigel Morgan, Science Library

Planning a workshop

Small-group teaching commonly takes place in IT training rooms. This offers greater opportunity for incorporating 'hands-on' activities, peer learning and discussions than a lecture. When starting to plan a workshop ask yourself:

- **How can I engage learners from the start?** Consider planning an activity for the beginning of the session rather than starting with a conventional introduction. For example, try asking students to make a list of resources which they normally use when searching for information and then to discuss these with their neighbour.
- **How do I ensure students find the session relevant?** Where possible, link the research topic to a forthcoming assignment, see Example 11, p. 127-133.

- **How should I allocate PCs?** The allocation of PCs can affect the dynamics of a session. Generally, students prefer working at their own PC. However, you can encourage discussion and interaction by getting pairs of students to share a machine. Example 9, pp. 121-122 is a worksheet used by groups of 2 or 3 students who had explored a particular database together whilst sharing a PC.
- **When teaching a particular resource, how much teacher input do students need before getting 'hands-on' practice?**
    - Try getting students to tackle databases with little prior instruction. Students will experiment with different approaches and learn in a way that is authentic and transferable to tackling new databases in the future. You could then follow this with a demonstration to consolidate their learning.
    - A more conventional (though often less effective) method is to set a structured exercise prefaced by a five minute introduction / demonstration.

HILT Pick

Describing keywords

Put this in the context of students' day-to-day lives by asking the whole group to shout out keywords which describe, say, a can of coke. Use this as a warm-up before asking them to tackle keywords for their essay topic. (Courtesy of Sarah Faye Cohen, Janet R. Cottrell and Cinse Bonino, Champlain College, Vermont, USA).

It is a challenge to keep learners engaged. Remember that evidence suggests that a student's attention span drops markedly after twenty minutes so ensure you plan a session which incorporates a good range of learning experiences. Two useful methods of engaging learners within workshops are mind maps and small group discussions (see overleaf).

Mind mapping **Case study 5**

Mind maps can be a very visual way of illustrating links between keywords and topics. A concept is put in the middle of a piece of paper, then lines radiate out and related keywords, ideas or even pictures can be added. Links can then be drawn to show relationships between keywords and to suggest how they could be combined.

Mind mapping can work as an individual or group activity. To encourage collaboration and brainstorming you could divide a class into groups of four, each being given an essay question and some guidelines on how to produce a mind map, using a flipchart and coloured pens.

I have found that, by using mind maps, students tend to produce a wider range of keywords than if they'd made a quick list and gone straight to a database. Working in this way also encourages more reticent students to contribute to the discussion.

Mind mapping doesn't have to be a large component of a session as it doesn't suit everyone. However, students haven't necessarily seen it before and it can be a good exercise away from computers. One of my students said he was going to use this method to plan out other essays!

Ruth Thornton, Trevithick Library

For more information about mind maps see:

Buzan, T. 2005. *The ultimate book of mind maps: unlock your creativity, boost your memory, change your life*. London: Thorsons.

Planning small group discussions

Discussions can be a useful way of getting learners to communicate with each other and to explore ideas. When starting to plan a discussion ask yourself:

- **Will a whole-group discussion be possible?** The size of your group will affect the success of the discussion. Numbers may be determined by the School, but if you have the option of choosing, the following table will assist in determining the most appropriate group size for the session:

3-6 people	everyone speaks
7-10 people	almost everyone speaks. Quieter people say less. One or two may not speak at all.
11-18 people	5 or 6 speak a lot, 3 or 4 join in occasionally
19-30 people	3 or 4 people dominate
30+ people	difficult to have a whole-group discussion

- **Should I split my class into smaller groups?**
  - The conventional approach is to split the class into pairs or groups of three or four and ask each group to discuss a topic before feeding back to the whole class. See Example 13, pp. 139-140.
  - Consider 'snowballing' or 'pyramiding'. Students begin by working individually on a simple task such as making a list. They then join in pairs to prioritise the list. Then, working in small groups they complete the complex task of producing a set of guidelines from the list and are required to feed back to the whole group.

Small group activity of this kind encourages active and collaborative learning.

Socratic dialogue in class discussions **Case study 6**

This technique consists of the tutor asking a question, getting a response from one audience member and then if the answer is perhaps not absolutely correct, bouncing the answer back to the audience in the form of a question: 'Mm, what is your view of that?' 'Do you think that is right?' Move the topic forward by asking questions and getting the audience to think about whether the answers given are right or wrong. Note the tutor merely asks questions and bounces the replies back to the group to consider. It is best if the tutor comments as little as possible.

Use the technique sparingly – do not toss every answer back, but use it only where the answer opens up possibilities to challenge the group's understanding of the topic. It can help if the tutor poses a question which suggests the wrong answer; a very simple example would be: 'Is Hansard a summary of what happens in Parliament?'

This technique works especially well with mature students or people who have some grasp of the topic area. It may not work so well with first year undergraduates. The method is suited to small groups of no more than 12 students.

Peter Clinch, Law Library

Planning one-to-one teaching

Although the emphasis in academic institutions is on group teaching, you will inevitably be asked to provide one-to-one sessions. These could be requested by:

- Undergraduates who missed a group session
- New researchers / lecturers
- Lecturers wanting a refresher course or to learn a new resource
- Clinicians needing information for patient care.

You may be able to book a time, or you may have to respond to an immediate request. In either case, you will need to ensure that you identify the needs of the learner and tailor the session accordingly. The case study below illustrates a thorough and practical approach to delivering one-to-one training.

One-to-one teaching **Case study 7**

I offer one-to-one teaching in my hospital-based library, where it is particularly appreciated by learners whose experience of electronic resources is negligible, or rusty. Our learners are mainly training grade doctors, nurses taking courses, or other health professionals. They can book a time for their session, but I am also happy to teach on demand, which is convenient for busy clinicians.

I start by establishing the learner's level of knowledge and the reason for their search (patient care, course work, general refresher). Then I will ask for a topic we can use, which will usually guide us to the most suitable resource. I will demonstrate the resource and then prompt the learner while they practice.

As the session progresses, I can establish a rapport with the learner, set a pace comfortable for them, encourage questions, and gauge how well they grasp the resource. The session can easily be tailored to their exact needs. Towards the end, I ask if they have learnt what they wanted or if they would like to repeat anything, and remind them that they are welcome to come back for further help.

For me, this type of teaching is particularly rewarding as I can get to know the students and they are usually very appreciative. It also enhances our reputation as a helpful library service!

Rosemary Soper, Archie Cochrane Library

Section 5: Teaching Technologies (August 2011 update)

Summary

A variety of teaching technologies may be used to promote learning and understanding in IL teaching. As well as selecting the right technologies for your session, it's also important to make sure you get the most out of them. This chapter provides an overview of some of the recent innovations in the following areas:

- Cardiff University teaching tools (pp. 39-45)
- Presentation technology (pp. 46-50)
- Other useful technologies (including social media developments) (pp. 51-52xviii).

1. Introduction

Chapter 5 focuses upon a range of technologies which may help you achieve your intended learning outcomes. The selection and use of technology requires careful thought; technology is a means to an end and should not be used for its own sake. Factors such as the size of the group, the proximity of your learners (many technologies are particularly suited to use with distance learners) and practicalities of the venue will strongly influence your choice.

Social media (sometimes referred to as Web 2.0) is not only having a significant impact upon our daily lives (*Facebook* and *Twitter* have become universally familiar) but also has important implications for our teaching. IL practitioners have needed to come to terms with an explosion of new web-based tools. A Higher Education Academy / JISC report, *Higher Education in a Web 2.0 World*,[1] defines Web 2.0 as "technologies that enable communication, collaboration, participation and sharing". Their immense popularity with students means that teachers ignore these new technological developments at their peril.

This chapter can do little more than scratch the surface of this increasingly diverse, complex and fast moving area. You will find a relatively small selection of tools described. Some are currently in use within the University whilst others may be unfamiliar but have the potential to enhance your teaching. Most can be implemented with relative ease.

We encourage you to embrace and experiment with these exciting new tools.

[1] JISC. 2009. *Higher education in a Web 2.0 world* [Online]. Available at: http://www.jisc.ac.uk/publications/documents/heweb2.aspx [Accessed: 5 May 2011].

2. Cardiff University Teaching Tools

The Cardiff Portal and Learning Central are the basic platforms used for the delivery of IL teaching within the University.

Cardiff Portal

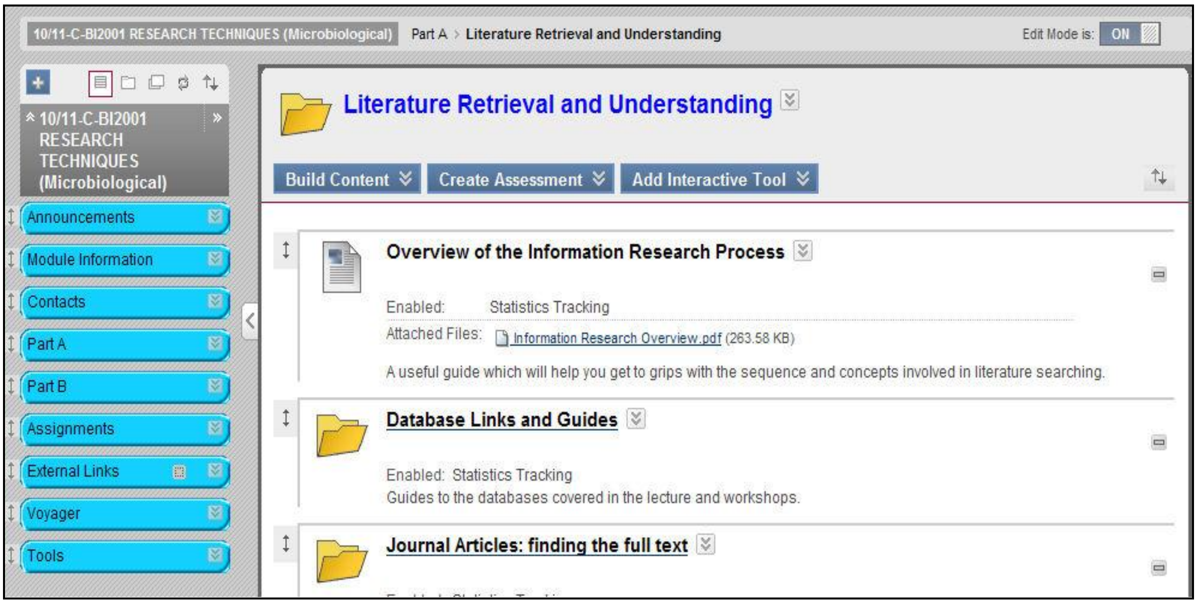
The wide range of Cardiff University electronic resources can be accessed from the Portal (http://portal.cf.ac.uk), including databases, electronic journals, CardiffMail, self-help guides and Learning Central, as well as an RSS feed reader. The Portal facilitates an efficient, convenient single access point for all resources and tools required by network users.

It is important to promote the use of the Portal at every appropriate opportunity during IL sessions (though this is not imperative if a subject-specific Library Toolkit is available (see p. 45), as extensive links are usually provided within the Toolkit).

Learning Central

Learning Central (http://learningcentral.cf.ac.uk) formerly known as Blackboard is the University's virtual learning environment. It is used extensively for the delivery of course content. If you have the approval of the course/module leader and have been 'enabled' by the School's Learning Central administrator, adding content within the Learning Central modules is an ideal way in which to make your teaching materials available. This could be part of your IL negotiations with the School. (Note that you need to be enrolled as a Learning Central instructor to be able to add teaching materials and set assessments.) Modules are recreated for each new academic year and content can be added or updated at any point during the year.

Your materials can easily be accessed by the whole class on or off campus.



Learning Central offers:

- Controlled access to learning resources such as documents, slides, images, video etc. Access to any resource uploaded to Learning Central is limited to students enrolled on an individual module.
- Online assessment through web-based quizzes, tests and surveys which enable you to monitor students' understanding
- Facilities to set assignments and receive uploads from students and to provide grades and feedback online
- Access to general communications, including email, group discussion and chat. Communication can be tutor-student or student-student.
- Ability to provide links to other web-based resources either internally or externally
- Activity and achievement tracking: it is possible to monitor students' activity on Learning Central such as how often they use the system and which resources they use
- Release of learning materials and activities based on time, user, assessment results or group membership
- A range of social media tools that can be easily incorporated into modules. These include blogs, discussion boards, journals, chat, wikis and podcasts.
- Access to the Training Materials Repository (see p.26).

Benefits of Learning Central:

- Simple to use and requires few technical skills
- When used to disseminate informational material, this allows contact time to be used more productively and interactively
- Creates opportunities to engage in new learning activities
- Remote students or groups which cannot come together at the same time and place can meet virtually.

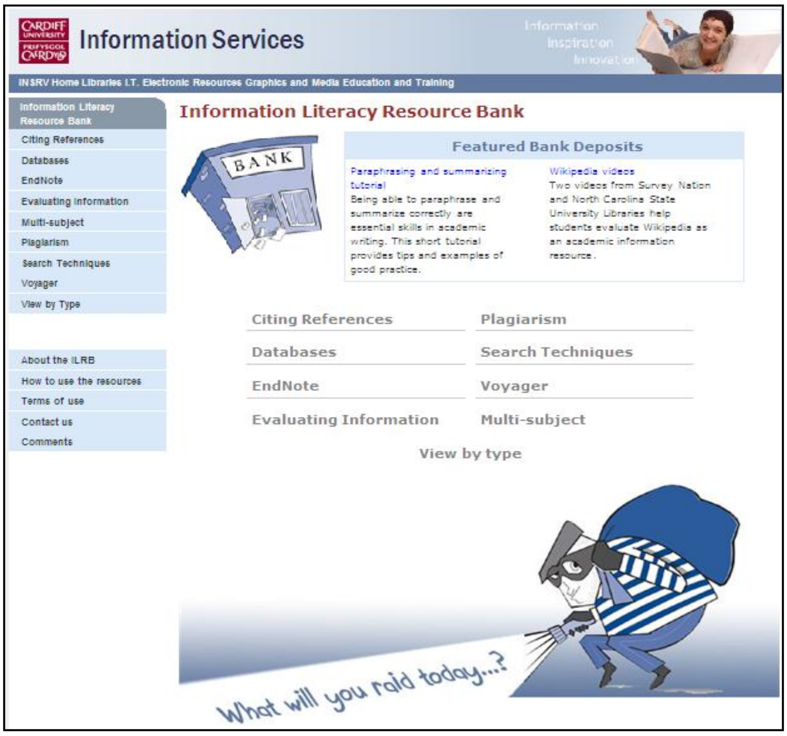
You will find helpful tutorials in the Staff Help section of Learning Central in the 'Organisation and Communication in Learning Central' portlet. A set of help guides is available at http://learning.cf.ac.uk/updates/tutorials/cue-tutorials

If you have queries about using Learning Central contact the INSRV Learning and Teaching team at: insrvConnect@cardiff.ac.uk

Information Literacy Resource Bank (ILRB)

The ILRB (http://ilrb.cf.ac.uk) is a collection of learning objects on IL topics developed at Cardiff University for use in your teaching.

Learning objects can be used in their entirety or parts can be repurposed as required. They can be integrated into a variety of teaching contexts, both online and face-to-face.



The ILRB includes:

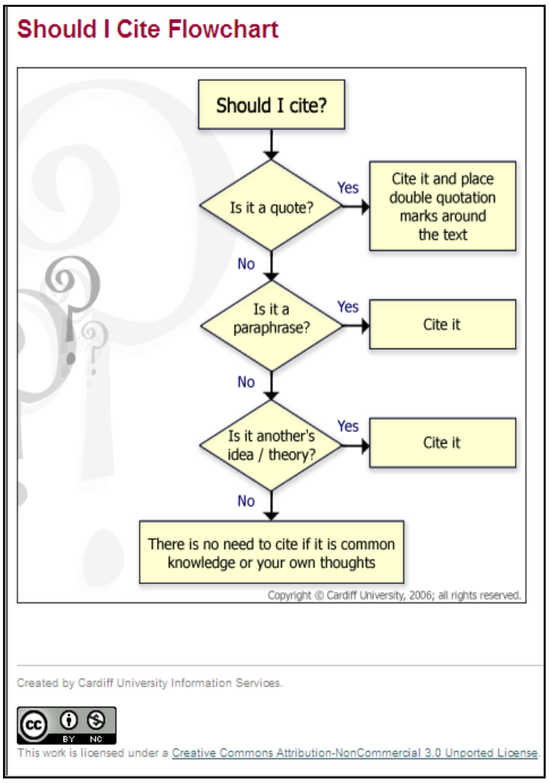
- Podcasts: try the *Student Survival Guide to Writing a Good Essay* podcast series created by ULS. This is also available on the Learning Central home page. This features six episodes providing tips from academic staff, librarians and students. Topics covered are:
    - What makes a good essay?
    - Quality control: information to use and avoid
    - Going beyond the reading list: finding good web sites
    - Going beyond the reading list: finding books and journals
    - Getting your references in order
    - Meeting the deadline.

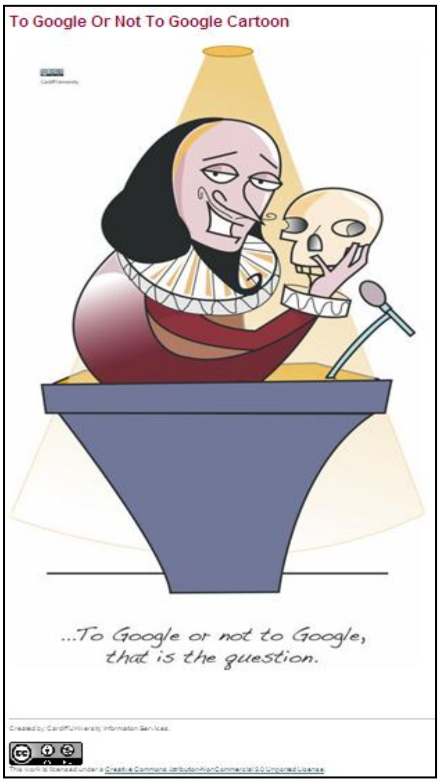
  Focus group responses from students have indicated that the podcasts offer a good bridge between lecturers' expectations regarding what constitutes a good essay in terms of library research, and actually meeting that standard.

- IL movies: consider using a video outlining some essential IL skills such as uncovering journal articles, evaluating online sources and citing material correctly. There is also footage covering the strengths and perils of *Wikipedia*.

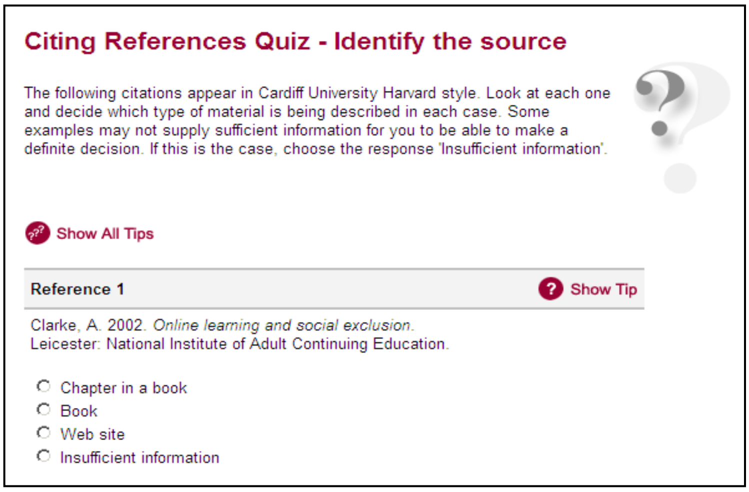
The “Taking the Frights out of your Cites” movie has proved particularly successful. Subject Librarian Cath Borwick explained that ‘the humour helped make a potentially boring topic more bearable’. Dr. Patricia Kieran, senior lecturer in Engineering at University College of Dublin remarked that ‘the video certainly elicited a far higher level of attention than I usually see when I try to address the same material through conventional lecturing’.

- Diagrams: it’s good practice to present your material in different formats to suit different learning styles.
- Cartoons: surely there can be no better way to brighten up your presentation or handout than this?





- Short tutorials: inject some variety and give students a break from the sound of your voice by letting them immerse themselves in an online IL tutorial. As well as the full-scale Medicine and Distance Learning toolkits, students can get to grips with EndNote, plan a search strategy or uncover the vagaries of the Harvard referencing system.
- Activities and quizzes: try getting your students to practise what they’ve learnt with the range of interactive exercises such as this Citing References quiz, to consolidate what you’ve taught them on the Harvard style.



There is also a quiz on how to avoid plagiarism.

- Vodcasts (video podcasts): these resources, intended for student self-help and for airing during your IL teaching, consist of bite-size chunks of video/audio content, each lasting around a minute. Topics include: accessing journals from off-campus, referencing web pages, referencing journal articles, setting up RSS feeds and getting the best from Web of Science.

Use learning objects for:

- Clarifying or illustrating concepts, e.g. database search strategy, referencing, plagiarism etc. Visual learners find diagrams and images particularly helpful.
- Reinforcing learning, e.g. an activity which allows application of newly learned skills
- Testing knowledge and understanding, e.g. a quiz which can be used as formative assessment
- Adding variety to the format of your lesson
- Enhancing handouts or PowerPoint slides, or embedding into Learning Central modules
- Providing stand-alone self-help resources, e.g. vodcasts and citing references tutorials.

HILT Pick

Teaching citing and referencing

Show students fictitious mistakes made by 'last year's class' and ask them to spot the errors. Students love picking holes in the work of their peers! Alternatively, use the engaging citing references tutorials and activities available in the ILRB.

Library Toolkits

Cardiff University has a number of subject-specific library toolkits. They provide online tutorials, guides and links to subject resources.

(https://ilrb.cf.ac.uk/multisubject/MedicineToolkit/home.html)

- The Information Skills section (see screenshot above) constitutes the core of each toolkit and is a step-by-step guide to searching for, retrieving and using information. Subject Librarians have adapted the Information Skills section to suit their subject and added their own specific information. For example, the Distance Learning Service (DLS) Toolkit contains the DLS Handbook, information on how to request articles and books and a Virtual Librarian widget that allows users to chat online with a librarian.
- The toolkits are embedded into the course VLEs and are introduced to the students in library inductions and IL training.
- The toolkits are constructed using HTML web pages with links to various resources and tutorials within the ILRB. To adapt the toolkit to your subject area you need to obtain the source web pages and edit them in a HTML editor such as *Dreamweaver* which is available on the Cardiff University network. Contact Lucy Collins (CollinsL2@cardiff.ac.uk) to obtain the files and for help getting started.

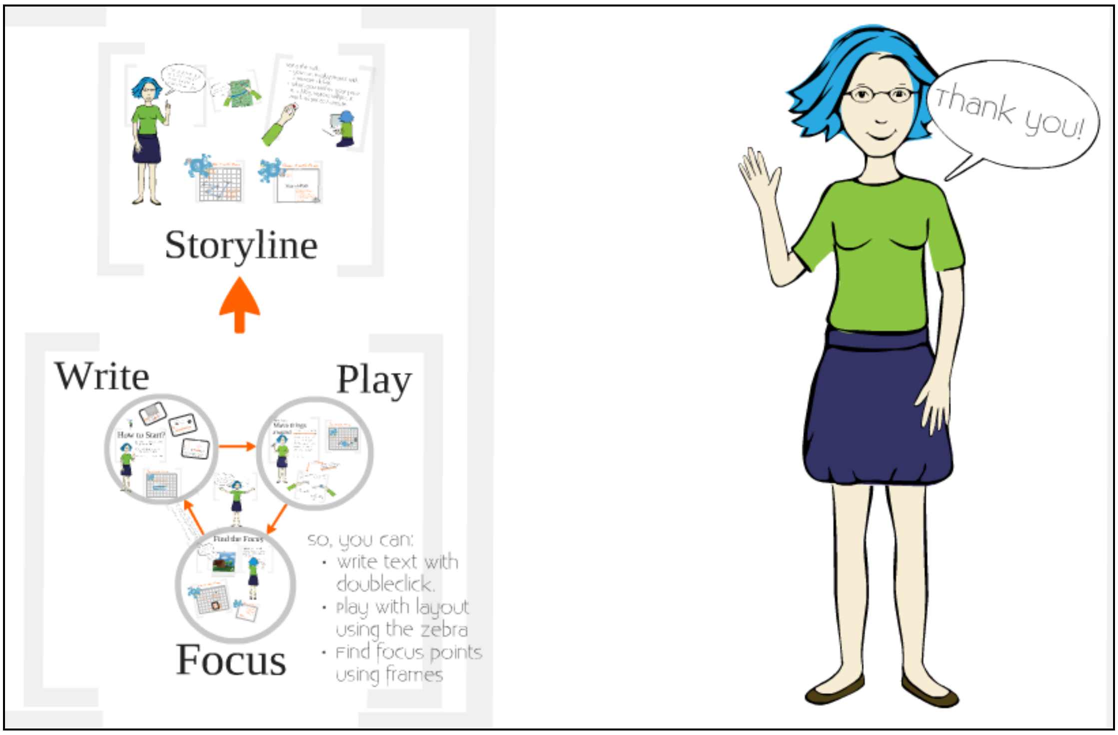
3. Presentation Technology

Prezi

Prezi is a piece of presentation software which provides an exciting alternative to PowerPoint. In contrast to PowerPoint, *Prezi* allows you to illustrate concepts in a highly visual, non-linear way. Text, images and videos can be added to a large canvas and the presentation can then zoom in and out and pan around the canvas.

You can sign up for a free account at http://prezi.com. Create your Prezi on the web site and then download it and play it as *Flash* files. The web site also includes a showcase of Prezis and a number of videos and guides to help you use *Prezi* effectively.

The software includes innovations such as the 'Zebra' (see image on the right), the blue menu which appears when you click on a piece of text or an image within *Prezi*. Drag the middle circle to move the object, drag the inner ring to resize and revolve the outer ring to rotate. This is a quick and flexible way of adding elements to form a visually strong presentation.



(*Prezi* created by Adam Somlai-Fischer: 'Academy: *Prezi* Workflow in 15 minutes' http://prezi.com/zvsqdyisrcgt/academy-prezi-workflow-in-15-minutes)

Tips:

- **Be inspired by the showcase on the *Prezi* web site.** Invest some time looking at top-quality Prezis before taking the plunge. Understanding the potential of the software is key to creating great Prezis.

- **Sketch ideas out first.** Start with a large piece of blank paper and a pen rather than using the software straight away. Sketching helps you think about the shape and structure of your presentation and how you will use metaphor and visuals.
- **Think differently.** Begin your presentation from scratch; don't just convert your PowerPoint into a Prezi. This software requires you to think visually while considering the overall message of the presentation and the relationship between the various elements. You will find the process quite different from that of creating slides.
- **Allow time for learning the software.** Using *Prezi* for the first time entails grappling using an unfamiliar interface and menus so make sure you have time available.
- **Include an overview.** Presentations work well if the canvas shows an overview of the structure of the whole presentation, which can be returned to during the presentation.
- **Use scale.** Whether zooming in on the details of a diagram or zooming out to a large image, good presentations will often use massive changes of scale both for dramatic effect and increased understanding.
- **Don't make your audience sick!** Audience members can experience motion sickness if there are lots of quick transitions from one end of the canvas to another. Group similar ideas to avoid moving around the canvas too much.
- **Be flexible.** It is possible to create a presentation path around the canvas, but it is also possible to deviate from the path in response to your audience (e.g. zooming in on a particular section in response to a question from a student), or even not to have a path at all.
- **Sign up for an educational licence.** This will provide more space for storing Prezis and also offer the option of making a presentation private.

PowerPoint revisited

PowerPoint is suited to a wide range of teaching environments, but be sure to mix it up with other teaching techniques within your session to maximise variety and enhance student concentration. You could break up your presentation with buzz groups, question and answer slots or other activities.

An INSRV PowerPoint template is available at:
S:\TEMPLATE\INSRV Templates\Presentation

Top 10 PowerPoint tips:

1. **Limit the information on your slides** to key points only. Steer clear of dense text and allow adequate spacing between points.
2. **Limit the number of slides**, e.g. to no more than eight or nine for a ten minute presentation, giving students time to absorb information on each slide.
3. **Use clip art, pictures, charts, tables, diagrams, sound and video to enhance content.** Ensure that you are complying with copyright law and generally limit to no more than two graphics per slide.

4 **Avoid 'noisy' distracting backgrounds**, and make sure your text is legible. If possible, try out the presentation in the room you are going to be using.

5 **Use animation sparingly** and go for variety – setting all your text to 'fly' in bullet by bullet can get tiresomely predictable. Consider whether you actually need every individual bullet point to be introduced separately.

6 **Create a numerical key for your slides**. If you are pressed for time, jump non-sequentially to a slide by typing the number of that slide and pressing Enter. Essential for Cephalonian presentations (see p. 13)!

7 **Check that text is not likely to be cut-off** at the edge of the projection screen – this means you need to make sure your margins are big enough.

8 **Do not apologise for any slide**. If the content is hard to read, redo it. Charts or tables should not be too dense or detailed.

9 To store a large file with lots of images, **'compress' pictures** by choosing the **Picture** tab and then clicking on the **Compress Pictures** button. Tick the box to 'Apply to selected pictures only', or leave the box unticked to compress all pictures in the entire presentation. Further compression settings are available by clicking the **Options** button.

10 Finally, when you are giving your presentation, **talk to the audience, not to the slides** on the screen behind you! Position your computer so you can see both the monitor and the audience. You may also want to keep a printout of your slides in your hand for easy reference.

Adding speaker notes to PowerPoint

Note that these guidelines refer to PowerPoint 2007.

You can type speaker notes into the notes panel displayed in the PowerPoint Normal view. These are useful to enable a colleague to deliver a lesson during your absence, in conjunction with your lesson plan and other materials.

Tips on printing out speaker notes for your presentation:

- When finalised, print out your notes as you will not be able to view them on screen during delivery. Go to **Office** and choose **Print**, then under **Print What**, select **Notes Pages**. Use a large font (if necessary enlarge the notes area in Notes Page view) – you must be able to see your printout of the speaker notes clearly during delivery.
- Alternatively, export your presentation to Microsoft Word to give you more control over layout, e.g. by including more than one slide per page. Go to **Office** – **Publish – Create Handouts in Microsoft Word** and select an option which includes Notes. You can then opt to delete the actual slides and retain just the Notes.
- You can also print the notes 2 or 4 pages per sheet (in the Print window) and then cut them up to make a handy 'stack' of cards for use during delivery. However, be sure to attach these together so you don't risk losing your place if you drop them!

Creating handouts

Also consider using the Export to Microsoft Word feature to give more general control over the look and content of your handouts e.g. by going to **Office – Publish – Create Handouts in Microsoft Word** you can choose from several Page Layout options:

- Notes next to slides
- Blank lines next to slides
- Notes below slides
- Blank lines below slides.

As the handouts are now in Word format, you have greater editorial control to make any other changes you wish.

Raising your game: advanced tips

- On the PowerPoint Insert tab, have a look at the **SmartArt** options, which offer a wide range of pre-set graphical formats. There are templates for lists, hierarchies, cycles and matrices, and you can dress up your data as a series of colourful interlocking gear wheels.
- Try using Microsoft templates to make your PowerPoint presentations look a bit different. You can access them at http://office.microsoft.com/en-us/templates/CT010336615.aspx
  If you download a template you'll find instructions for customising it included in the 'Notes' pane of the PowerPoint file. Be warned however – some are really top-notch; others may be best left where you found them!
- **Be flashy:** use a remote control USB wireless presenter to move through your presentation while away from the PC / lectern.
- If you haven't got a remote control USB wireless presenter, there are a number of more conventional ways you can **control your slides**:
  - If you are not already in live presentation view, pressing F5 will start your presentation from the beginning
  - Hitting the letter 'B' will replace your presentation with a 'black screen'. Use this when you want the audience to focus 100% on you, or on another task you are setting them. Pressing 'B' again will restore your presentation at the point where you left off. Similarly, you can use the 'W' key for a white screen.
  - Type the number of a specific slide to manoeuvre around a presentation out of sequence if appropriate (see previous tip 6)
  - Use the **Alt** and **Tab** keys to switch between applications, for example between PowerPoint and a web page / database, for a smoother, more professional transition.
- Use a laser pointer (sparingly) to highlight specific text or any on-screen features to which you refer during your presentation.

- Avoid interruptions during your presentation by disabling screensavers and powersave options (on laptops). To disable any screensavers, rightclick on the Desktop, choose **Properties** and then click the **Screensaver** tab. Choose **None**. The **Power** button on this tab enables you to disable any powersaving settings.
- Wow your audience by whipping out PowerPoint's secret weapon, the 'highlighter pen' function. This enables you to emphasise elements of your slide in real time while addressing your audience: move the mouse over the icons at the bottom left of the Full Screen view of your presentation to choose Highlighter, Felt Tip or Ballpoint, and select a variety of colours to annotate your slides during the presentation. Click the button again when you feel you've exhausted its creative potential, to de-activate this.
- For more tips, see Mollerup (2011).[2]

Slideshare

Why not delve into http://www.slideshare.net for some inspiration? You can upload your own presentations or download and view presentations created by other individuals and organisations. It is a valuable source of information and is also a useful place to pick up tips on presentation techniques and design. You can create a *Slideshare* account and sign up for the regular newsletter which highlights top presentations and other news.

Take a look at the education category at http://www.slideshare.net/category/education or try searching for presentations relating to keywords of your interest.

Slideshare users have the option to make their presentations public, allowing anyone to view them. Presentations can be made available for adaptation under a Creative Commons licence.

JISC Digital Media have provided a useful summary guide to *Slideshare* at http://www.jiscdigitalmedia.ac.uk/crossmedia/advice/slideshare

[2] Mollerup, P. 2011. *PowerNotes: slide presentations reconsidered* [Online]. Melbourne: IIID International Institute for Information Design; Faculty of Design, Swinburne University of Technology. Available at: http://hdl.handle.net/1959.3/191214 [Accessed: 7 June 2011].

4. Other Technologies: an A-Z

This section features a small selection of tools which have the potential to enhance your teaching. It is by no means exhaustive but represents an excellent starting point for experimenting with technology in IL teaching:

- Assessment and feedback tools
- Audience Response Technology (ART)
- Classroom management software
- Image websites
- Interactive whiteboards
- Podcasts
- QR codes
- Social bookmarking
- Tutorials and quizzes
- *Twitter* in the IL classroom
- Videos, movies, screencasts and vodcasts
- Web conferencing
- Wikis.

Assessment and Feedback Tools

E-assessment allows students to get feedback on their skills and progress at a time and place that suits them, without additional burden on staff time. While not replacing face-to-face contact, it helps to put the student in control of their own learning and develops their autonomy in this area.

Turnitin is an online service which analyses written text for matches with other sources. Once uploaded, *Turnitin* detects whether elements of written work – for example, a student essay – match against text from websites, other student papers or electronic journals. It then returns a colour-coded “Originality Report” which highlights the text matches it has found and their sources. These can then be read side-by-side with the student work to establish whether a student has properly referenced their sources, paraphrased appropriately or used good quality resources.

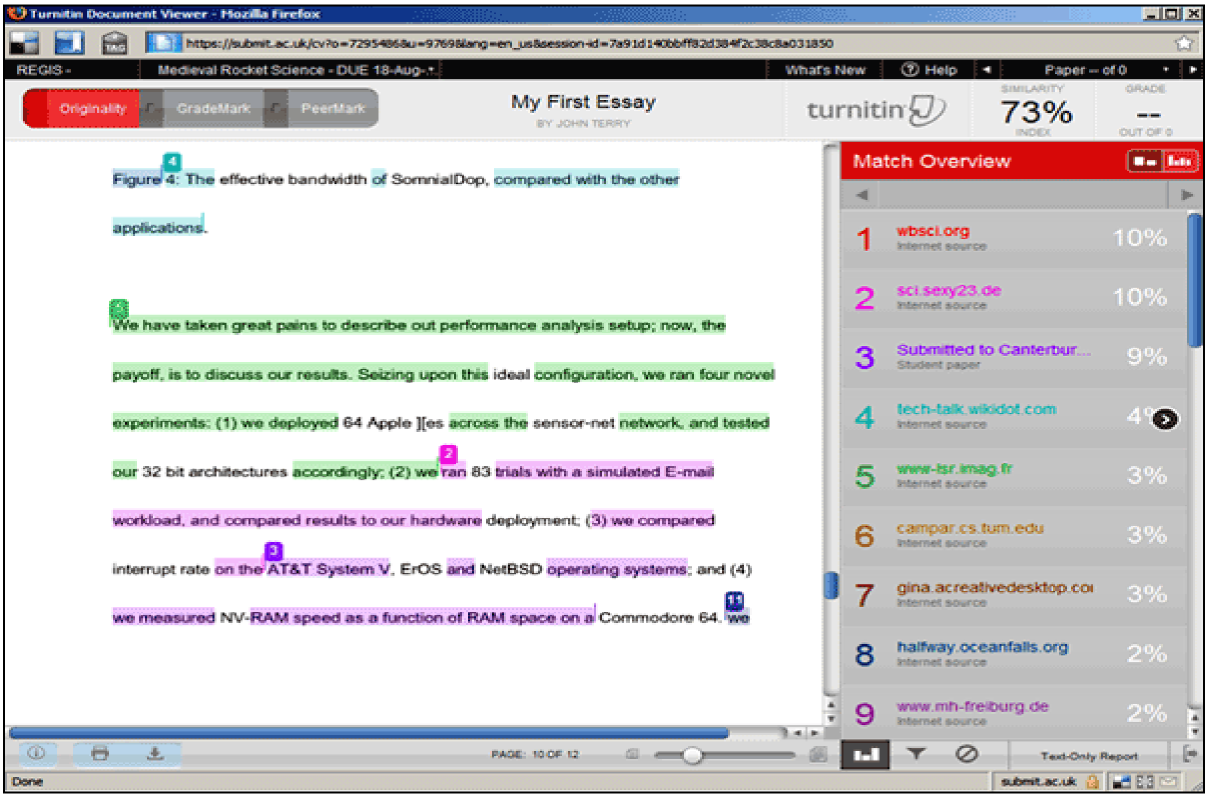
Available to all staff and students through Learning Central (and used regularly by around half of Cardiff’s Schools), *Turnitin* can be a useful tool in teaching sessions on referencing technique and avoiding plagiarism. Students can submit examples of their own work and be guided in the interpretation of the reports and how to correct citation errors. The *Grademark* facility built into *Turnitin* also allows staff to annotate student work onscreen and provide electronic feedback that can be accessed from any PC.

It can be helpful if student sessions on plagiarism, referencing and *Turnitin* make time to explain:

- that a text match identified by *Turnitin* does not automatically equate to plagiarism: well-researched work will inevitably contain many legitimate matches to other sources.
- Students should not try anxiously to minimize their *Turnitin* 'score' if they have referenced correctly; there is no universal threshold *Turnitin* percentage that they should aim to get under.
- *Turnitin* is not 'marking' their work: academic judgement remains paramount.

Note that it is essential that Subject Librarians discuss with the School its policy regarding the use of *Turnitin* prior to utilising this resource.

There are guides to using the software at: http://www.cardiff.ac.uk/learning/turnitinquick and https://submit.ac.uk/en_gb/support-services



(Sample *Turnitin* "Originality Report")

Other online assessment and feedback tools **Case study 8**

Marking over one hundred Year One Induction assessments can be oppressively time-consuming during an already busy period. Analysing hundreds of feedback forms can be even more daunting. By creating online quizzes and surveys that students can take either at the end of your session, or soon after, you don't have to mark a thing, and everyone gets immediate feedback. The only outlay is in the set-up time. Learning Central provides tools for both tests and surveys with a good choice of formats. Creating an assessment is fairly self-explanatory, though you may need some assistance in publishing the test to the relevant module. *Questionmark Perception* is slightly more complicated but is highly flexible, allowing you to host the assessment on Learning Central, or on any other webpage. As the questions are created separately from the assessments, you can mix and match questions to your heart’s content.

Charity Dove, Music Library

Audience Response Technology (ART)

Audience response technology provides a popular and attractive option for incorporating interactivity into your teaching. It has been available for many years in the form of the well-known handsets (‘clickers’) systems. However, the latest ART innovations include online polling software.

1. ‘Clickers’

The two most widely used software packages at Cardiff are: *InterWrite PRS* and *TurningPoint*. The latter is now available on the network, accessible via the Start menu: **Networked Applications – General Software – Trial Applications – Turning Point Installer**. The standard setup involves the use of wireless keypads; audience members use these to select an answer from a given range of options shown on a PowerPoint slide. Each selection is sent to a receiver attached to the presenter’s PC and results are displayed as percentages and/or graphic illustrations. ‘Clickers’ can be used with large groups in lecture theatres or smaller groups in workshop settings.

Benefits may include:

- added variety and interest
- ensuring engagement with content
- enabling participants to contribute anonymously
- improved knowledge retention
- opportunity to gauge understanding of particular points, so you can recap on any parts of the lesson which have not been understood
- an effective and time-efficient method of assessment
- providing feedback on a session

- rendering an otherwise passive session active.

However, 'clickers' technology is best used sparingly; it is good practice to limit the number of questions used since a session should not be driven by the technology! INSRV have 64 wireless handsets, a receiver and a dedicated laptop suitable for use with PRS in smaller lecture groups or in classrooms. To reserve the equipment and obtain support/training, contact insrveducation@cardiff.ac.uk. Also, some Schools e.g. BIOSI have sets which may be available for loan.

If you are interested in using 'clickers' in your teaching, the Audience Response Technology Question Bank in the Training Materials Repository on Learning Central contains some examples of presentations created by Subject Librarians and some ideas for questions you might incorporate into your sessions.

Audience Response Technology ('clickers') **Case study 9**

I was looking for a way to liven up my citing references workshops, and after familiarising myself with the 'clickers' InterWrite PRS software I created six quiz questions to test student understanding of what constitutes plagiarism, as well as their ability to apply their School's chosen citation method. These retained students' interest as they could never be sure when they were about to be tested! Students were polled anonymously, though some expressed anxiety at having their answers found out. Workshops were limited to groups of twelve, so this wasn't inconceivable, but would be easily avoidable with larger classes.

The most surprising outcome of using 'clickers' was the extent to which questions were incorrectly answered, despite students claiming understanding; this allowed me to review certain points that would otherwise have been passed over. Crucially, a colleague was present to ensure the technology worked so I avoided distractions.

I will certainly use 'clickers' again but will confine its use to small groups to minimise the impact of any technical problems. I'll start with a control question to test understanding of the process.

Sarah Nicholas, Architecture Library

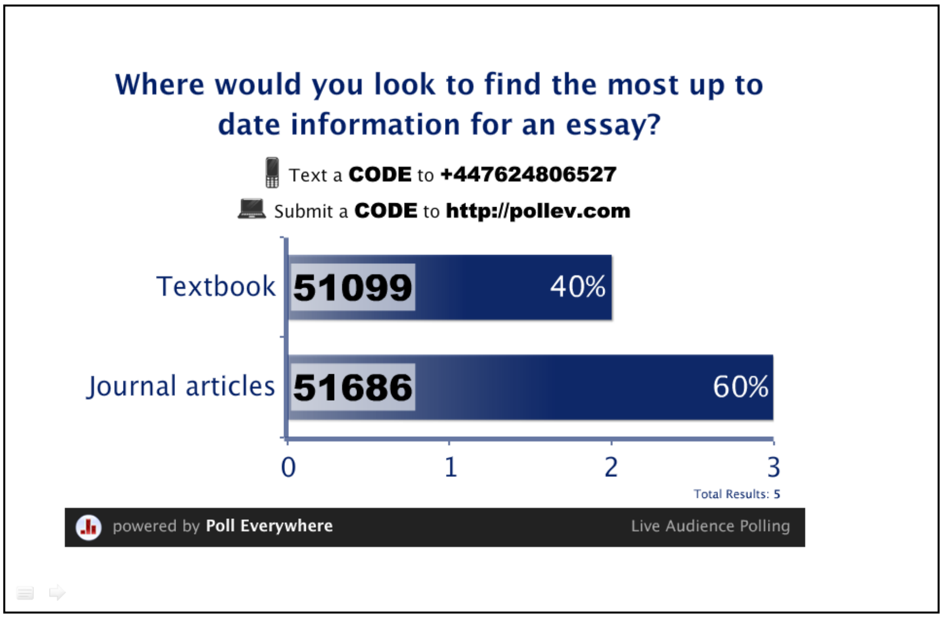
2. Online polling

Online polling software is an alternative to 'clickers', and has a great advantage: you do not need to bother distributing handsets or worry about them disappearing. A useful tool we have tried at Cardiff is *Poll Everywhere*.

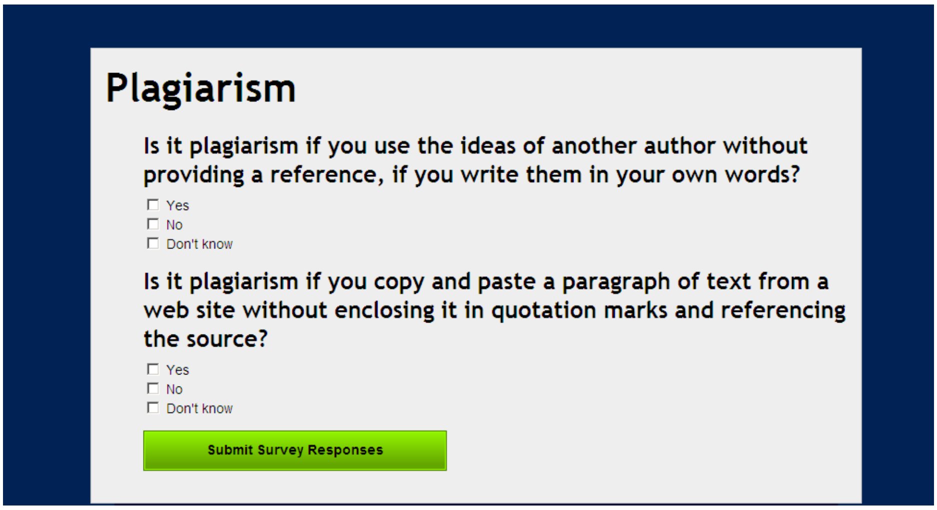
Poll Everywhere - http://www.polleverywhere.com

- *Poll Everywhere* allows you to set up survey questions quickly and easily, and is free for use with audiences of 30 and under
- Although no sign up is required this is recommended as this enables you to keep track of your polls easily
- Options include a multiple choice poll, a free text poll or a 'goal' poll (donation polls for raising money)
- Responses can be made using texting, *Twitter* or via a web link

- If asking participants to respond by texting, the instructions for doing so are clearly displayed with the poll (see below). The poll can be shown on the *Poll Everywhere* site or embedded into a PowerPoint slide, which updates the results live (n.b. a number of questions can be downloaded from PowerPoint at the same time).
- If using the web link option, poll questions can be collected together as a series on one webpage (see below)
- Quantitative results are presented in bar charts or tables, with qualitative responses from free text polls listed singly
- Results can also be downloaded to blogs or webpages.



(PowerPoint slide for poll)



(*Poll Everywhere* questionnaire (web link))

Issues to consider

- Students may need to be provided with the web link to vote, as they may not be signed up to *Twitter* or be willing to use their mobile phones (they may incur a charge by texting using their own phone). The web link can be shortened at http://tinyurl.com to make it easier for students to access the poll.
- If you intend to use the same question for different classes you need to set up a different poll for each to ensure you get the unique results from that class.

Classroom Management Software

Once installed in an IT room, this software connects the teacher's computer to all the students' PCs. It can be used to:

- **Remove distractions**. To prevent students using *Facebook* or email during the session, you can allow access only to the specific web site(s) relevant to the lesson. Access to applications and to printing can also be limited as needed.
- **Improve display**. The software can relay the image from your monitor to those of the students. This provides a clear, close-up image if students are having trouble viewing the projector screen or reading small fonts.
- **Facilitate learning between students**. You can relay the image from a particular student's PC to all student monitors. For example, effective search terms chosen by a student could be shared with the rest of the class.
- **Monitor students**. You can view all the students' PCs images via your own PC, to monitor the progress of each learner.
- **Help an individual student**. You can connect to a single PC to help with a specific problem.
- **Assess student understanding**. Features of the software include electronic testing and voting whereby a true/false or multiple choice question could be used for a quick assessment of students' understanding.

You will need to ensure the students are aware of how the software is being used during the session. The classroom management software used by the University is *LanSchool.*[3] This is available in selected IT rooms across the University including training rooms in the Julian Hodge Study Centre and the Brian Cooke, Trevithick and Science libraries. If you are interested in obtaining more details or obtaining a licence for your site, the *LanSchool* contact at the University is Sharon Magill from the Cardiff School of Journalism, Media and Cultural Studies (MagillSE@cardiff.ac.uk).

[3] LanSchool [Online]. Available at: http://www.lanschool.com [Accessed: 18 July 2011].

Classroom Management Software **Case study 10**

I started to use *LanSchool* in September 2008. I particularly wanted to use the software during three of my large group teaching sessions at the beginning of term. *LanSchool* was an ideal solution for focusing such a large group. I was able to take control of the screens, disable computer mice and keyboards and carry out demonstrations with the full attention of the group. I gave the students prior warning of this, so they had a minute or two to finish whatever tasks they were performing.

I would recommend *LanSchool* to any member of staff who carries out teaching in an IT Training Room environment. It is an excellent tool for effective teaching, as emailing and surfing the web are major temptations for students; cutting out these distractions is good both for learner and teacher.

Clare Davies, School of Dentistry

Image Websites

Images can be a good way of enlivening a presentation, and there are many freely available images on the internet. Licences and copyright vary widely, and so it is key to check details for each image.

MorgueFile **http://www.morguefile.com**
MorgueFile provides a stock of high quality images. The free photos section allows you to download photos and states that you may ‘copy, distribute, transmit the work and to adapt the work. Attribution is not required. You are prohibited from using this work in a stand alone manner’. The full licence conditions are set out at: http://www.morguefile.com/license/morguefile

Flickr **http://www.flickr.com/search**
Flickr is a photo-sharing web site and the quality of the images varies widely, as do the licence regulations. To find photographs held under a ‘Creative Commons’ licence click on ‘advanced search’ to the right of the search box then scroll down to click on ‘Only search within Creative Commons-licensed content’.

Some photos may have certain rights reserved, so make sure you read the licence details carefully. Many photos require you to ‘give the original author credit’ - this can be easily done by providing an author acknowledgement in small text beside the photograph used.

British Library Images **http://www.imagesonline.bl.uk/britishlibrary**
These images, mainly historical, are drawn from the British Library’s numerous print and photograph collections. Images need to be acknowledged and in some cases permission must be sought.

In addition to these sites there are image search tabs on search engines such as *Google Images* (http://www.google.co.uk/imghp) and *Yahoo Images* (http://images.search.yahoo.com).

Interactive Whiteboards

Interactive whiteboards can be found in some seminar rooms and IT training rooms on the Cathays Park campus. The screen image from the presenter's computer is projected onto a touch-sensitive wall-mounted whiteboard. The teacher controls the whiteboard using their finger, a stylus, a pen or other pointer, rather than using the computer's mouse (although this option is still available). Additionally he/she can treat the device as an electronic whiteboard to annotate the on-screen display and write notes. In some lecture theatres whiteboards are replaced by small touch-sensitive screens at the front of the room, as an alternative means of manipulating the display being projected.

Uses for interactive whiteboards include:

- Operating any computer software, for example a web browser, database applications or PowerPoint presentations
- Annotating the on-screen display and capturing the notes for use at a later date (e.g. publication to the web in a Learning Central module)
- Brainstorming and concept mapping: to capture traditional whiteboard or flipchart style notes. Interactive whiteboards allow freeform writing and drawing. This is ideal for getting students actively involved. This information can be saved electronically for future use.
- Seamless presentations: the teacher can fully engage with the audience rather than needing to stand by the computer to use the mouse.

Podcasts

"Podcasts [are] digital audio programs that can be subscribed to and downloaded by listeners via RSS". [4] Having subscribed to the podcast, the listener will automatically receive each new episode, which can be heard or viewed via mobile devices such as smartphones, tablets, MP3 players and laptops as well as on a PC. However, whilst the original concept of the podcast was that they were episodic and required subscription, many podcasts are 'stand alone'; the "click to listen" / "Podcast on-demand" approach is perhaps now the most common model.

Podcasts are a great way to supplement your face-to-face teaching, helping you to reach your students beyond the classroom. For example, you could create an audio tour of the library or record some quick tips on information literacy topics.

Benefits of podcasts:

- Students can learn anywhere or at any time freeing them to carry out other activities as they learn such as commuting, exercising or household chores!
- They can help students with visual disabilities, dyslexia, or those who prefer to learn by listening

[4] Kaplan-Leiserson, E. 2005. *Trend: podcasting in academic and corporate learning. Learning Circuits* [Online] June. Available at: http://www.astd.org/LC/2005/0605_kaplan.htm [Accessed: 18 July 2011].

- They can be re-played so are ideal for non-native English speakers and can act as memory aids.

Creating podcasts:

- When deciding on the content, aim to keep your listener's attention by making the podcast entertaining and not too complex, using a variety of voices and keeping the time span short
- Record your content using a digital recorder capable of creating MP3 or use one of the many free audio editing software tools such as *Audacity* (http://audacity.sourceforge.net) and a microphone connected to your PC
- They can be distributed to your audience via Learning Central's podcast tool (see the podcast guides in the 'Wikis, blogs, journals and podcasts portlet' in the Staff Help section of Learning Central).

Alternatively, Cardiff University's *Student Survival Guide to Writing a Good Essay* podcast series created by ULS is available in the Information Literacy Resource Bank at https://ilrb.cf.ac.uk/multisubject/podcast/index.html and on the Learning Central home page.

QR Codes

QR (quick response) codes are a complex type of barcode which connect the user via smart technology to data or text. In order to access the information a smartphone with QR code reader software installed is required. (Netbooks, laptops and tablets can also be used, as long as they have a camera and the QR code reader software.)

Walsh (2009) identifies four applications for QR codes: they can contain a URL; contain a few lines of text; ring a phone number; or start a text message.[5] The first of these (encoded URL) is probably the most popular. It is becoming more common to see 'mobile tagging', where a QR code might be displayed on an object or advertisement which, when scanned, takes the user to a URL giving more information.

Above is a QR code for the ILRB

[5] Walsh, A. 2009. Quick response codes and libraries. *Library Hi Tech News* 26(5/6), pp. 7-9.

Potential uses for QR codes in IL teaching:

- Adding them to worksheets to allow interactivity in responding to questions via text message during the session
- Adding them to handouts, relying on the novelty value to increase the likelihood of students accessing follow-up resources via URLs after the session
- Displaying them around the library to direct users to learning resources via URLs as and when they need them, thereby offering IL support outside formal sessions. For example, a QR code could be displayed next to the law section of the Library which links the student to a web page which displays a video on finding law reports.

Barriers to using QR codes:

- Some students do not have smartphones
- Low awareness amongst students (and often library staff too) of what QR codes are
- Low numbers of students installing QR code reader software on their phones
- Students may be deterred by mobile phone data charges.

Questions to ask before implementing QR codes:

- Are the web sites to which you direct your users designed to be mobile-friendly?
- If the QR codes are displayed within the Library, do your noise policies allow for users making a phone call (if the QR code gives a phone number) or watching a video with sound (if the QR code links to an instructional video)?
- If you are using QR codes within your IL sessions, do you need to ensure that students work in groups that contain at least one student who is willing and able to use their phone for the activity?

How to create a QR code:

- Use a search engine to find a free QR code generator, e.g. http://qrcode.kaywa.com
- Enter the content you require and generate the QR code
- Save the QR code as a picture
- If you are using a long URL you might find it is best to use a free URL redirection service (e.g. http://tinyurl.com) to shorten it before you convert it to a QR code.

How to read a QR code:

- Go to the app marketplace for your phone to find and download free QR code reader software
- Select the app, which will then display a viewfinder rectangle on your phone screen
- Scan the code by placing it inside the rectangle and the app will do the rest!

QR codes are worth experimenting with because they can:

- **Capture student interest**. The current low awareness of QR codes can have a positive effect if it means students are intrigued enough by the codes to try and find out more.
- **Encourage student participation**. Students often enjoy additional opportunities to use their phones.
- **Minimise visual clutter**. QR codes can look more attractive in handouts and on posters than text or URLs.
- **Enhance IL teaching**. Most importantly, QR codes offer huge potential for extending IL support beyond formal sessions and for providing links between the physical and the electronic.

Social Bookmarking

Social bookmarking tools such as *Diigo* http://www.diigo.com and *Delicious* http://www.delicious.com are a convenient way of bringing together websites in an easily accessible place. Bookmarks are classified by "tags" (subject terms), and can be annotated with explanatory text. There is no charge to register for these tools and they are simple to use. Most social bookmarking sites offer a downloadable toolbar enabling you to conveniently bookmark websites.

These tools can be useful

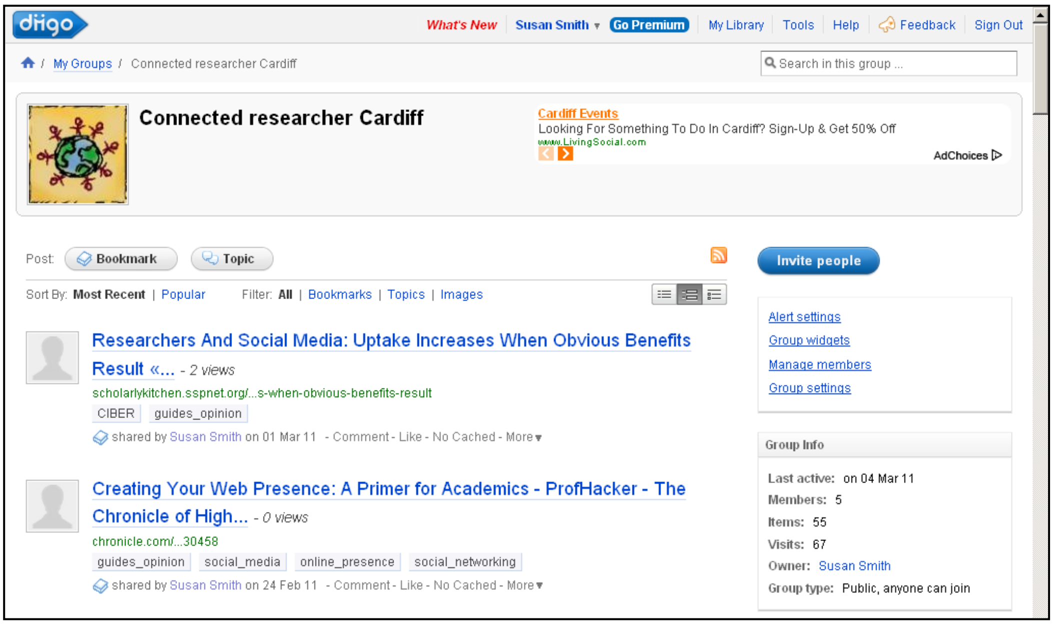
- as a way of promoting useful websites to students e.g. providing links to supporting materials or further reading
- to provide a hyperlinked list of websites used in a teaching session, thus allowing students to access multiple websites from one location without having to type in multiple URLs.

For a comprehensive list of social bookmarking tools see Phil Bradley's list at http://www.philb.com/iwantto/web2pagebookmarking.htm

Social Bookmarking in the Classroom — Case study 10a

I use the social bookmarking site *Diigo* for two courses run for the Graduate Centre Research Students Skills and Development programme, 'Intelligent Web Searching' and 'The Connected Researcher'. Both courses cover a large number of websites, and previously paper handouts of the URLs had been provided. Participants in an 'Intelligent Web Searching' session run last year had expressed a wish for a hyperlinked list of the websites rather than having to type in all the URLs and I decided to use *Diigo* for this. It is very easy to set up a group on *Diigo*, and websites can be annotated and tagged with subject terms to categorise them.

The example below shows the Connected Researcher *Diigo* group, available at http://groups.diigo.com/group/connected-researcher-cardiff This group collected together all the social media tools and websites mentioned in the session, and participants could then easily access all the sites as they were discussed.



(The Connected Researcher *Diigo* Group)

Susan Smith, Aberconway Library

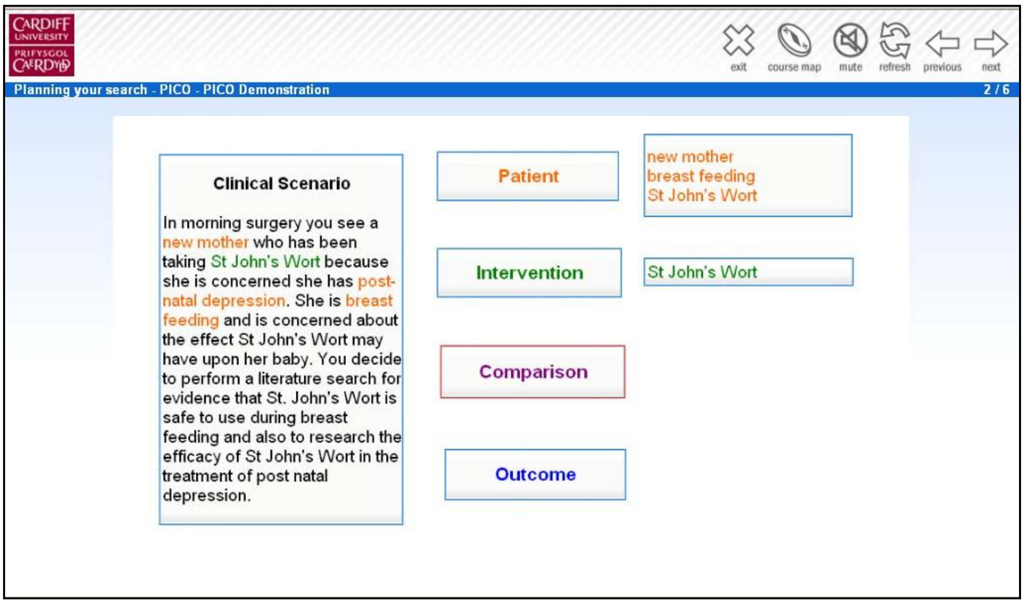
Tutorials and Quizzes

Online tutorials and quizzes can be incorporated into teaching sessions, used within toolkits or as standalone units to reinforce and refresh IL concepts. You will find a selection of these on various topics in the ILRB (see pp. 41-44). However, if you wish to create your own, *Udutu* and *Glomaker* are examples of free online software.

Udutu

Udutu has been used to create some of the tutorials in the ILRB, e.g. 'Planning your search' (https://ilrb.cf.ac.uk/searchtech/planning_your_search/course/course9105.html). You can sign up for an account at: http://www.myudutu.com

No technical expertise is required; follow a step by step process to create your tutorial then download and host on your own server. The tutorial can be hosted on the ILRB; contact Rebecca Mogg (MoggR2@cf.ac.uk) for instructions.



What can you do in *Udutu*?

- Create quizzes and assessments including multiple choice questions (MCQs), matching labels to images/text and placing images/text in order. Insert images, videos, PowerPoint presentations and audio files.
- Create advanced screens such as image rollovers and scenarios
- Add a glossary of terms used.

Glomaker

Glomaker is an open source tool developed by London Metropolitan University for creating learning objects.[6] Providing you have administrative rights on your PC, you can download and install the Glomaker software from:

http://learning.londonmet.ac.uk/RLO-CETL/glomaker/downloads.html

The tutorials you create must be uploaded to your own server. They can be hosted on the ILRB; contact Rebecca Mogg (MoggR2@cardiff.ac.uk) for instructions.

[6] London Metropolitan University. 2009. *Glomaker: about GLOs* [Online]. London: LMU. Available at: http://learning.londonmet.ac.uk/RLO-CETL/glomaker/downloads.html [Accessed: June 15, 2011].

What can you do in *Glomaker*?

- Choose from two sets of pedagogical sequences or choose “freestyle” which allows you to build a learning object in whatever sequence you choose
- Insert images, videos and audio files
- Create quizzes including MCQs and placing words in the correct order.

One of the main advantages of using *Glomaker* is that you can download learning objects created by others and edit them so you don’t have to start from scratch.

Xerte

Xerte is a suite of open source e-learning tools created by Nottingham University http://www.nottingham.ac.uk/xerte

The full software can be downloaded and installed on your computer, providing you have administrative rights. The full version requires some coding skills, so you might find *Xerte Online Toolkits* a better option.

Xerte Online Toolkits is a browser-based course authoring tool. You can sign up for an account to try it out at http://www.techdisplayxerte.info but you will need to export any learning objects you create. The software can also be downloaded from the *Xerte* website. Whether you create the learning objects online or on the downloaded software, the final product must be hosted on your own server. The tutorial can be hosted on the ILRB; contact Rebecca Mogg (MoggR2@cardiff.ac.uk).

For examples of tutorials created using *Xerte* at Loughborough University, see http://learn.lboro.ac.uk/course/view.php?id=5973

Twitter in the IL Classroom

The backchannel – using *Twitter*

A backchannel is defined as ‘a line of communication created by people in an audience to connect with others inside or outside the room, with or without the knowledge of the speaker at the front of the room’. [7] *Twitter* is one of the main ways the backchannel is used. This is now a familiar feature in conferences and to a lesser extent in teaching. Typically, conference organisers will assign a hashtag for tweeters to use, thus enabling tweets to be searchable and easily located (e.g. Cardiff University’s Technology-Enhanced Education Conference 2011 used #cdftee). In some cases, the stream of tweets containing the hashtag will be displayed on a screen behind the presenters throughout a conference. There are tools to collect tweets with a particular hashtag such as Twitterfall (http://www.twitterfall.com).

Bruff (2010)[8] suggests that the backchannel can be used in teaching in the following ways:

[7] Atkinson, C. 2010. *The backchannel: how audiences are using Twitter and social media and changing presentations forever*. Berkeley: New Riders.

[8] Bruff, D. 2010. *Backchannel in education – nine uses.* In: *Teaching with classroom response systems blog* [Online] 21st Jan 2010. Available at: http://derekbruff.com/teachingwithcrs/?p=472 [Accessed: 14th June 2011].

- Asking questions – students can ask questions during a teaching session, which the presenter can then answer, either during the session or at the end
- Sharing resources – useful resources can be shared with the rest of the class
- Offering suggestions – students can suggest topics they would like to be addressed by the presenter.

The backchannel can be an effective way of improving interactivity in a teaching session.

Issues to consider

There have been many instances of the backchannel 'biting back', with rude, critical and in some cases offensive comments made via *Twitter* (Atkinson 2010). Think carefully about whether this is an appropriate method to use with your audience: the backchannel may work well with a small class of postgraduates or staff but not necessarily as well with a large class of undergraduates.

Additionally, not all students will use *Twitter* and those who do not may be reluctant or opposed to signing up.

Videos, Movies, Screencasts and Vodcasts

Ever thought of using original videos or streamed video clips from the web in your IL sessions? There are numerous benefits to this method:

- A short video can help focus attention and provide variety within a presentation/workshop
- A video will give students a welcome break from the presenter and give *you* some breathing space too
- A well chosen video will help make more memorable the points which you have presented in your session. Note: video clips should be used to reinforce the content of your session not merely to deliver information.

Three methods for obtaining IL videos are:

1. **Use a video which has been prepared externally**

   Video sharing web sites such as *YouTube* offer an increasing number of videos on IL themes such as identifying source types, referencing, the research process etc. The search facility on *YouTube* is limited, so performing an Advanced search on Google with Youtube.com specified as the domain may be the best strategy. The quality of production and content varies considerably. Many videos are of US origin so may not necessarily be appropriate within a UK context. It is advisable to seek permission from the copyright owner to use them. This is particularly important in cases where the video includes 3rd party copyright content which the creator does not own.

2. **Use a video which has been prepared internally**

   Check out the Information Literacy Resource Bank (ILRB) http://ilrb.cf.ac.uk. The 4 entertaining and highly informative movies cover key areas of the information research process:

1. Information research: the initial steps
2. Exploring the journal literature
3. Evaluating online information
4. Taking the frights out of your cites.

3. Engage experts to help create professional videos

If you have complex requirements, you will need to engage experts who can assemble a video in a professional manner. This can be time consuming and expensive, requiring meticulous planning and lengthy discussion. However, IL videos such as "Taking the Frights out of your Cites" (see p. 43), which were created by ULS with the help of the Media Resources Centre, illustrate that the end result can make the effort worthwhile.

4. Create your own simple IL movies

You don't need a film crew and a lot of equipment to create some effective IL movies quickly and easily. Vodcasts can be created with just a webcam with a microphone. Below are some tips on how you can create your own IL movies.

Screencasts

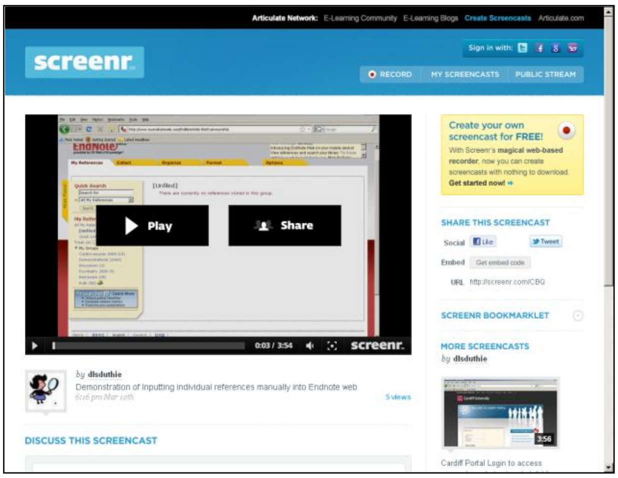
A screencast is a recording of a desktop demonstration with either a voiceover or captions. Numerous screencasting software packages are available.

Camtasia and *Captivate* offer features such as editing options, zooming and automatic captioning. *Captivate* would need to be purchased from an external supplier. However, *Camtasia* has been purchased and installed on two INSRV laptops. Contact Cathie Jackson (JacksonCM@cardiff.ac.uk) for details.

Using free software such as *Screenr* entails recording the screencast with sound in one take; if you make a mistake you have to begin again. One benefit of using *Screenr* is that your screencasts are hosted on your *Screenr* page and you can link to them quickly and easily.

You can upload your screencasts to video hosting/sharing services such as *YouTube* and *Vimeo*.

To record a voiceover with any of the screencasting software you will need a microphone on your computer, a headset or a webcam. Tip: write out your script and time it before you start recording.



Xtranormal

Xtranormal is an online movie maker that allows you to create animated movies by typing in text. You can set up a free account at http://www.xtranormal.com. All new accounts come with 300xp (xtranormal points) which allows you to purchase sets and "actors" to perform in your movie. Educator accounts are available and anyone with an active account can request to have it converted to educator status which provides an extra 5000xp.[9]

The process of making a movie is simple: choose a set, one or two actors and pick their voices, then type in (or copy and paste) your script. You can also add sound effects, background music and gestures for no extra points. Once you have edited your movie you can publish it on the *Xtranormal* site with its own URL. You are also provided with a code should you want to embed the movie into a tutorial or learning object. There is also an option to publish directly to *YouTube*.

(http://www.xtranormal.com/watch/6768643/mwe-test)

It is important to think about your target audience when using a tool like *Xtranormal*; the animations are probably more suited to year one undergraduates than to researchers.

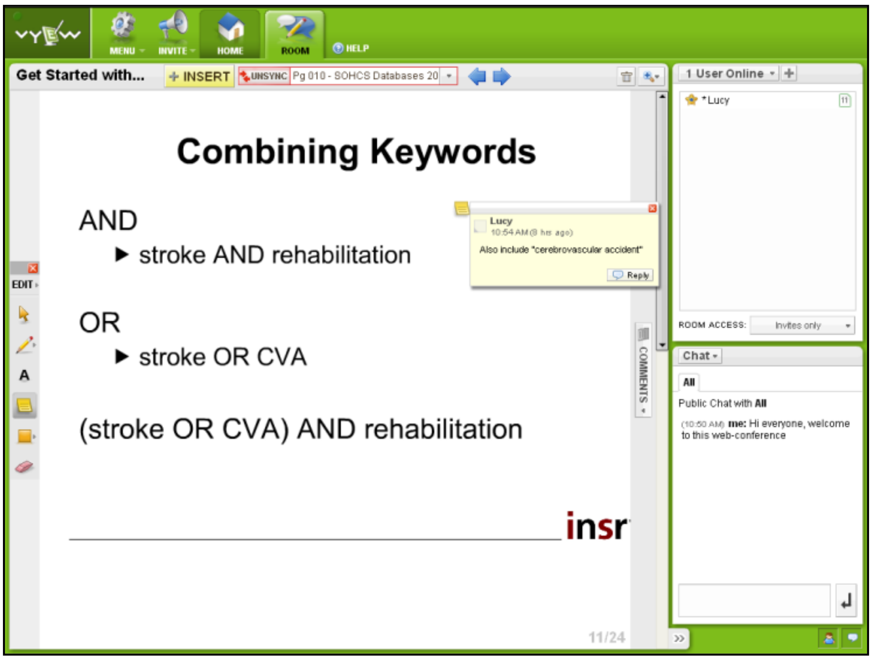
Web Conferencing

Web conferencing provides another means of delivering IL teaching to students who are unable to attend sessions on campus, e.g. distance learners and part-time students. There are numerous web conferencing software packages available: *Eluminate* and *Webex* require payment, while *Yugma* and *Vyew* are free online. Staff at the Health Library have been using *Vyew* to provide IL training for distance learning students.

[9] Xtragaz. 2010. *What am I paying for? I'm an educator. Is it true I can get a discount at Xtranormal?* [Online]. Available at: http://xtranormal.zendesk.com/entries/197530-text-to-movie-asset-store-and-virtual-currency-faq [Accessed: 15 June 2010].

Vyew

To sign up for a free account go to http://vyew.com



- *Vyew* allows the presenter to share their computer screen, an interactive whiteboard or a file such as a Word document or PowerPoint presentation, with up to ten students (the maximum number of attendees allowed for free accounts)
- Students access the web conference in *Vyew* by clicking on the URL to your "*Vyew* Room" which can be emailed to the students once they have signed up for a session
- Students do not need to install any software but they do need *Adobe Flash Player* enabled and sound on their computer
- Up to five attendees (including the presenter) can share a webcam within the meeting or all attendees can use the public chat (in the bottom right corner in the screenshot) to communicate with one another and ask questions
- You will need a webcam and a headset (depending on the quality of the microphone in your webcam) installed on your PC.

Tips:

- Advertise the sessions one week in advance on a blog and in Learning Central
- Tie in the sessions with assignment dates
- Allow 5-10 minutes settling-in time to let the students get used to the learning environment; have some patter prepared to keep them entertained whilst they're waiting for the other students to join; check pronunciation of names
- Be aware of time zones when scheduling the sessions
- Keep the students' attention by asking direct questions.

Video Conferencing software to support library users **Case study 10b**

Video conferencing software enables us to provide support in using the University's electronic resources to distance learners. The software enables you to share your desktop remotely with the participants of the session allowing you to give sophisticated demonstrations and take questions via voice or instant chat messages.

We have been using *BigBlueButton* hosted by JISC. To run one of these sessions you will need a headset with microphone, the latest version of *Adobe Flash* and a webcam. Participants will need a headset with microphone and the latest version of *Adobe Flash*. We hope that the functionality of the software will soon be extended to record sessions and to share participant's desktops.

Mari Ann Hilliar, Health Library

Wikis

A wiki is a tool that allows users to add and edit content freely on a website. The main goal of wiki communities is to create free, reliable, up-to-date reference sources. Wiki is a Hawaiian word meaning "fast".

Wikis can be used as online IL collaborative working tools in the following ways:

1. Collaboration between learners
2. Collaboration between teachers
3. Collaboration between learners and teachers

A great example of a wiki is *Library Success: A Best Practices Wiki* (http://www.libsuccess.org). This has a similar layout and design to *Wikipedia* because it uses *Media Wiki* http://www.mediawiki.org - a free open source software originally written for *Wikipedia*. The following are further examples of free open source software sites you may use for creating your wiki:

- *Wiki Spaces* (http://www.wikispaces.com)
- *Wet Paint* (http://www.wetpaintcentral.com).

However, bear in mind that Learning Central incorporates a wiki tool which has been used with great success (see case study on the next page).

Creative use of a wiki **Case study 10c**

Using the wiki tool on Learning Central allowed me to create a virtual repository for most of the content in my handouts and lectures. Unlike a simple collection of links, the material is searchable through tags and the hierarchical index. Embedded links within the articles facilitate browsing throughout the wiki, connecting topics together. I was also able to embed links to external web pages in and out of Cardiff University, providing both contextual information and further in-depth resources.

By placing most of my IL content in a secure location accessible to all School of Music students and staff, I was able to take a more relaxed approach to my IL sessions. In the inductions and introductory research skills sessions, I focused on enabling autonomous information seeking, rather than simply force-feeding the information to the students directly. The wiki is just one of the tools we used in developing our own Library module on Learning Central. Creating a hub of relevant information helped strengthen the School's Learning Central presence, which also reinforced our own relevance in the School. A nice side effect was that putting so much content online also significantly reduced paper output and staff time by eliminating the need for mass-photocopied handouts!

Although I have focused initially on using the wiki as a repository, I hope in future to expand its use for collaborative engagement with the School. I'd like to develop - either as part of the existing wiki, or as a separate wiki - a "by-genre" resource review where students and staff can share useful weblinks and recommend relevant materials. The idea is to create social bookmarks within a wiki article format. The trick will be convincing our School that sharing resources will enhance not replace traditional research.

Charity Dove, Music Library

Acknowledgements:

Update prepared by Lucy Collins, Jessica Emerton, Nigel Morgan, Susan Smith, Rowland Somers, Rosemary Soper and Erica Swain. Formatted by Rob Sell. With new contributions from Catherine Borwick, Charity Dove, Mari Ann Hilliar, Rebecca Mogg and Nathan Roberts.

Section 6: Lesson Delivery

Summary

This section examines good practice in three important components of lesson delivery:

- Presentation techniques (pp. 53-56)
- Managing the teaching environment (pp. 56-59)
- Facilitation skills (for workshops) (pp. 59-61).

Presentation techniques

Delivering a presentation for the first time, whether in the form of a lecture or part of a workshop, is not an easy task. Presentations have much in common with live theatre; after all, you will be giving a performance! Very few people are born presenters. However, the good news is that presentation skills can be learned / acquired with practice and everyone improves with experience. Entire books have been written on effective presentation techniques so it is impossible to go into great detail here. The following five point plan will stand you in good stead:

1. **Be confident**

   - **Good planning** is the key to good delivery. If you have correctly identified the learning outcomes, have a good structure and have chosen appropriate teaching aids you are off to an excellent start.
   - **Know your material** inside-out. If you have a knowledge of the material beyond what you are covering within the lesson, you will be less likely to be fazed by difficult questions.
   - **Practise your delivery** and any demonstrations beforehand
   - **Use instructor notes** as a prompt (see Section 3: Lesson Planning, pp. 21-22) but don't read them out word for word!
   - **Don't be fazed by mistakes** – they happen to us all. In most cases your audience will not notice.
   - **Try to relax**. It is inevitable that you will be nervous but the extra adrenaline will keep you alert and help you get through it.
   - **Be keen, be enthusiastic!** It is impossible to enthuse an audience if *you* are not enthused.

2. **Be clear and coherent**

- **Make your opening effective** and unhurried. Gain attention by making your opening remarks striking and attention grabbing.
- **Let your audience know what to expect**. Outline the framework of the lesson ensuring that the learning outcomes are understood.
- **Use structuring tactics:**
    - signposts: statements which prepare the audience for what is coming next, e.g. "I will now explain how to use Voyager. Firstly, how to find textbooks, secondly, how to find journals…"
    - frames: statements which indicate the beginning and ending of sub-topics, e.g. "So that ends my introduction to journal indexing services. Now let's look at one in particular: Web of Science."
    - foci: statements which highlight the essential points of the presentation, e.g. "So the key point is ..."
    - links: statements which link the different sections and relate to the learners' experience and knowledge, e.g. "You can see that by using narrower terms the number of records retrieved is reduced. This could mean relevant material is missed. To avoid this, use the database's thesaurus which we will look at next."
- **Look at the content from the standpoint of the audience**. Don't leave out chunks of explanation by assuming the audience is familiar with basic points of reference.
- **Don't use technical language** without explaining the meaning first. Learners will be confused by references to "OPAC", "Boolean" etc.
- **Repetition of key points and phrases** can be useful to get essential information across
- **Make your ending conclusive** and effective:
    - **Provide a summary** drawing together all your key points
    - **Be brief** and say nothing new at this stage
    - **Finish with a key observation** or quote
    - **Don't tell your audience that this will be a concluding summary** as they are likely to switch off and start packing up!

3. **Be inclusive and involving**

- **Use questioning** to encourage alertness and maintain interest. With large groups use global questioning: encourage contributions but bear in mind that, within large groups, learners may feel inhibited.
- **Use activities** to break up a session and encourage active learning; these can be especially effective within lectures, which traditionally are recognised as a passive format (see Section 4: Lesson Formats, pp. 33-34).

- **Use Audience Response Technology ('clickers')** to involve your audience and to help you assess the effectiveness of your session (see Section 5: Teaching Technologies, pp. 39-40)
- **Face and talk to the audience** not the screen when you are using teaching technologies such as PowerPoint! Maintain eye contact throughout.
- **Use pauses** to allow your audience time to reflect and catch up
- **Choose examples which are relevant, memorable and striking** when undertaking demonstrations.

4. **Be time conscious**

- **Rehearse in order to gauge the overall timing**. This will help ensure you are not spending too long on particular sections at the expense of others
- **Finish within the allotted time**. Learners will not mind finishing early but they will not be happy if you overrun!
- **Be alert to signs of restlessness** and inattentiveness. If you are aware of this, try changing the pace of delivery or move on to the next section.

5. **Be yourself!**

- Your **voice** is one of your greatest natural assets:
    - Speak clearly and loudly enough to be heard
    - Use intonation; if you speak in a monotone your audience will find your delivery monotonous.
    - Speak at a steady pace; if you speak too quickly, learners will be unable to digest what you have said; if you speak too slowly, you run the risk of sending your audience to sleep!
    - Don't try to hide a regional accent; just speak naturally but clearly.
- **Use humour**. A light touch and a witty aside can be useful for keeping the attention of your audience.
- **Use expressive body language and speech rhythms** but try to avoid any mannerisms which may be irritating to your audience
- **Dress comfortably and appropriately** – don't arrive under or over-dressed!

Above all, **Enjoy Yourself** – and your audience will too!

HILT Pick
For nervous presenters!

Strike up a conversation with one or two of the students before you start the session. You could ask them about the lecture they have just come from. This will help you engage with the students as individuals and ease your nerves when you come to speak to the whole group.

Pecha Kucha ペチャクチャ

Pecha kucha (pronounced pe-*chak*-cha) was devised in 2003 in Japan by a group of architects, and has since spread into the business community and other fields. It takes its name from the Japanese term for "chit-chat". It is a quick-fire technique to use with PowerPoint presentations, allowing a rapid and concentrated approach to the session. The speaker is limited to twenty slides, shown for twenty seconds each (you must set the timings using PowerPoint's Slide Transition option), giving a total time of 6 minutes 40 seconds. *Pecha kucha* requires good preparation and careful thought about the key points to choose for your slides, but it does provide a lively and effective method which should maintain your audience's attention.

Text is generally kept to a minimum as the impact of the format relies heavily on images. *Pecha kucha* may work well if you are required to give a short presentation within a large general orientation organised by the School; a well planned, attractive *pecha kucha* presentation is sure to stand out and make an impression. You may also find the format useful for presenting to colleagues at professional events. For examples of *pecha kucha* presentations used at an IL conference see:

http://www.library.unlv.edu/conferences/loexw/pechakucha.html [Accessed: 17 June 2009]

You will find a Cardiff University example in the Training Materials Repository (see Section 3: Lesson Planning, p.26) in the following folder: Training Materials - Orientation and Voyager - Presentations.

Managing the teaching environment

The teaching surroundings can have a considerable impact on the effectiveness of your session. It is worth considering the following points:

Room preparations

- Before the day, confirm the room booking either with RoomBooking@cardiff.ac.uk or check the weekly timetable on the door (for pool rooms)
- Visit the lecture theatre if it is unfamiliar to you - be prepared to visit outside academic teaching hours if the lecture theatre is booked up during

the day. If necessary, take along a colleague who is already familiar with the room and who can show you how the equipment works.

- On the day, ensure lighting or blackout arrangements are satisfactory, but also that lighting in the darkened room is still sufficient for note-taking
- Decide where you will put any handouts which you want to distribute at the start of the session. Many lecture theatres have two entrances so you might want to place handouts in separate areas.
- Also ensure that you:
    - Locate the most appropriate place to position yourself
    - Get a feel for the dynamics and atmosphere of the space
    - Practice projecting your voice.

Equipment preparations

- If you are using a portable data projector, ensure it is set up so that cables are not a hazard to you or the learners
- Ensure that you are able to log on to the presenter's PC:
    - Check that any web pages you wish to use display properly
    - Bookmark them in your web browser or link to them from your presentation. Run them up on the PC just before the start of your session to speed up access.
- Ensure that any sounds or images you intend to use run properly on the PC
- If you have back-up computer logins for your learners, test these out in advance
- If you are using a whiteboard or flipchart, find out how large and neat you have to make your writing for it to be legible throughout the room.

Seating arrangements

Try to ensure that learners are seated in the most appropriate arrangement for your session; for example, encourage your learners to sit *en bloc* near the front of the room rather than at the back or in a dispersed fashion. This should help ensure good interactivity and effective delivery.

HILT Pick

Stand at the back of the lecture theatre or classroom as learners are entering – they will then tend to gravitate towards the front!

Group work

If your session is in a seminar room with moveable furniture and involves the use of paper sources, breaking the class into smaller groups of, at the most, three or four learners, creates very good learning conditions. Students work as a team and learn from one another (see Section 4: Lesson Formats, pp. 36-37).

Working in pairs

An option for computer-based workshops is to get learners to work in pairs. Again, learners are able to support one another and the weakest learners in particular will benefit from this approach.

Room conditions

The temperature of the teaching environment can have a marked effect on performance. Unfortunately, most of the time we have very little control over heating and ventilation conditions. Where possible, every effort should be made to ensure that you and the learners are as comfortable as possible.

During the lesson

- Ensure you do not block learners' view of visual aids; stand to one side of the whiteboard / projector screen
- Give learners a chance to read on-screen information before you talk about it
- If you wish, switch the projector to a blank screen when you are not referring to a slide (press the letter **B** on your keyboard) in order to focus attention on you rather than the screen. Hit the same key again to switch back.
- If you have prepared a handout, suggest that learners use this for making notes.

HILT Pick

When using prompt cards or notes, number each sequentially, punch holes in one corner and hold them together with a treasury tag. If you then drop these, you should be able to find your place and continue without too much disruption (or embarrassment!).

Disabled learners

Every effort should be made to meet the requirements of disabled learners.

- Ensure that you know whether you will have a disabled student in a lesson. Check with the disability contact in the relevant School or the module leader.
- If you have a choice of venue ensure that it can accommodate the needs of the student(s), e.g. wheelchair access, acceptable acoustics
- Furniture should be arranged where possible to accommodate wheelchair access, and space should be made for guide dogs etc.
- If group work is to be used, consider carefully how the groups are to be formed.

See Supporting Document 5: Accessible Teaching Strategies, pp. 94-95.

Facilitation skills (for workshops)

When leading a workshop / hands-on training session, strong facilitation skills are needed to encourage individual learning or group interaction. These skills can be acquired with experience but it is worth bearing in mind the following points:

- Several kinds of facilitation skills are required:
  - **Attending / listening skills:** these involve *active* listening, maintaining eye contact, exploring and clarifying problems with a learner. Some learners are more articulate and coherent than others in how they express themselves. Focus and concentrate on what is being said to you. To ensure that you have understood, it is a good idea to paraphrase back to the student.
  - **Observing skills:** these involve closely watching the behaviour of learners, searching for clues which indicate how the training is being received – are the learners bored, restless, confused or generally comprehending and responding to the training in a positive fashion? Be watchful – try to identify which learners are experiencing problems and respond promptly and tactfully.
  - **Questioning skills:** many learners will be tense and you will need to encourage them through questioning to articulate their concerns and difficulties. You will need to use different kinds of questions in different situations: use a combination of specific (closed) and exploratory (open) questions to identify a learner’s specific needs or problems; use exploratory questions to encourage discussion within groups.
- **Get the balance right** between intervention and non-intervention. Many learners welcome general advice while others will feel intruded upon if you intervene when they have no apparent problem. You will need to be intuitive to assess each situation.

- **Anticipate problems** based on your past experience and point out potentially problematic areas before the hands-on part of the workshop begins
- **Be sympathetic** to the needs of:
    - **Fast learners:** it is useful to have on-hand an additional worksheet to engage learners who may have completed tasks before the rest of the group.
    - **Slow learners:** be positive and encouraging but don't allow yourself to be side-tracked as you will need to devote time and attention to other learners too! Suggest a follow-up session or if possible offer to stay behind after the session to address the problems being experienced.
- **Provide constructive feedback** whenever possible: be prepared to suggest more efficient approaches or encourage learners to reflect in order to devise alternative search strategies.
- **Don't be negative** or destructively critical as this can de-motivate learners; instead, look for opportunities to praise good practice.

Latecomers and difficult learners

Students arriving late can disturb the whole class, and may miss some important information. Try to minimise the disruption by:

- Continuing the session without repeating what you have already said
- Starting or continuing an exercise with the main cohort and helping the latecomer afterwards
- Speaking to the learner after the session; if they have a genuine reason for being late, try to offer another time when you can help them catch up.

Remember that lateness is sometimes unavoidable e.g. if a previous lecture over-ran.

Learners using *Hotmail*, booking train tickets online, arranging an Interflora delivery for Mum's birthday or completing coursework unrelated to your session can demoralise both you and other learners. You will need to consider each situation carefully, as the learner may simply not understand what they should be doing. However, you must avoid a confrontation in front of the group.

Tips for trouble-free sessions:

- At the beginning, set ground rules about participation and interaction
- Make a friendly but firm remark to divert a distracted student back to the task in hand
- When giving out feedback questionnaires, ask learners who may not have taken a session seriously or worked through the content to write down the reason

- Focus attention on a demonstration or ensure that students fully engage in discussion activities, by asking them to switch off their computer screens.

In *exceptional* circumstances and only as a last resort, ask the student politely to leave the session

Don't forget – your role as a facilitator is to **Encourage**, to **Motivate** and to **Support**!

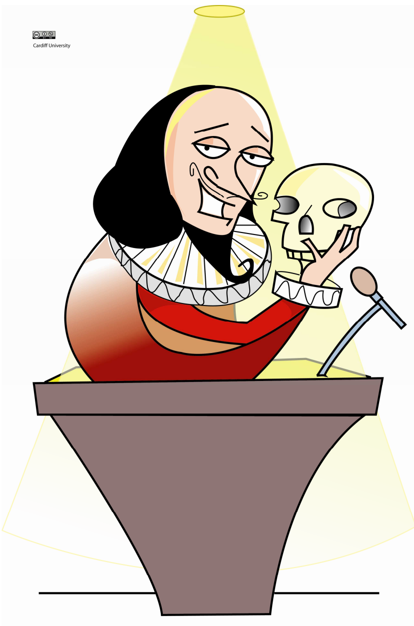
Facilitating workshops **Case study 11**

I've been helping with first year IL sessions for a couple of years and it's a really good way of getting to know both the students and the resources they will be using. I find it helps me deal with IL queries when I staff the information desk as I can refer back to things we covered in the student's session.

It's essential to run through all the tasks the students will be doing before your first session so you are familiar with any problems they may encounter. It can be a bit scary speaking in front of a group for the first time but I found it helped to begin by talking about house-keeping issues, e.g. checking that everyone had signed in.

Each group we teach is different: a lively group can lead to a more interactive session. With quieter groups we need to be more proactive as they are less likely to ask questions. Occasionally, groups of students start chatting and they may need a few reminders to focus on the session; asking "how are you getting on?" and looking at their PC screen usually helps. I think the most important part of facilitating IL sessions is trying to help the students appreciate how important IL is to their course. I really enjoy assisting with IL sessions and we often get positive feedback from the students which is very rewarding.

Nicola Jones, Biomedical Sciences and Science Libraries



...To Google or not to Google,
that is the question.

Section 7: Assessment

Summary

This section highlights the issues to consider when setting assessments. Areas covered include:

- Purpose and forms of assessment (p. 63)
- Principles of assessment (pp. 64-67)
    - Validity, including research trails and other methods (pp. 64-65)
    - Reliability (pp. 66-67)
    - Explicitness (p. 67).

Purpose and forms of assessment

Assessment can serve different purposes and the method you choose will depend on its purpose. The University's Assessment strategy[1] notes three functions of assessment and defines them as follows, noting that any one assessment task may fulfil more than one function:

- *Diagnostic assessment* is used to show a learner's preparedness for a unit or programme of study and identifies any potential gaps in knowledge, skills and understanding expected at the start of study, or any other problems.
- *Formative assessment* is designed to help learners learn more effectively through giving them feedback on their performance indicating how it can be improved.
- *Summative assessment* is used to indicate the extent of a learner's success in meeting the intended learning outcomes of a unit of study or programme.

A formative assessment might, for example, take the form of an in-class test or an essay which is marked but does not count towards the final marks given for a course. A summative assessment determines the final mark the student receives, e.g. an essay, dissertation or traditional examination.

You must obtain express permission from the School before setting students any work to be completed outside your class, even a non-assessed exercise.

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[1] Cardiff University. No date. *Assessment Strategy* [Online]. Available at: http://www.cardiff.ac.uk/learning/resources/Assessment%20Strategy%20final.pdf [Accessed: 6 August 2009].

Principles of assessment

Effective assessment depends on three principles: validity, reliability and explicitness.

- **Validity** refers to whether the assessment measures what it is supposed to, is aligned with learning outcomes and proportionate in volume.
- **Reliability** refers to the accuracy, consistency and repeatability of the assessment, and whether it discourages opportunity for plagiarism.
- **Explicitness** refers to the clarity of assessment to all involved in the process. It is associated with the quality, quantity and timeliness of information given to staff and students regarding the assessment.

Validity

The form of assessment used by a module will be indicated in the module description along with the learning outcomes of the course. The learning outcomes and assessment methods are formulated at the same time. Students must only be assessed on the stated outcomes, so it is essential that, if you are asked to contribute to summative assessment, IL outcomes are first clearly stated in the course description.

INSRV staff have used successfully a number of methods for formative or summative assessment:

- **The research trail.** This is a useful tool in assessing the level of skill a student has in identifying, finding and evaluating the information needed for a task. The research trail will be just one element of a larger assessment task, such as an essay which will, in addition to other learning outcomes, assess the student’s ability to use the information effectively and ethically. The research trail supplements, rather than replaces, the list of references or bibliography at the end of the written work.

  A typical research trail might require the student to:

  - set out the research plan or strategy they adopted
  - list the keywords selected to find information
  - list the full bibliographic details of all the items identified as being relevant to the research (the list might include material not eventually cited in the written work)
  - outline the steps taken to uncover the relevant information
  - reflect on how useful they found each item listed, according to various qualities such as relevance, reliability, authority and objectivity
  - consider what changes they would make if asked to undertake the research process again.

  An example of a research trail assessment issued to students appears as Example 18, p. 150-151.

I-maps, similar to research trails, are used in conjunction with a conventional essay and document a student's information gathering and handling process.[2] In addition to recording how information was found, the i-map will record thought-processes and how the student's ideas developed. It takes the form of a "map" or diagram and may be particularly suitable for visual learners.

- **Other Methods:**
    - a multiple choice or short answer test (see Example 19, pp. 152-153)
    - preparation of a review of recent literature on a topic
    - critical appraisal of a journal article
    - an essay or report, for which a percentage of the marks (say, 25%) is allocated to evidence of research (e.g. the presentation of background information or wider reading and a bibliography).

Assessing your information literacy sessions **Case study 12**

Stephen Thornton, a Politics lecturer, and I have recently experimented with adding an assessed element to the Politics Year 1 Information Literacy sessions.

In 2007/08, we used a research trail to encourage students to reflect on their use of information in essays. Student feedback was generally positive, but some suggested that completing the trail meant having to "sacrifice" time and effort that could be spent on the "more relevant" activity of writing an academic essay. Some students also felt that they were artificially justifying or changing their sources to "fit" the criteria.

For 2008/09, we radically changed the assessment for this module. Students didn't write a "traditional" essay, instead they were asked to complete the integrated assignment (see Example 20, p. 154). Overall, students have seemed to take to this approach more positively. One said "The assignment was a challenge, very different from the other essays and the skills addressed within it such as reputability of sources made me more aware of the sources I used in other essays." Another said "The assignment was more useful as it gave me some ideas about why I should use sources, something which I didn't question before."

Sonja Haerkoenen, Arts and Social Studies Library

[2] Walden, K. and Peacock, A. 2006. The i-map - a process-centered response to plagiarism. *Assessment & Evaluation in Higher Education* 31(2) pp. 201-214.

Reliability

A key component of assessment is consistency of marking. Discuss and agree your approach with the other markers before you commence. Set down the criteria for marking and use a standard marking sheet. There are several different designs for this:

- **An unstructured marking scheme** (Example 21, p. 155) provides the marker with opportunity for free comment. On the other hand, the criteria for marking are not clearly stated and it can lead to 'impressionistic' marking. This scheme is often used when marking reflective or essay type work. If free comment by the assessor is important, you may wish to consider a semi-structured scheme which uses general headings as in the unstructured scheme but lists the criteria which the assessor should consider in making his assessment.
- **A fully structured marking scheme** (Example 22, p. 156) allocates a portion of marks to each of the criteria to be considered by the marker. (The criteria outlined for students in Example 18, p. 151 provided the structured marking scheme for that assessment).

Where an exercise requires one word or short answers it is good practice to prepare marker's notes which set out the correct answers and provide information on how the correct answer has been obtained. Such notes will ensure consistency in the marking and annotation of student exercises both for a single marker and, more especially, where several staff working independently are marking the same exercise. The marker should annotate incorrect answers with the correct response and include a note on the best method of achieving the correct answer. Alternatively you may wish to prepare a model answer with the correct answers and methodology, to distribute to students when their submissions are returned.

The Freedom of Information Act 2000[3] gives a general right of access to information held by public authorities. Students can ask Schools to provide them with copies of assessments, feedback sheets and marking sheets used in conjunction with the assessment process. The request is usually prompted by a student considering the preparation of an appeal. Take care when commenting about the quality of the answer on any assessment papers to ensure that it is fair, relates to the criteria only and is defendable.

[3] *Freedom of Information Act 2000* [online]. Available at: http://www.opsi.gov.uk/Acts/acts2000/20000036.htm. [Accessed: 6 August 2009].

Marking research trails **Case study 13**

I work closely with a colleague in the Law School to set and mark assessments for the Practical Legal Research element of the Legal Practice Course. My teaching colleague marks the answers/legal interpretation while I mark the research trails. We use a marking grid (Example 23, p. 157) where I am responsible for sections 9 and 10 of the grid. My part of the marking is a major task which takes me about 75 hours. I mark 150-200 papers and find that with no word limit for the research trails and most questions permitting the use of a wide range of resources, consistency can be a challenge.

When marking I first draft my own research trail as a template for that particular question. If I find a student has successfully used a different way to find information, I add that to my template. I also create a document where, against each student number, I highlight any poor use of the resources and whether they were competent or not competent. This becomes a guide that I can quickly refer back to in order to keep the consistency throughout the marking.

After marking is complete, I re-check those papers that were not competent and borderline. Then my teaching colleague double checks the research trails before we have a meeting to discuss any papers over which we have concerns. Finally, a cross-section of papers are sent to the external examiner to validate our marking. Students who are eventually found not to be competent will receive feedback in preparation for a re-sit and for this reason I am always mindful that I need to be able to justify and articulate my reasons for marking a paper down.

Matthew Davies, Law Library

Explicitness

For modular courses, Senate assessment regulations state that assessment criteria (a description of what the learner is expected to achieve in order to demonstrate that the module learning outcomes have been met) should be provided in written form to students in the Module Catalogue and notified to each student at the start of the session.

Provide students with the marking sheet and discuss its contents with them before the assessment is set to help them understand the criteria for the assessment and provide transparency to the assessment process (see Example 18, p. 151). If there may be confusion over what is expected by the student in terms of content or presentation, you may wish to design model answers which can be handed out prior to or at the same time as the assessment. Obviously these should be on a topic unrelated to the actual exercise. Some Schools, with permission from those involved, have made available examples of student work from a previous year along with the comments and marks from the assessor.

Section 8: Evaluating your Teaching

Summary

The importance of adopting a reflective / evaluative approach to your teaching is explored. The key areas are:

- Reflective practice (pp. 69-70)
- Feedback from students including questionnaires (pp. 70-72)
- Key performance indicator (KPI) for IL (p. 73)
- Feedback from tutors (pp. 73-74)
- Peer Review of Learning and Teaching (PRLT) (pp. 74-75).

Why evaluate your teaching?

It is essential to gather information which will enable you to assess the effectiveness of your teaching and the learning achieved. This will help you identify your successes and failures and provide evidence to inform your future practice.

Reflective practice

"Reflective practice is a means by which practitioners can develop a greater self-awareness about the nature and impact of their performance, an awareness that creates opportunities for professional growth and development".[1]

Reflective practice is regarded as an essential element of continuing professional development. The definitions of reflection indicate that this is an active rather than a passive process; Reid (1993) defines reflection as "a process of reviewing an experience of practice in order to describe, analyse, evaluate and so inform learning about practice."[2]

Some key points to think about:

- The purpose of reflection is to improve and enhance your teaching. It is a means of evaluating an experience leading to a positive change in behaviour in future.
- Reflection is more than just 'thinking'; it requires the ability to critically assess, analyse and review all aspects of your teaching

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[1] Osterman, K. F. and Kottkamp, R. B. 1993. *Reflective Practice for Educators.* Thousand Oaks, CA: Sage.

[2] Reid, B. 1993. "But we're doing it already": exploring a response to the concept of reflective practice in order to improve its facilitation. *Nurse Education Today*. 13, pp. 305-309.

- It is a highly personal process requiring discipline and honesty; you will need to confront your disappointments and mistakes as well as your successes.

There are several ways to reflect on the success (or otherwise!) of a session and on your own performance. You can initiate the process by making brief personal notes during or immediately after a session. You might want to ask yourself:

- What was the purpose of the session?
- Did I have any concerns about the session beforehand?
- Which parts of the session went well and why?
- Which parts of the session did not go well and why?
- Were the learning outcomes achieved?
- What have I learned that can help me improve my performance?

Set aside some time soon after your session to address these issues. If possible, keep a diary to record your reflection and refer to this in future. It's also a good idea to take into account the opinions of others. For example, you could encourage colleagues to offer observations on your performance. This is particularly appropriate when you are teaching as part of a team. Feedback from students can also give an indication of your effectiveness.

Feedback from students

This can be obtained by direct and indirect means. Direct means include:

- Feedback questionnaires
- Group discussions at the end of sessions
- Comments boards
- Focus groups

Indirect means include:

- Feedback given to the School when sessions are embedded
- Noting non-verbal behaviour during the session, e.g.:
    - o eye contact (or lack of)
    - o background chatter (or lack of)
    - o excessive rustling or coughing (signs that students are not successfully engaged)
    - o interest in asking or answering questions
    - o are they responding to humour?
    - o are they yawning or asleep?
    - o are they engaging in the activities - or are they booking their train tickets for the weekend? (Remember - this may not necessarily be a reflection on your performance!)
    - o are they packing up and wishing to leave the session early?
- Evaluating student performance in exercises and assessed work.

Questionnaires

Questionnaires are widely used for collecting feedback and can cover all aspects of the design, delivery and assessment of the course of instruction.

Ideally, your session will be part of a module, so you may need to use a questionnaire designed by the School. Alternatively, there may already be a question(s) relating to your sessions on the course feedback questionnaire administered by the School and you may feel that this is adequate. However, if you wish to and are free to use your own, check out the following examples. Example 24, p. 158 and Example 25, p. 159, may be used after a single IL session, whilst Example 26, p. 160, is appropriate for obtaining feedback from students who have attended a series of sessions. Be aware of ‘survey fatigue’ amongst students: you must not duplicate the collection of feedback by the School.

Designing questionnaires

Sometimes it will be necessary to design your own questionnaire, for example if you:

- wish to obtain feedback on a specific aspect(s) of a session
- are running a session for the first time
- are incorporating new content in an established session
- are using new materials, methods or technology
- wish to carry out a pre-session audit to gauge the expectations / prior knowledge of students.

Questionnaire design can be complex and is a topic of study in its own right. However, here are some tips:

- Make the aims of the questionnaire clear from the outset, e.g. “to identify student preference for online tutorials or printed worksheets at database training sessions” or “to gauge student reaction to a new interactive library orientation session”
- Questions should be relevant and appropriate to the aim(s) of the questionnaire - keep it tightly focussed
- Only ask about aspects of your teaching you are in a position to act on as a result of the responses received
- Make the questions short, precise and simple to answer. Avoid ambiguity and use straightforward language.
- If possible, use a combination of ‘closed’ and ‘open’ questions
    - Closed questions provide ‘quantitative’ data by offering a choice of answers using tick boxes or requiring responses using a scale or number rating. They are quick to answer and the data is easy to collate.

E.g. Which of the two exercise formats used in this session did you prefer?

Online tutorials ☐

Printed worksheets ☐

No preference ☐

- o Open questions are used for obtaining ‘qualitative’ feedback in the form of stated opinions and comments. Keep these to a minimum as they will take more time to complete and are likely to be ignored by some students:

  E.g. Why (if you specified a preference) did you prefer this format?

- Keep it short - one or two sides of A4. Long questionnaires look off-putting and take up too much time to complete at the end of a session.
- The layout should be clear and uncluttered. Use lots of white space and a generously sized Arial font.
- Conform with the accessibility recommendations referred to elsewhere in this handbook, for example in Supporting Document 6, pp. 96-97.

Draw attention to the questionnaire at the end of the session and collect completed forms before students leave. This will help ensure a high response rate and thus a reliable picture of opinion.

Other suggestions

- Initiate a group discussion at the end of the session using open questions (How, What, When, Why)? For consistency, put the same questions to every group following the course of instruction.
- Give students a coloured post-it note to comment on an aspect of the session which they liked, and a different colour to highlight an aspect of the session which they didn’t. Ask students to stick these on a board as they leave.
- Ask the module tutor to elicit feedback in their next class. You could also seek feedback at any staff / student panels which you attend.
- For a new session you could (with permission of the School) set up a small focus group to receive a more in-depth response
- Monitor student use of, or enquiries relating to the sources in which you have provided instruction in order to gauge changes in behaviour following your session, over a period of time. If this indicates that some students are experiencing difficulties take remedial action by, for example, offering ‘follow up’ sessions.

Key performance indicator (KPI) for IL

A KPI is a meaningful measure of success which can assist in assessing progress towards the achievement of a specific goal. INSRV Board has requested a KPI to measure the impact of IL teaching. After consultation at a ULS Briefing, the IL Group has agreed that the best measure of impact is one which takes into account students' perceptions of the effectiveness of the IL teaching they experience. The following KPI has been formulated to enable teachers to quickly and conveniently elicit a response:

"As a result of the [information literacy] training, I feel better prepared to research and complete my academic work"

Teachers may replace 'information literacy' with their preferred terminology e.g. 'legal research', 'library skills' etc. The question should be addressed to each student at the end of an IL session or the final session of a series. The Likert scale should be adopted for students to specify their level of agreement i.e. Strongly agree, Agree, Maybe, Disagree, Strongly disagree.

Responses may be collected via a number of means

- If you are using clickers you may set-up a vote and record the results
- If you are using a feedback form, include the question at a prominent point (see Example 26, p, 160)
- Display the question and response options on a PowerPoint slide. Issue post-it notes and get the students to attach to a wall as they leave the room
- Set up a quick online response survey using a free online voting tool such as Doodle (http:www.doodle.com)
- Set up a survey using Bristol Online Surveys (BOS). To obtain an account contact the Web Services team at authorsupport@cardiff.ac.uk

Make sure you impress upon the students the importance of responding and, whichever method you use, try to ensure they respond before leaving the room rather than relying on them to respond at a later date. Having compiled the results for a whole cohort, send them to Cathie Jackson who will produce the overall figure for the KPI.

Feedback from tutors

The quality of student work will be formally and informally assessed by tutors. As a result, they will have views on how effectively the learning outcomes incorporating elements of IL have been met. Key indicators might be how well students have developed their research strategies, uncovered the depth and breadth of appropriate material and avoided plagiarism.

Develop relations with tutors by:

- discussing outcomes and appropriateness of lesson content beforehand
- sending copies of the documentation you will be handing out
- providing a report / feedback after the session(s)

- seeking feedback on how successfully the IL elements of assessed work were handled by students.

Peer Review of Learning and Teaching (PRLT)

PRLT is designed to help you reflect on your teaching with support from a colleague. In February 2006, Senate endorsed the Peer Review of Learning and Teaching Policy Framework.[3] The central tenets of the scheme are **reflection**, **development** and **enhancement**.

All INSRV staff with teaching responsibilities are expected to undertake PRLT at least once a year. This will be a confidential and non-judgemental experience based on mutual trust and respect. A supportive colleague will attend your session to help you reflect on all aspects of your teaching. As part of the process, you too will be expected to offer similar support to an INSRV colleague. The intention is that both parties will learn and benefit.

To date, INSRV staff have found this a positive and worthwhile experience (see Case Study 14, p. 75). PRLT can prove inspirational as you may get to see alternative teaching methods and styles in action. It can also help build confidence by confirming your strengths, and helping you improve in those areas in which your teaching is less developed. Moreover, the process will encourage you to think critically about your teaching as you will need to discuss your approaches in depth and detail with your colleague.

Your initial peer discussion should help set the context of your session for your partner. It is important to discuss what you expect to get out of the process. You will need to

- Flag the areas of concern, those aspects of your teaching upon which you would particularly value the opinion of your partner (though ideally, your post-session discussion should be as wide-ranging as possible)
- Agree upon the form in which the data / evidence will be collected and presented at the discussion.

For further information see *the INSRV Peer Review of Learning and Teaching Framework* on the shared drive at:
WorkingGroups\Informationliteracy\Staff development

Finally, remember that reflection is an ongoing process – it does not stop after your PRLT has been completed for the current year. Time set aside for reflection is time well spent. It is a sound professional practice from which you and your students will benefit immeasurably.

[3] Cardiff University. 2006. *Peer Review of Learning and Teaching: a guide for participants* [online]. Available at: http://www.cardiff.ac.uk/learning/themes/peerrev/index.html [Accessed: 6 August 2009].

PRLT: a subject librarian's perspective **Case study 14**

I'm one of the lucky ones. It wasn't that long ago that I received my MLIS, and in my final semester I even had a class on using technology in IL education. Granted, between all of the role-playing, new tools, methodology, and of course our final exam (designing and delivering an instruction session to our very critical peers), I suspect that in some ways the training I received did me more harm than good. I came away from the experience with outrageously high expectations, and now that I was faced with creating my own curriculum and presenting it in an academic setting, I felt completely overwhelmed. And on top of this, I had to face peer review… again?!

I can't say the idea of PRLT filled me with joy. But the experience was nothing like I had imagined. There was no criticism - only offers of assistance. Even the emails trying to coordinate the observations were friendly reminders that I wasn't alone. Sitting in on a colleague's class gave me additional parameters for evaluating my own classes and shook loose ideas that had been stuck in the back of my brain. Going through her handouts showed me how I might adapt worksheets from the Training Materials Repository to meet my own needs. Most importantly, there was the act of setting aside some time to reflect, and to have the opportunity to do so with someone there to act - not as an assessor, but as a mirror.

Participating in the PRLT transformed what had been a somewhat stressful project into a satisfying and fulfilling process. By working independently alongside my peers, I received the support I needed to manage my expectations and create my own learning experience. Will I be a better teacher because of this? Undoubtedly. Will I be a calmer and more confident professional? Absolutely!

Charity Dove, Music Library

Supporting Documents and Examples

In addition to this training, subject librarians compile a range of electronic and print instructional resources. For a list of the subject librarians for each School visit the INSRV Information Literacy web pages at www.cardiff.ac.uk/schoolsanddivisions/divisions/insrv/training/infolit/

With funding from the University's Innovative Learning and Teaching fund, INSRV has developed the Information Literacy Resource Bank (http://ilrb.cardiff.ac.uk). This is a collection of 'bite-size' online interactive tasks, diagrams, cartoons and short tutorials which focus on aspects of information literacy. They are available for staff to download and incorporate into their own online or printed teaching materials.

Additional support is provided by insrvEducation which offers training and certification to enable staff and students to make the best use of centrally provided IT facilities and software applications.

.2 Registry

Registry is able to offer support and advice to academic staff regarding information literacy and the University's Learning and Teaching Strategies, the enhancement of learning and teaching (including the financial support of innovative projects), and quality processes (including the programme approval process).

If you would like to discuss any aspect of Registry's work in this area, please contact Stephen Iwan Griffiths (telephone: 74456 or email: GriffithsS4@cardiff.ac.uk).

5. Sources of additional information

1. **Information Services Information Literacy web pages**. www.cardiff.ac.uk/schoolsanddivisions/divisions/insrv/training/infolit/
2. **The Information Literacy Resource Bank**. A collection of learning objects on information literacy developed by Information Services. http://ilrb.cardiff.ac.uk
3. **Association of College and Research Libraries (ACRL) Information Literacy web site**. http://www.ala.org/ala/acrl/acrlissues/acrlinfolit/informationliteracy.htm
4. **Information Literacy web site**. A web site on information literacy for the UK created by Eduserv and CILIP. It includes a list of tutorials and resources on information literacy in higher education. http://www.informationliteracy.org.uk
5. **insrvEducation web site**. For information about the programme of IT training courses provided by Information Services. http://www.cardiff.ac.uk/schoolsanddivisions/divisions/insrv/training/ittraining/

Supporting Document 1:

Information Literacy Guidance Note

This document was approved by the Learning and Teaching Committee in February 2007. It replaces the original Information Literacy Guidance Note (May 2002).

1. Introduction

.1 Defining Information Literacy

Information literacy is defined as a set of abilities requiring individuals to "recognise when information is needed and have the ability to locate, evaluate, and use effectively the needed information" (ACRL 2000).

In essence, information literacy is a framework for finding, evaluating and using information. The concept:

- is applicable to all disciplines, learning environments and all levels of education;
- ensures that learners become more independent, enabling them to assume greater control over their own learning and research;
- forms the basis for lifelong learning.

Information literacy is internationally recognised. National policies have been developed in Australia and New Zealand, the USA and the UK (Bundy 2004; ACRL 2000; SCONUL 1999).

To clarify the concept, the Association of College and Research Libraries (ACRL 2000) identifies five standards which support the development of learning outcomes for information literacy:

The information literate individual:

1) determines the nature and extent of the information needed.

2) accesses the needed information effectively and efficiently.

3) evaluates information and its sources critically and incorporates selected information into his or her knowledge base and value system.

4) uses information effectively to accomplish a specific purpose.

5) understands many of the economic, legal and social issues surrounding the use of information and accesses and uses information ethically and legally.

.2 Why is information literacy vital?

Information Literacy:

- is an essential component of critical thinking and research-led learning and teaching.

- enables us to meet the challenges arising from the proliferation of information.

  The amount of new information stored electronically doubled between 1999 and 2002. This is equivalent each year to 37,000 new libraries with collections the size of the Library of Congress or, put another way, 30 feet of books for every person in the world (Lyman and Varian 2003).

- will help us reap the benefits of the Modern Working Environment in our everyday working life.

- can play a key role in promoting an understanding of what constitutes plagiarism and in deterring its practice by promoting integrity and accountability in the use and presentation of information.

- is a key to lifelong learning in our knowledge society.

2. Background and Policy Context

This guidance note has been developed to further the central aims of the University's Strategic Plan and in particular, key aspects of the Assessment, Learning Environment, and Learning and Teaching strategies:

- The second of the four aims of the Learning Environment Strategy is to enable users to make the most of the learning environment.

- One of the key objectives (2.3 Learning) of the Learning and Teaching Strategy is to ensure that the learning opportunities made available to students allow them to develop appropriate research and academic-related skills, and to become independent and lifelong learners.

- Tenet 2.5 of the Assessment Strategy states the need for students to understand the concept of academic integrity and act accordingly.

3. Information Literacy and the Curriculum

.1 Information literacy is important in all disciplines and at all levels of study. It is best developed within the context of the academic curriculum, rather than as a separate add-on removed from the subject content. It is suggested that students are more likely to recognise the relevance and importance of information literacy if teaching is delivered at the point of need, affiliated with their own subject, and included in assessment (Godwin 2003; Hine et al. 2002).

.2 The embedding of information literacy into curricula facilitates student-centred teaching methods including problem-based, inquiry-based or evidence-based learning together with opportunities for self-directed learning and reflection (ACRL 2000).

.3 Evidence suggests that success in embedding information literacy into the curriculum depends on the establishment of collaborative working partnerships with all those involved in the learning and teaching process (see for example Davies and Jackson 2005; Grafstein 2002; Hine et al. 2002; Thornton 2007).

An example of how information literacy has been embedded into a year one CLAWS module is provided in Appendix One. Views of academic staff on the success of embedding information literacy into other modules are quoted in Appendix Two.

4. Information Literacy: University Support

.1 Information Services

Information Services (INSRV) has developed a national reputation for its support of information literacy in the University. In 2004 Cathie Jackson (JacksonCM@cardiff.ac.uk) was appointed to take the lead in implementing INSRV's information literacy strategy and to advise on approaches to embedding and assessing information literacy across INSRV and the Schools.

Subject librarians collaborate with academic colleagues in the Schools to integrate information literacy into programmes of study and tailor methods of delivery to suit the requirements of each discipline. They provide instruction embedded within courses such as hands-on workshops for large and small groups, demonstrations, lectures and tutorials.

In 2005/6, subject librarians provided 76% of students on taught courses at Cardiff University with database and web searching training; 61% received in-depth information literacy training involving identifying and locating good quality information, from a range of sources, for their research. For 39% of students, information literacy training was fully integrated into a module or course of study.

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SCONUL Advisory Committee on Information Literacy. 1999. Information skills for higher education: a SCONUL position paper [online]. London: SCONUL. Available at: <URL: http://www.sconul.ac.uk/groups/information_literacy/papers/Seven_pillars2.pdf> [Accessed: 18 January 2007].

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Appendix One – Example of the integration of information literacy into a curriculum

Legal Foundations[1] is a core, year one, 30 credit CLAWS module which is planned and delivered collaboratively by the module leader, Jackie Davies, the subject librarians for law and the CLAWS Computing Officer.

The aim of the module is to introduce students to the main features of the legal system in England and Wales and develop the legal skills needed to study law. The coursework element of the assessment is through an essay, accompanied by a reflective “research trail”. Information literacy provides a framework through which skills are presented in a relevant and easily applicable way to students.

Course structure

The course consists of four units: the legal system of England and Wales; legal analysis and reasoning skills; legal research skills; and legal presentation skills. The latter two incorporate information literacy and are delivered through five two-hour seminars and two lectures during the latter half of the module. These sessions build on earlier IT skills workshops and an introductory lecture and exercises which outline how legal information is structured.

The information literacy seminars are planned around a hypothetical case study on the English legal system which aims to build on the legal knowledge gained earlier in the module. The first seminar is based on Information Literacy Standards 1 and 2 (determining a need for information and accessing information) and is led by a subject librarian from the Law Library. This highly participative workshop, delivered in a computer room, builds on students’ previous experiences of finding information to explore the breadth of information needed for the case study.

In preparation for their next seminar, students read the material they have identified. The second session is back with the law tutor and introduces techniques for critically evaluating the information sources they found for relevance and quality (Information Literacy Standard 3). As a first step to Standard 4 (using information effectively to accomplish a specific purpose) students are then asked to draft an oral report and a short piece of legislation using an appropriate selection of the information they have identified.

In preparation for the third seminar, students are required to plan and write a 1250 word essay accompanied by a reflective research trail. The research

[1] Full details on the Legal Foundations module are available in Davies, J. and Jackson, C. 2005. Information literacy in the Law curriculum: experiences from Cardiff. *Law Teacher*, vol. 39 (2), pp. 150-160. Available at: <URL: http://eprints.cardiff.ac.uk/31> [Accessed: 18 January 2007].

trail asks students to reflect upon the reliability, objectivity, authority and relevance of each of the sources they used in the essay. This third seminar is based on Standard 5 (using information ethically and legally) and covers writing skills, including correct citation and avoidance of plagiarism. At the start of the seminar, students work as a group to identify the characteristics of good writing. These are compared with the criteria actually employed by the Law School. Each student then peer reviews another student's essay anonymously and comments on it using the criteria identified earlier. Meanwhile, the tutor reviews the adequacy of the research process as demonstrated in the research trail. Each student is given the opportunity to re-draft their own essay in response to this feedback before submitting it, together with the research trail, as an assessed piece of coursework.

The final two seminars consolidate and reinforce students' information literacy in a fresh context. The module culminates with a mooting exercise and the information literacy element is emphasised in the penultimate seminar as teams pool and discuss their research and plan their submissions.

Outcomes

- Adopting a structure developed around the concept of information literacy has facilitated a skills-based approach to student learning without sacrificing substantive content and started the process whereby students are enabled to meet the QAA benchmarks for law.

- Working together, law tutor and librarian can focus on skills of *evaluation* and *use* (Information Literacy Standards 3 and 4) to address the challenge presented to this generation of students by information which increasingly comes in unfiltered formats.

- Peer and tutor review of essays in a workshop format has enhanced key skills of communication and literacy.

- The introduction of a research trail in the coursework assessment has both reduced the incidence of plagiarism, whilst also making it easier to detect, and has encouraged students to reflect upon their learning.

Appendix Two – Views of academic staff

"Access to huge amounts of information, via various electronic means, is the norm for today's student. Whereas the challenge previously for a student was how to find sufficient information, today the issue has become how to prune and select appropriate sources amongst the Wikipedia, Google and Ask internet minefield. Integrating the expertise of the Biosciences Information Specialists [subject librarians] into our modules has been a vital tool in increasing the students' critical understanding and effective employment of their developing information literacy skills."

Dr Kate Phillips
Year One Co-ordinator
School of Biosciences

"Information literacy workshops are an integral part of a postgraduate professional issues and skills module. The students benefit from being taught by an information specialist and are aware that the School regards it as important that they develop their information literacy skills."

Pat Ryder
Professional Tutor
School of Computer Science

"With an overwhelming amount of information readily available to anyone with access to the necessary technology, gaining an appropriate level of information literacy is now an essential element in the process of becoming a successful student".

Dr Stephen Thornton
Lecturer in Comparative Politics
School of European Studies

"Information literacy training forms a sound basis for and serves to promote life long learning."

Dr Rachel Waddington
Director of Postgraduate Research Students
School of Dentistry

Supporting Document 2:

INSRV Information Literacy Strategy 2008-2011

Developments since 2005

There has been significant progress on information literacy (IL) in Cardiff University during the period of the 2005-2008 Information Services (INSRV) Information Literacy Strategy. Over half of all students now engage with information literacy as part of their curriculum, facilitated by subject librarians. The outputs of innovative projects including the Information Literacy Resource Bank and the Student Survival Guide to Writing a Good Essay podcast enable staff to enliven their teaching materials and offer interactive and entertaining support for students. A new and improved Handbook for Information Literacy Teaching provides a source of guidance and inspiration to staff and has proved so popular that it is shared on the web and even translated into Finnish and Swedish.

Cardiff's leadership in IL has been recognised through national awards. Nigel Morgan, Biosciences Subject Librarian, won the inaugural Information Literacy Practitioner of the Year award in 2008. In the same year, Cathie Jackson received the Wallace Breem Memorial Award from British and Irish Association of Law Librarians for the contribution to law librarianship made by her online IL-related tutorial.

Updating the strategy

This revised Strategy refreshes our Objectives for the period 2008 to 2011 in accordance with the Information Services Strategy 2006-2011[1]. It is aligned with INSRV's mission both to deliver world-class information services that give staff and students an edge in realising their potential and achieving their objectives, and to achieving international recognition for the Directorate and the University.

The strategy supports the University's Learning and Teaching Strategy to 2010/2011[2], in its objective to "allow all students to develop appropriate research and academic-related skills" and to "properly prepare all students to become independent and lifelong learners." It has also been informed by the requirements of library users as identified by local and national studies[3,4,5] and the recommendations from the 2005 review of the University's Library Service[6].

The strategy will be achieved through the work of the subject librarians, supported by the Information Literacy Working Group and in partnership with other Directorates and with academic Schools, as outlined in the University's Guidance Note on Information Literacy[7].

A changing information landscape

During the period of this information literacy strategy, we will witness a continued proliferation of both content and tools on the web which can aid students, researchers and administrators as they find, manage and use information for the task at hand. Alongside this, the explosion of information resulting from the availability of Web 2.0 technologies such as blogging, social networking and media sharing tools as well as higher publishing output from Universities and many other sources will require the reader to be more discerning than ever. The strategy for the next three years will ensure we play our part in building an information literate University community to address the challenges and opportunities of our modern working environment.

Objectives

1. To facilitate the integration of information literacy into all taught programmes of study in partnership with academic Schools.
2. To enhance the information literacy of all research postgraduates through specialised discipline-related training in Schools and through generic training in partnership with the Graduate Schools and the Graduate Centre;
3. To spearhead the development of opportunities to enhance the information literacy of University staff, through Schools-based initiatives and through partnerships with other Directorates;
4. To harness new technologies to enhance information literacy in the University;
5. To work closely with the Registry and other Directorates to continue the integration of information literacy into University policy as appropriate;
6. To facilitate and support subject librarians in enhancing their roles as information literacy educators; and
7. To maintain our reputation as a centre of excellence for information literacy on the national and international scene.

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Supporting Document 3

Instructor Training

Quality information literacy training depends on instructors being competent and confident in the planning and delivery of training sessions. The following procedures are designed to ensure that ULS satisfies this aim.

- Before delivering their first group session, a new appointee should have attended an appropriate teaching skills course or have shown evidence to the site librarian or section head of possessing the required skills.

- Examples of evidence might include Fellow status of the Higher Education Academy (HEA), possession of a formal teaching qualification e.g. PGCE, or substantial relevant experience gained in a previous post.

- An appropriate course in teaching skills will include instruction in the skills and techniques included in this handbook under the sections relating to the planning and delivery of training.

- Ideally, the course should include a video-recorded presentation made by the attendee followed by feedback principally from the course leader. The course should encourage reflective practice and raise awareness of special educational issues such as compliance with the Special Educational Needs and Disability Act 2001. Examples of suitable courses include INSRV's *Training the Trainers* course and CILIP's *Teaching Skills* workshop.

- Either before or immediately after attending a course, a new appointee should gain experience by assisting in the delivery of a teaching session under the guidance of an experienced teacher.

- Such assistance might take the form of delivering a portion of a lecture or providing support to students in a workshop session.

- Once the new appointee has attended an appropriate course in teaching skills, it is recommended that they ask a more experienced member of ULS staff to observe one of their first training sessions where they take the lead. The experienced member of staff should take a supportive role and be willing to offer the new appointee constructive feedback after the session.

- Experienced staff will be encouraged to update, enhance and develop their teaching skills through attendance on appropriate courses run by INSRV, e.g. the staff training programme for information literacy skills teaching; courses run by Schools within the University, e.g. the School of Postgraduate Medical and Dental Education's *Effective Teaching Skills* course; or courses run by external organisations e.g. CILIP.

- In addition, staff will be encouraged to take advantage of other skills development opportunities, as appropriate to their duties; these might include registration with the HEA and/or undertaking programmes of training leading to formal qualifications in teaching, such as a postgraduate certificate in education.

- New appointees will be encouraged to seek the help and advice of more experienced members of ULS staff on any aspect of teaching. Experienced members of staff will be expected to offer new appointees an invitation to observe training sessions, support, advice and guidance when required.

Supporting Document 4

Elevator Speech

Information Literacy

What and Why

Information can now be found anywhere, not just in the library. The amount grows massively year on year with the academic push to publish as well as the growth of unmediated web pages, blogs, tweets and wikis. Without critical skills it's easy to end up relying on information that's less than the best and this impacts on scholarship and decision-making.

In the libraries we recognise the problem and are working with others in the university to address it. The solution is information literacy.

What success looks like

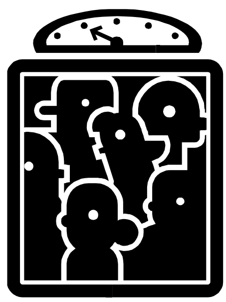
This means knowing why, when and where to find information and what to do with it. For example, a member of a Directorate knowing that there are resources to support their CPD. Students understanding how to synthesise rather than plagiarise from a pile of information they've found. Appreciating the relative merits of wikipedia and peer-reviewed articles. Citing the chosen sources correctly. For a researcher it could mean an awareness of the very latest publications or knowing how to play the citation game.

Information literacy is a key factor in the change in the way we work with our MWE tools, as we consider how to manage our information or get the best out of Web 2.0 technologies.

What we need from you

Information literacy is about the whole learning experience. It's not a one-off intervention. For a student it's the drawing together of learning experiences from across their curriculum to take them through their degree and into employment. 55% of students are getting information literacy through the curriculum but we need your help to reach everyone within a strategic drive across the university.

Information literacy is for everyone in the university. Consider the information literacy training needs of your staff. INSRV has a presence in the university staff development programme and can also meet the specific needs of your own teams.



It's about collaboration. We need your help in championing awareness of the need to address the problems of information overload.

Supporting Document 5

Accessible Teaching Strategies

The Disability Discrimination Act requires us:

- Not to treat disabled people less favourably
- To make reasonable adjustments so disabled people are not substantially disadvantaged as a result of their disability
- To anticipate the needs of disabled people and make adjustments in advance.

So what does this mean for subject librarians in delivering information literacy sessions?

Aim to eliminate or reduce barriers to learning.

Before the session:

- Check with the School's disability contact; do they know of any students with additional support needs
    - Bethan Clemett (COCOM) has a list of School disability contacts
    - ClemettB1@cardiff.ac.uk or x79919
- If possible, make the following available in advance
    - handouts
    - materials and reading lists
    - written instructions, e.g. for group discussions or computer lab work
- Keep information in electronic format. This allows alternative formats, e.g. Braille, large print to be produced quickly.

When delivering a session:

- Create a structure and stick to it
- Check as you go that the students understand
- Take mini-breaks or change the type of activity. This will aid student concentration.

Practical advice:

- Face the students. Helpful for lip readers
- Limit movement around the room. This aids lip readers
- Repeat questions from the students before responding
- Articulate visual clues and read out PowerPoint slides
- Keep slides clear and uncluttered
- Use ‘signposts’ to indicate the structure, e.g. recaps
- Check the induction loop is switched on (if there is one)
- Speak clearly and at a reasonable pace.

Small groups:

- Arrange seating so everyone can see each other
- One person to speak at a time, to aid anyone with a hearing impairment
- Repeat or rephrase students comments if necessary
- Use board or flipchart to write up main points of discussion
- Use breaks or changes in activity types to aid concentration
- Provide written material in advance.

Other considerations:

- Wheelchair access
- Electrical outlets
- Hearing loops
- Noise levels and overcrowding
- Time between lectures – do students have to come from another lecture elsewhere?
- Students who need to take breaks/ stand up/ move around.

Taken from a presentation on Accessible Teaching Strategies by Katya Hosking, University Accessibility Officer, 2005

Alison Charles
INSRV Equality and Diversity Representative
September 2008

Supporting Document 6

General guidelines for preparing written materials

Layout

- Use line spacing between text to break up text. There should be more spaces between paragraphs than between lines of text
- Leave plenty of space between columns of text
- Left-justify text and leave the right margin jagged. This makes it easier to follow lines of text for people with dyslexia
- Use bullet points and short notes instead of continuous prose. Try limiting lines to 60 to 70 characters and keep paragraphs brief. Short, simple text is easier to read and understand
- Try to have only one topic per slide, and no more than six or seven bullet points
- Using boxes to show prominence or highlight important text can be effective.

Text/Font

- Provide typed handouts preferably in a sans serif font like Arial, Helvetica or Trebuchet MS
- Use at least 12pt font in publications, 12pt or 14pt on handouts and 24pt on slides. Most people find larger print easier to read, including people with some kinds of visual impairment, dyslexia or concentration difficulties
- Avoid excessive use of CAPITALISATION and <u>underlining</u>. People with dyslexia often recognise words by patterns they form. Capitalisation removes these differences between words because all letters are the same height. Underlining can make text run together, again making it difficult to read
- Use **bold** text for headings and avoid faint text at all times. Avoid the use of *italics* or text at an angle. It can be difficult for people with visual impairments and dyslexia to read
- If writing in pen, use a medium tip pen or a felt pen. Black pen is easier to read, as it provides a good contrast and is usually darker than a blue pen
- Avoid using red and green. People who are colour-blind will find these impossible to read.

Paper

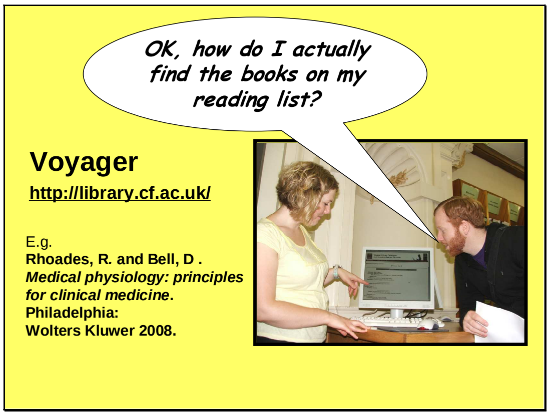
- Ensure there is good contrast between text colour and background colour, but be aware that black on white can cause glare. Provide publications and handouts on pastel-coloured paper, if possible
- Print text on a plain background. Printing text on a patterned background can obscure the text and make it difficult to read
- Ensure any paper used is heavy enough to minimise ‘shadow’ from the opposite side. Good quality 80 or 90 gm paper is effective
- Avoid using glossy paper. Material printed on matt paper is easier to read and creates less eye strain.

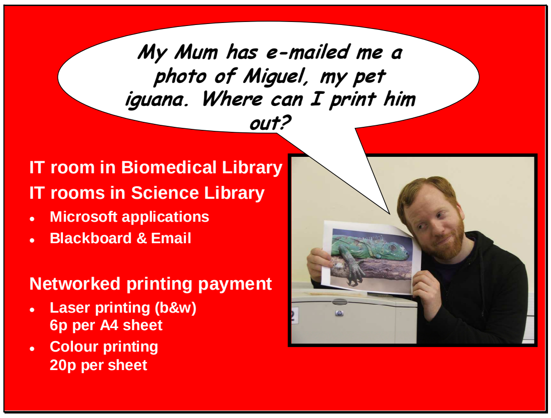
Text compiled by the Cardiff University Accessible Working Group in 2005.

Alison Charles
INSRV Equality and Diversity Representative
September 2008


CARDIFF UNIVERSITY PRIFYSGOL CAERDYḎ
Welcome to "Getting started with medical information"
Introducing the Library
Nigel Morgan and Linda Davies
Information Services


What kind of stuff do you have in the Biomed Library?
Books
DVDs
Current Journals
Reference Collection
Bones / teeth


OK, how do I actually find the books on my reading list?
Voyager
http://library.cf.ac.uk/
E.g.
Rhoades, R. and Bell, D .
Medical physiology: principles for clinical medicine.
Philadelphia:
Wolters Kluwer 2008.


My Mum has e-mailed me a photo of Miguel, my pet iguana. Where can I print him out?
IT room in Biomedical Library
IT rooms in Science Library
Microsoft applications
Blackboard & Email
Networked printing payment
Laser printing (b&w) 6p per A4 sheet
Colour printing 20p per sheet


Help! I've missed my 9am lecture - where can I copy my friend's notes?
Self service photocopying
6p per A4 sheet
8p per A3 sheet
20p per A4 sheet (colour)
Copyright Law


What really irritates the library staff?

MBBCh
Year 2 Medicine

Using Ovid healthcare databases to retrieve information - introductory session

Learning Outcomes

At the end of this session you will be able to:

- describe accurately the range of healthcare databases on the OvidSP service and detail the subject strengths of each
- formulate a logical and effective search strategy
- demonstrate the importance and significance of “exploding” MeSH headings
- refine searches efficiently by restricting to “focus” and choosing relevant subheadings
- maximise relevance by combining/limiting searches in a variety of ways, eg by publication year, language, age group
- select appropriate records and print, download or email them
- establish auto-alerts on OvidSP, so as to maintain current awareness in your topic area
- link directly to Cardiff University e-journals from OvidSP.

For those students wishing to familiarise themselves with Ovid search facilities ahead of this session there is an excellent OvidSP tutorial at: http://www.med.yale.edu/library/education/guides/screencasts/ovidsp/ovidsp_new_features/

ACTIVITY
You will be given a description of the range of healthcare databases and a brief demonstration of the key features of the OvidSP service. You will then be given a workbook to use during the rest of the session and will complete a series of exercises which will help you use the databases effectively. The exercises will not be assessed. The workbook can be kept and used as a reference tool when you use OvidSP in future.

For further information and assistance please ask at the Duthie Library Service Desk.

Rowland Somers,
Duthie Library,
June 2009

RLS 04/06/2009

Teacher: Rebecca Mogg

Level and Subject	Class size	Date	Time	Venue/Room	Duration
Full-time PGCE	85	27 September 07	12.10	Glamorgan Building -1.64 (Lecture Theatre)	50 minutes

Lesson Aims

To raise students' awareness of when citing and referencing are necessary.

To introduce methods of citing and referencing using the Harvard style.

Objectives / Learning outcomes

By the end of the lesson students will be able to:

1. Correctly identify, from a selection of scenarios, when a reference would or would not be required.
2. Accurately apply the Harvard style of citing in the text to a given piece of work.
3. Accurately apply the Harvard style of writing references to at least three different types of source, referring to the guide provided if required.

ACRL Standard 5[i]

LLUK Standards: AS3, BS1, BS2, BS3, BS5, CS1, CS2, CS3, CS4, D1, D3[ii]

Minimum Core: English language - particularly punctuation and comprehension[iii]

Methods of checking learning

Observation and responses to activities

Responses to questioning

Time	Lesson phase	Teaching approach / methodology	Resources
5 minutes	*Introduction* What is referencing? Why is it important to reference? Introduce learning outcomes.	Whole group questioning Teacher presentation	Data projector and PC/laptop PowerPoint presentation Citing and referencing in the Harvard style guide
10 minutes	*Development 1* When is it necessary to provide a reference? *Learning Outcome 1*	'When to cite' activity to be completed in pairs Take answers from whole group at plenary. Student questioning Teacher summarises key points using 'When to cite' flowchart	PowerPoint presentation Citing References worksheet
15 minutes	*Development 2*		PowerPoint presentation Citing References Worksheet

	Citing in the text and quoting in the Harvard style. *Learning Outcome 2*	Teacher presentation Questioning – take questions from students relating to presentation Paired activity – "Spot the Citation Mistakes". Take answers for each 'mistake' from whole group at plenary. Display correct citation on PowerPoint slide. Student questioning	
15 minutes	*Development 3* Writing the References List *Learning Outcome 3*	Teacher presentation Paired activity – "Compile the references". Students may refer to "Citing and Referencing in the Harvard style guide" to complete the exercise. Teacher displays answers on PowerPoint slides and recaps key learning points. Students self-mark exercise. Student questioning	Citing and Referencing in the Harvard style guide Citing References Worksheet PowerPoint presentation
5 minutes	*Summary and recap* Re-visit learning outcomes	Teacher presentation and questioning Student questioning	PowerPoint presentation

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i Association of College and Research Libraries. 2000. *Information literacy competency standards for higher education* [Online]. ACRL. Available at: http://www.ala.org/ala/acrl/acrlstandards/informationliteracycompetency.htm#ildef [Accessed: September 2007].

ii LLUK. 2007. *New overarching professional standards for teachers, tutors and trainers in the lifelong learning sector* [Online]. Available at: http://www.lifelonglearninguk.org/documents/standards/professional_standards_for_itts_020107.pdf [Accessed: September 2007].

iii LLUK. 2007. *Addressing language, literacy and numeracy needs in education and training: defining the minimum core of teachers' knowledge, understanding and personal skill: a guide for initial teacher education programmes* [Online]. Available at: http://www.lifelonglearninguk.org/documents/nrp/minimum_core_may_2007_3rd_2_version.pdf [Accessed: September 2007].

MBA

information services
gwasanaethau gwybodaeth

Finding Information For Your Assignments

Susan Smith
October 2008

insrv

MWE

❑ The MWE gives you access to

- Email
- Online databases
- Voyager library catalogue
- Blackboard
  - Blackboard is the University's virtual learning environment
  - Very important to check for information about modules, assignments etc

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Accessing the MWE

- Log in at www.mwe.cf.ac.uk
- Much of the library's information is online, and can be accessed through the MWE website
- Will allow you to access email and information off-campus

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Workshop Content

Step 1: Finding Items on a Reading List
Step 2: Searching Journal Databases
Step 3: Searching for Market Reports
Step 4: Citing your References

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Step 1: Finding Items on a Reading List

- Various types of information included on your reading list including books, chapters from books, journal articles etc

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Example Reading List: Identifying Types of Material

- 1) C.W.L Hill International Business: Competing in the Global Marketplace Irwin McGraw Hill Boston 2007
- 2) J H Dunning Assessing the costs and benefits of Foreign Direct investment: some theoretical considerations in P Artisien-Maksimenko and M Rojek *Multinationals in Eastern Europe* McMillan, London 2000, Chapter 4
- 3) M D Intriligator Globalization of the world Economy Potential Benefits and costs and a net assessment Journal of Policy Modeling 26, 4, pp 485 -498 2004

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Types of Material

- Item 1 is
  - a book
- Item 2 is
  - a chapter in a book
- Item 3 is
  - a journal article

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Voyager Library Catalogue

- On the Voyager library catalogue you can:
  - Search for books, reports and journals
  - Reserve books
  - Renew books (using My Account function) – this will help you avoid fines
  - See what books you have on loan

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Searching Databases: Key Concepts and Keywords

- Essay questions can usually be split into keywords and ideas
- Best to search databases with keywords – you need to break essay questions down

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Example Essay Question:

"Discuss, with reference to at least one content and one process theory of motivation, the ways in which the manager of a call centre might try to improve levels of performance and levels of employee satisfaction.".

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Key Concepts and Keywords

Motivational theory/theories
Content theory/process theory + motivation
Specific theories, e.g. Maslow's hierarchy of needs

Motivation, commitment
Performance, productivity, commitment
Employee satisfaction, job satisfaction,

Call centres/centers, contact centres/centers
(British and American spellings)

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Using Keywords

- We will now use the keywords to search for journal articles and marketing reports

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Step 2 + 3 Journal Databases and Market Reports

- Many databases available which provide articles, market reports, statistics, company financial data, economics data, equities data and much, much more
- Keep the Database list handout for reference – you will need this information

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Step 4:Citing and Referencing

- You must cite and reference every idea/concept you use that is not <u>completely</u> your own work
- Tutorials and guides available on library resources page on MWE
- Very important to cite and reference properly – beware of plagiarism

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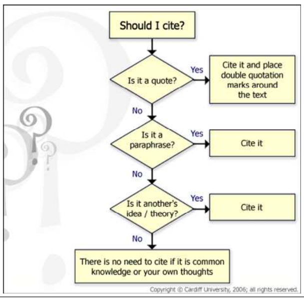
When should you cite?



insrv

Choosing correct reference formats

- Book: correct answer is B
  Hill, C.W.L. 2005. *International business: competing in the global ,marketplace.* Boston: Irwin/McGraw Hill.

- Journal: correct answer is C
  Intriligator, M.D. 2004. Globalization of the world economy: potential benefits and costs and a net assessment. *Journal of Policy Modeling*. 26(4), pp. 485 -498.

insrv

Citing in your text

- According to the Environment Agency (2005), in 20 years' time there will be 33 percent more vehicles on our roads. There is conclusive evidence that road transport has a major impact on the environment. Traffic emits significant amounts of other air polluting gases such as carbon monoxide (Schwela and Zali, 1999).

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..continued

- Cairns (2003, p. 75) argues that although 'fuel and vehicle developments have made a huge difference to local air quality', measures to reduce traffic will also be required if the Government is to achieve its targets on air quality. One such measure is congestion charging which, according to a recent article by Beevers and Carslaw (2005), has been successful in reducing vehicle emissions in London.

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BI2001 Literature Retrieval & Understanding workshop

Checklist

Use this as a quick guide to the resources which you could be using when researching your presentation topic. You can access all resources via the MWE at http://mwe.cardiff.ac.uk

Click on the **Information Resources** tab at the top of the screen then use the options in the **Library Resources** panel

Remember that you need to record details of relevant results which you intend to use

Reference Sources Have you tried: 1. **Printed encyclopedias / reference works** 2. **Encyclopedia of Life Sciences (ELS) (available online via MWE**	☑ ☐ ☐
Now try looking for **Printed text books** Check these out by doing a **Keyword** search on **Voyager**!	☐
Finding journal articles To find appropriate articles, check the Databases. You will already be familiar with most of these. If you need a reminder, guide sheets to some of these resources are available in the room. 1. **Scopus** 2. **Web of Science (available via Web of Knowledge)** 3. **BIOSIS Previews (available via Web of Knowledge)** 4. **PubMed** (useful if you have a biomedical topic)	☐ ☐ ☐ ☐
Internet Sources Use the Advanced Search option on **Google**, or **Yahoo** or another search engine to restrict your search to the UK academic domain (.ac.uk) or the U.S. academic domain (.edu)	☐

BI2001. Overview of the Information Research Process

Why is it so important to use good information resources?

Finding high quality information will help you to produce a good presentation for BI2001. However, this will also prove invaluable for the preparation of coursework in other year 2 & 3 modules. Efficient information handling skills will enable you to produce better coursework, give you more confidence when researching projects and impress your tutor!

Finding information can be daunting; you must be aware of the key information resources available to you and learn how to use them effectively. The aim is for you to spend more time working on your coursework and less time searching up blind alleys!

Why all the bother? Can't I just use Google?

Using internet search engines is perfect for hobbies and interests. However, Google is not the best place to find information to support academic work. General search engines do not exert any quality control over the results they give you. Remember: anyone can publish anything on the web! There is a lot of sub-standard material out there as you have no doubt discovered!

Your tutors expect you to use high quality information sources i.e. material written by authoritative named individuals or responsible organisations. We are not ruling out the use of Google – we are simply saying that there may be better places for you to look.

You should carry out your search in a logical sequence. To get the best results, follow the step by step instructions below.

Stage 1: Textbooks and Reference Works

Q: Why use reference sources?

A: *To give you a basic overview and grasp of a topic and to familiarise yourself with its structure and terminology. Even in the electronic age, print resources such as the high quality textbooks which you will find in the libraries provide ideal background material for your coursework.*

You may have been recommended certain textbooks by your lecturers, and these should be your starting point. Use the keyword search on ***Voyager,*** the library catalogue, to find additional titles. All textbooks and reference books have detailed contents pages and indexes. Use these to find the information that you need.

Information in textbooks and reference books will provide an overview, ensuring that you understand the *structure* and *terminology* of your topic before you tackle the databases to search for journal literature. You may also want to consult a dictionary for basic definitions.

Check ***Voyager*** and the reference section in the Library to find encyclopaedias and other reference works. Some important reference sources are available electronically on campus e.g. ***Encyclopedia of Life Sciences.***

You may find that textbooks and reference books provide sufficient detail for some pieces of work, but if you're looking for further or more recent information and certainly for projects and dissertations you'll need to use the databases to trace *journal articles*.

Stage 2: Journal articles

Q: Why should I use journal articles?

A: *Journals are "primary sources" of information. Original research will be published in journals long before the content appears in book form. Also, "review articles" will provide you with an overview / summary of research within a particular topic.*

Trace appropriate journal articles by using bibliographic databases. These index and summarise the millions of journal articles published each year. A successful database search will produce a list of journal articles relevant to your subject.

In many cases there will be a direct link to the full text but some records will simply give you an abstract (summary) and details of which journal, year and volume you need to check.

Databases are primarily directional tools. They will tell you what has been published but won't always provide you with the end product!

You should be prepared to search for information in more than one database, as they each have a different emphasis:

- ***Web of Science*** is more general in its coverage, and the citation searching facility enables you to search forward in time from one key article to find more recent ones related to it.
- ***BIOSIS Previews*** is the key database for journal articles in the life sciences. It also includes coverage of book chapters and conferences and has good European coverage
- ***Scopus*** is another excellent general coverage database
- ***PubMed*** is a useful database for the biomedical sciences

Databases frequently have different indexing policies and search software. Refer to the specific database guides included further on in this booklet.

Useful Links

The above databases may be accessed on or off campus via Information Resources tab on the **MWE** at **http://mwe.cf.ac.uk**

Planning your database search strategy

Terminology

Decide which ***keywords*** best describe your subject. Use reference works to check for alternative terms and to check the relationship between different terms.

Be prepared to adapt the terms as your search progresses e.g. if you're searching for ***MRSA*** you may want to include the term ***methicillin resistance*** and possibly the name of the bacteria: ***staphylococcus aureus.***

When you find a reference that is particularly relevant, check the record to see which terms the database has used to index it and then consider using these in a further search. You should retrieve further relevant references in this way.

Truncation and Wildcard Symbols

- Use a **truncation** symbol at the end of a word to search for all variations of the word, e.g. *child** would retrieve *child* or *children* and *arter** would retrieve *arterial arteries* or *artery*.
- Use a **wild card** symbol within a word to search for different spellings of the same word, e.g. *coloni?ation* would retrieve references containing *colonisation* or *colonization* and col?r would retrieve references containing *colour* or *color*.

Truncation symbols vary from one database to the next. You should always check the help screen on each database for precise details.

Adapting your search

You may find that your search terms retrieve *too few* or *too many* results. There are several techniques you can use to revise your search. Each database will have different options and terminology for these. Here are some general hints:

Found too many references?	**Found too few references?**
Use more specific subject terms	Use broader subject terms
Search in narrow fields (eg. title)	Search in broad fields (keyword, abstract)
Use ***AND, NOT***, to combine terms	Use ***OR*** to combine alternative terms
Apply limits (publication date, age)	Use truncation (*****, **$**) and wildcard symbols
Select review articles	Check results for more alternative terms

Combining terms with AND, OR, NOT

- A search for *artery* ***AND*** *vein* would only retrieve references containing both terms.
- Searching for *artery* ***OR*** *vein* would find all references containing either *artery* or *vein*, or both. This set of references would be much larger than the first.
- Searching for *artery* ***NOT*** *vein* would eliminate all references containing *vein*. This option must be used with care, as you may also eliminate useful references to *artery*.

Stage 3: Finding the full-text

When a database offers you a link to the full text of a journal, this is the most convenient method of access – you will be able to view and print the article straight from your desktop. If you are given a choice, opt to view the article in PDF (Portable Document Format). This provides an "electronic photocopy" of the printed article and is the best format from which to print as all diagrams / tabular material are incorporated into the text and will not need to be printed separately.

Sometimes you will need to find an article for which no full text link is provided by the database. In these cases, check *Voyager* at **http://library.cf.ac.uk/** to see if the journal in which the article is published is in stock.

When using Voyager the golden rule is:

Don't type in the title of the article. Select the ***Journal Title begins with*** option, then type in ***the title of the journal*** *in which the article is published.* If we have it, *Voyager* will give you details of the location so that you can hunt down a printed copy or will sometimes give a direct link to the online version of a journal.

What if the journals aren't in Cardiff?

We can obtain books and journal articles that are not in stock. You will need to fill-in an Inter Library Loan form for each item and this will have to be authorised by your tutor / project supervisor. Each Inter Library Loan costs £6.30 or more so the School will want to be sure that you genuinely need the item.

Stage 4: Internet Sources

Q: Why use the Web at this point? Couldn't I have started off using Google?

A: *The internet is a* ***supplementary*** *information source and should not be used as a substitute for quality textbooks and journal articles. There is no quality control exerted by search engines and they therefore need to be used with extreme care. Consider using a subject gateway instead.*

Using *Google* to search the web for information about sport, films or music or to book a holiday is fine. But the information you use in your academic work **must** be from authoritative, reliable sources.

Unfortunately, the majority of information on the web has no quality control, it may be inaccurate and in some cases completely wrong.

Beware!

Never use information from a web page if there is insufficient information to cite it correctly.

Stage 5: Citing References

Q: Why do I need to cite / reference my sources?

A: *Full acknowledgement needs to be given to all information sources you have used. If you fail to do this it could amount to plagiarism!*

When you have completed your work, you **must** cite all of the publications you have referred to. This is an essential part of your work, it shows that you have researched your subject and avoids plagiarism. You must acknowledge the source of ***ALL*** ideas and information used and, where necessary, link them to the specific parts of your work.

Q: What is the difference between a "citation" and a "reference"?

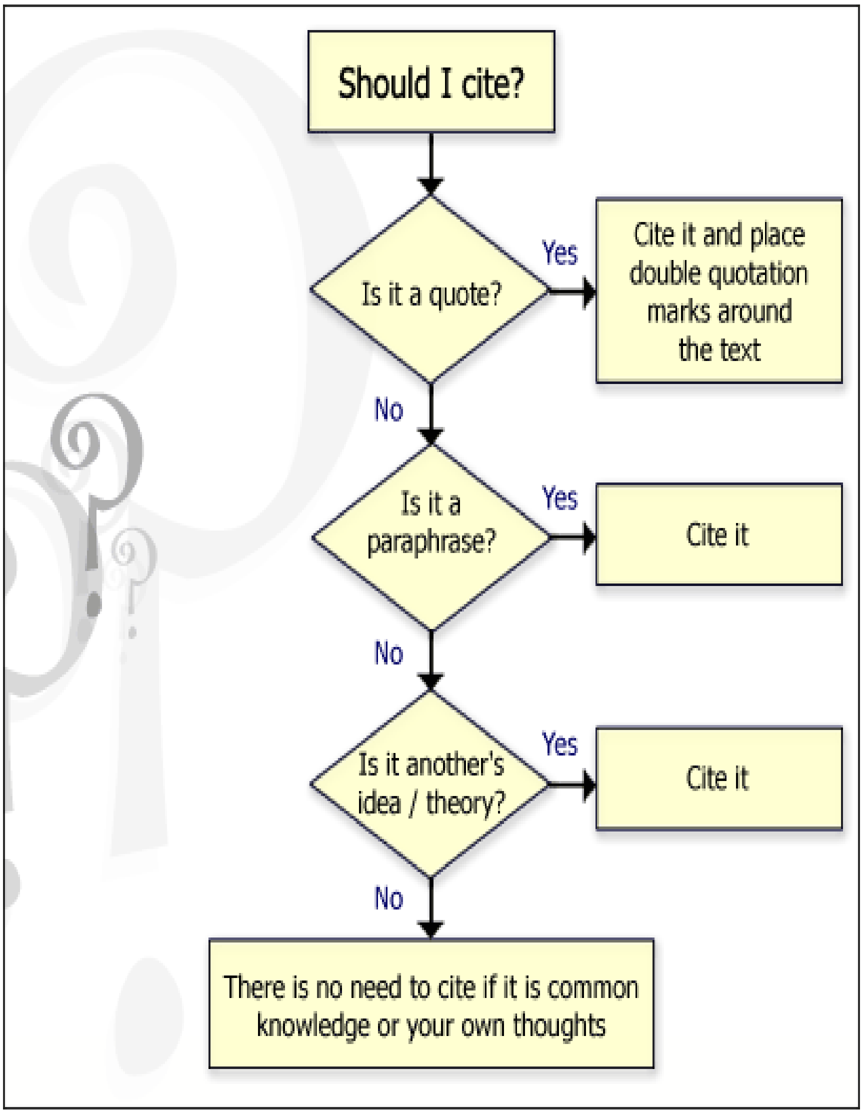
A: *A* ***citation*** *is a note within the text of your work identifying a source which you have used in the course of your research. An example of a citation appears in bold below:*

It has been concluded that antibiotic resistance can be reduced by using antibiotics sparingly, with diverse (rather than cycled) use of antibiotics **(Livermore 2005)**

A ***reference*** *for your citation should appear at the end of your work to identify the title and full publication details of the cited item:*

Livermore, D. M. 2005. Minimising antibiotic resistance. *Lancet Infectious Diseases* 5 (7) pp. 450–459.

The flowchart below will help you decide whether you need to cite a particular source of information in cases where you may have some doubt.



Information Research Strategy: a summary

Start your research

By checking textbooks and reference books:

- to ensure that you understand the structure of your subject
- to find alternative and additional terms

This should make it easier for you to modify your search, if it becomes necessary to do so.

Design your search strategy:

- Select database(s) eg. *Web of Science*
- Enter your terms and consider the alternatives
- Consider ways of broadening or narrowing your search
- Use limits: language / date / review article

Check your results:

- These will mainly be references, NOT full text articles
- Read the abstracts
- Mark the useful references for saving / email
- Keep a list of the references on file
- Include your search strategy
- Use web resources with care

Finding the references:

- Check VOYAGER, the Cardiff University catalogue
- Check for electronic full text journals
- If not available – use Inter Library Loans

Citing the references:

- You **must** list all the publications you have referred to
- **Harvard** is the format normally preferred – but check with your tutor!
- Also cite any web pages used

BSc City and Regional Planning

Citing references worksheet

To cite or not to cite?

Here are some actions that you might do when writing a piece of work. Tick **Yes** or **No** depending on whether or not you would need to provide a reference:

Action	**Reference required?**	
	Yes	**No**
Copy text from another source		
Include a table of data or a diagram from another source		
Mention a fact which is commonly known		
Discuss the ideas or research of another person in your own words		
Write about your own opinions on a topic		
Paraphrase the ideas from two separate sources linking them together using your own words		

Spot the citation mistakes!

Text

References should be given for "all direct or indirect quotations, and in acknowledgment of someone's opinions, or of a source of factual information which is not general knowledge" **(N. Walliman)**. **Li and Crane** point out that the main objective of citing references is to give sufficient information to allow sources to be located. General overviews of the process of citing references are given by both **Bosworth (1992) and Craig**.

References

Bosworth, D.P. 1992. *Citing your references: a guide for authors of journal articles and students writing theses or dissertations.* Thirsk, N. Yorks: Underhill Press.

Craig, P. 2003. How to cite. *Documentation Studies* 10(1), pp.114-122.

Li, X. and Crane, N.B. 1996. *Electronic styles: a handbook for citing information*. 2^{nd} ed. Medford, New Jersey: Information Today.

Walliman, N. 2001. *Your research project: a step-by-step guide for the first-time researcher*. London: SAGE

Compile the references

Write the following elements of these references, in the correct order, according to the Harvard style

Question 1 - Book

London: Routledge.

Reeves, D.

2005.

Planning for diversity: policy and planning in a world of difference.

Question 2 – Web site

How might democracy be deepened in the 21st Century? [Online].

Gaventa, J. 2006.

[Accessed: 9th November 2006].

Sussex: Institute of Development Studies.

Available at: http://www.ids.ac.uk/ids/bookshop/wp/wp264.pdf

Question 3 – Journal article

71(3), pp. 245-260.

Journal of Environmental Management

Feasibility versus sustainability in urban water management.

Starkl, M. and Brunner, N. 2004.

Question 4 – Chapter from an edited book

Needham, B. 1997.

Making strategic spatial plans: innovation in Europe.

London: UCL Press, pp. 269-282.

Planning strategies and planning methods.

In: Healey, P. et al. eds.

Question 5 – Government/Organization report

London: Defra.

2002.

Department for Environment, Food and Rural Affairs.

The strategy for sustainable farming and food: facing the future.

BA Journalism, Film & Media Year 1 MC1113:
Library Workshop 3
Beyond Google!

1. Choose a title and plan keywords

Select one of the following essay titles:

1. What are the recent debates around advertising to children? Is a ban on advertising desirable or workable?
2. Is the internet an information superhighway or a high tech shopping mall?
3. To what degree does advertising drive other media industries?
4. What do you understand by the term ‘media literacy’?
5. How has the issue of immigration been reported in the British media since 2000? Examine the use of statistics in the reportage.

Spend **five minutes** discussing and planning some keywords on your chosen essay topic using the list or mind map technique.

✐**Keywords:**

2. Identify and search information resources

Select at least one information resource from the Information Resources for Journalism web pages or the list of Journalism resources on MetaLib. Search for information on the topic using your chosen keywords.

Tip: From the Cardiff University homepage, select **Online Learning Resources** and then either **MetaLib** or **Find resources for your subject**.

✏**Resource(s) and search terms used**

3. Select information

Note down the information you find which you think would be useful for the essay. Answer the following questions about each piece:

1. Do you need to find the full text of the document? If so, how would you do this?
2. Why do you think it is suitable? Justify your answers in terms of relevance, reliability, currency and authority.

✏

Engineering – Year 2

Searching databases – group feedback

1. Which database were you searching?

2. Note down a couple of the searches you tried and how many results you found.

Search	No. of results
Search	No. of results

3. Note down details of a search you tried which produced particularly useful and relevant results. Also note how many results it found.

Search	No. of results

4. Note down details (author, article title, source, date) of two useful / relevant articles you have found and whether or not the full text is available.

	Full text available? Yes / No
	Full text available? Yes / No

5. If you get too many results, how might you revise your search to find fewer results so you do not need to look through hundreds of references?

Can you restrict your search so it just finds journal articles?	Yes / No
Can you restrict your results to just articles written in English?	Yes / No
Can you search for just papers published in the last 5 years?	Yes / No

Also, how can you narrow your search down by changing the way you use the keywords? Think about the type of keywords you might use and how you might combine them, also which fields you might search in. Note down your ideas below:

6. If you get too few results, how might you revise your search to find more results to help you in your research? Think about the type of keywords you might use and how you might combine them, also which fields you might search in. Note down your ideas below:

7. How easy did you find it to use this database? What were your favourite features? What did you like least? Would you use it again?

IP3: Year 1 Medicine.

Wikipedia: 21st century oracle or 21st century minefield?

Q: What exactly is "Wikipedia"?
A: Wikipedia is a free, open access encyclopedia which includes over 2 million articles. The content is provided by interested volunteers who are not credited in the articles. There is no authorial ownership since content is freely editable and may therefore be the work of many contributors. It has become a worldwide phenomenon and is probably the most accessed and controversial reference source on the web.

Wikipedia and coursework

Wikipedia is not a legitimate source of reference for academic work. If you are determined to consult Wikipedia, its use should be restricted to the initial stages of your research. Indeed, it can sometimes be useful for getting an overview of a large, sprawling subject or for providing a basic introduction to a complex topic.

When you have read your chosen entry, **close it down and move on to a more scholarly source.** You will take away a basic understanding but this must be verified and supplemented by more authoritative sources. Here are some important facts of which you should be aware:

Six good reasons why you should be wary of Wikipedia!

1. **Anyone can contribute / edit an article.** There is some overarching editorial control but the measures in place are far from infallible.
2. There is **no guarantee that the information is accurate** and can be relied upon
3. There is **no guarantee that the information has been provided by an authority** in the subject area. In most cases it is not!

4. Since the information is not subject to ‘peer-review’ there is a **greater danger of bias**
5. **Sources of reference are not always made explicit** or are incompletely identified
6. **Your tutor will justifiably be unimpressed** if you reference a Wikipedia article in a piece of academic work. **It is not an academic source.**

Exercise

The aim of this exercise is to compare and contrast an article from Wikipedia with one from *Encyclopedia of Life Sciences* (ELS). You will need to browse the articles identified below then answer the questions which follow.

- **Examine the Wikipedia article on brain death:**
  http://en.wikipedia.org/wiki/Brain_death

- **Now access the *Encyclopedia of Life Sciences.***
  This is accessible via the MWE. Click on the Information Resources tab. Then in the Library Resources portlet select Search a specific database. You will find a link to *Encyclopedia of Life Sciences* in the alphabetical listing.

- Locate and browse ***Brain Death and the Vegetative State*** by Bryan Jennett

Questions

1. How does the Wikipedia article compare to the ELS article in terms of the **authority** of its authors? (Click the **History** tab at the top of the Wikipedia article to get some idea on who has contributed to the content)

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2. Both articles are designed to be concise introductions to the topic. However, which in your opinion achieves this more effectively and why?

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3. Compare the references at the end of each article. Is the referencing adequate? Can you pinpoint an example of poor referencing?

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4. Can you suggest three reasons why the ELS article may be considered superior to the Wikipedia article?

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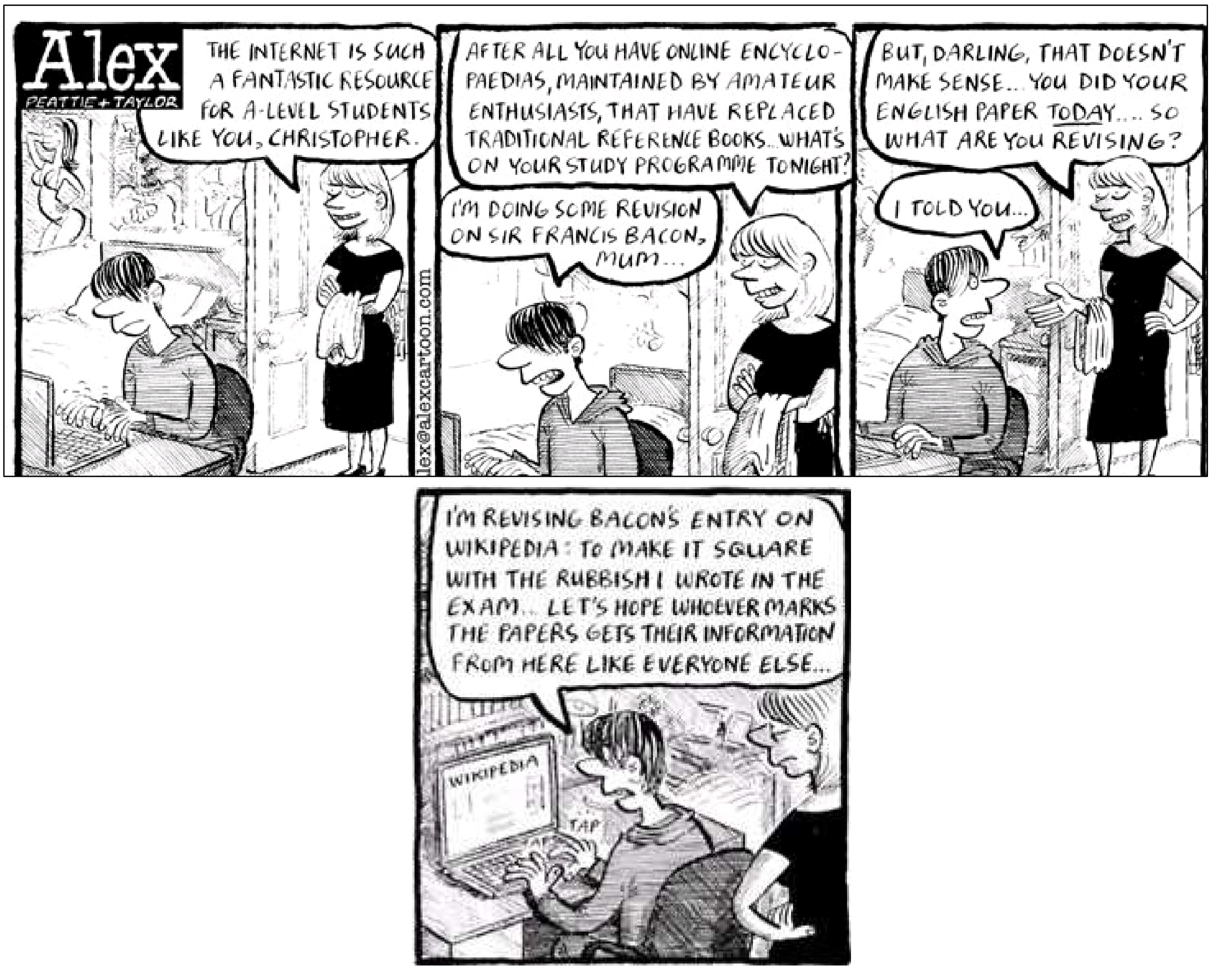


Information Services

Review of Architectural Information Sources *for essay writing and design projects*

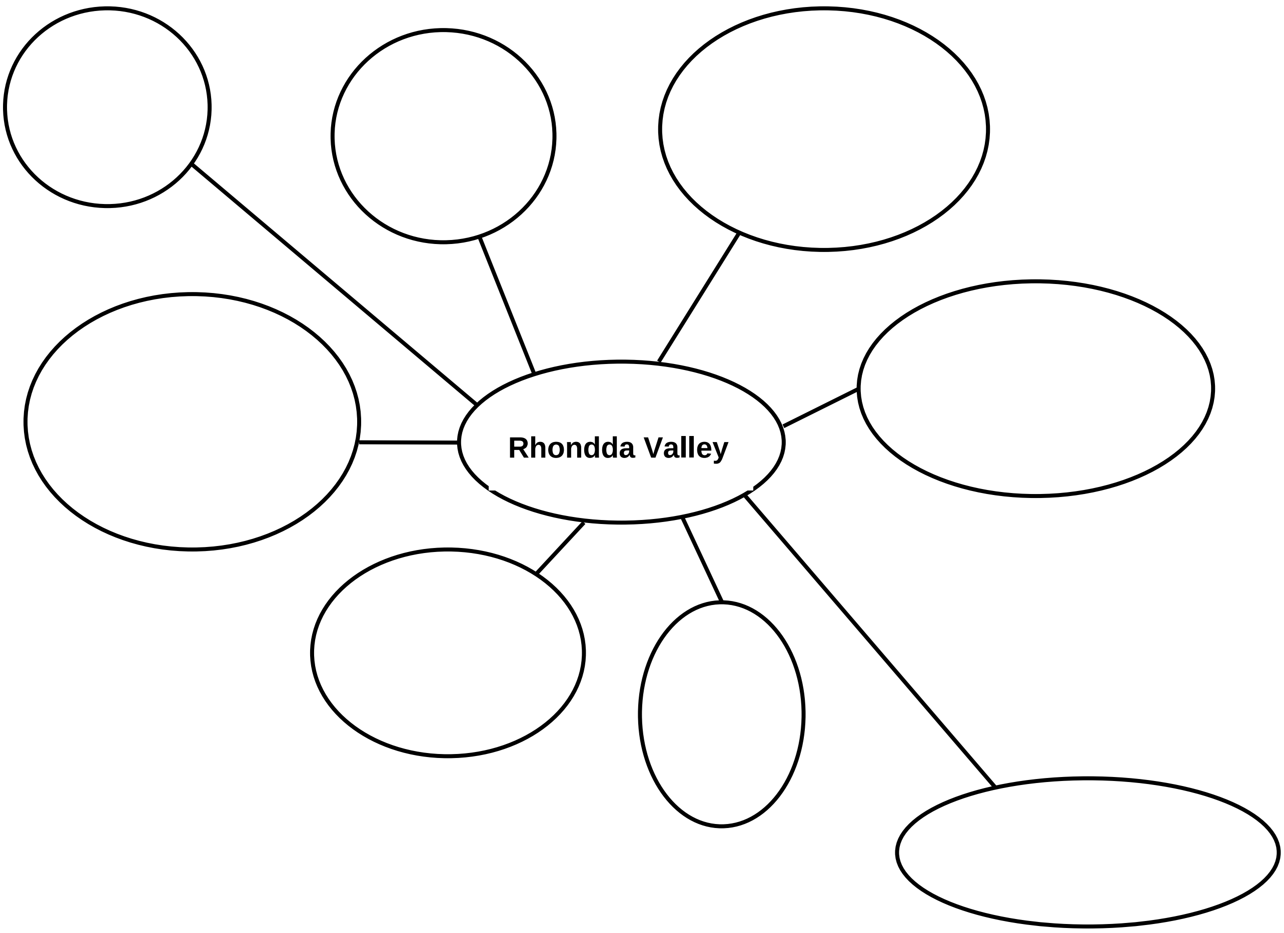
CARDIFF UNIVERSITY
PRIFYSGOL CAERDYDD

A worksheet for Year 2 Architecture students, 3 - 5 December 2008.

1. Planning your search

ⓘ Use this session to begin researching your Urban Conditions project.

✎ Note as many alternative **keywords** as you can for the area you are researching, **Rhondda Valley**.



👁 Watch the presentation.

2. Searching Avery Index to Architectural Periodicals

ⓘ Bibliographic databases index and summarise the millions of journal articles published each year. A successful database search will produce a list of references to journal articles relevant to your subject. Some databases offer access to the full text of some of the articles they index, but in most cases you will simply be given details of which journal, year and volume the article is available from.

At the MWE Portal home page **http://mwe.cf.ac.uk**, enter your Cardiff University username and password and click on **Log in**. Select the **Information Resources** tab in the blue bar near the top of the screen. Click on **Find resources for your subject** in the **Library Resources** portlet. Select **Information Resources for Architecture**.

Select **Databases** - **Architecture** - **Avery Index to Architectural Periodicals**.

Search for some references about the Rhondda Valley, using some of the alternative keywords from exercise 1.

ⓘ Remember to

combine search terms using **AND** or **OR** *e.g.*
acoustics AND structure
acoustics AND (structure OR building)
use **truncation** to find singular and plural versions, or alternative endings to your search terms *e.g.* **acoustic***

Note the details of one relevant article using the MHRA style *e.g.* Jeremy Matthews, 'More than Just the British Library', *Architects' Journal* 206.10 (18 September 1997), 48-55.

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Mark a few relevant records by clicking in the check boxes next to the article.

Now email them to yourself. Click on **Save, Print, Email**. Select **Use x Marked Records**. Change Short format to **Full format** from the drop down list. Enter your email address in the relevant box. Click on **E-mail**.

Finally, check to see if the article you noted above is available in the Library by returning to the Internet Explorer window displaying the **MWE Portal Information Resources** tab. In the **Library Resources** portlet, click on **Use the Voyager library catalogue**.

Note the location, whether printed or electronic, of the journal title.

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Keep Avery Index to Architectural Periodicals open in the background. You'll be using it again later.

3. Searching Architectural Publications Index (APId)

No single database provides full coverage of the literature in architecture. To guarantee a complete search, always search more than one database.

Return to the Internet Explorer window displaying the **MWE Portal Information Resources** tab. In the **Library Resources** portlet, click on **Find resources for your subject**. Select **Information Resources for Architecture**.

Select **Databases** - **Architecture**.

Select either **RIBA British Architectural Library Catalogue** or **Architectural Publications Index (APId) Networked CD-ROM**. These two sources search exactly the same data, but in different formats.

Search for articles on the social housing scheme in Penrhys. This was the largest social housing project in Wales when built in 1968.

Who were the architects?

____

Which of the following are included in the articles you found?

Plans ☐	Sections ☐	Elevations ☐	Models ☐
Photos ☐	Illustrations ☐	Details ☐	Maps ☐

Leave Architectural Publications Index or RIBA British Architectural Library Catalogue.

Watch the presentation.

4. Searching other databases

ⓘ Always use the appropriate database for your subject.

✎ Using your copy of the handout **Architectural Information Sources**, identify which source, or sources, are best suited to finding the following information.

Subject: Welsh monastic architecture

Database: ____

Subject: Using GIS (Geographic Information System) to model accessibility for wheelchair users in the urban environment

Database: ____

Subject: Comparative studies of local councils' town centre regeneration schemes

Database: ____

Subject: Reports in the *Western Mail* and *South Wales Echo* on the site of the old Maerdy hospital

Database: ____

Subject: The number of people driving, cycling and walking to work in Treorchy

Database: ____

👁 Watch the presentation.

5. Current awareness services

ⓘ Current awareness services are designed to keep you up to date with what is being published in your area of study. Some of these services are integrated into databases and so offer automated searching on a specified subject, forwarded to you as an email or set up as an RSS feed* within the MWE. Other current awareness services provide contents pages of the latest issue of your favourite journals. These services can prove vital in maintaining an awareness of developments in the study of architecture.

- Return to the Internet Explorer window displaying **Avery Index to Architectural Periodicals**.

- Click on **Search History** in the top right corner. Select **Save OR Alert** underneath one of the searches you did in exercise 2.

- Click on **New Users Register Here** and create a personal account.

- When presented with the **Save Your Search Alert** page, change the **Delivery Method** option to **RSS** and click on **Save**.

- Click on the orange RSS button. This button is used throughout the Internet to indicate an RSS feed is available.

- Copy the URL, or web address, from the address box in Internet Explorer.

- Return to the Internet Explorer window displaying the **MWE Portal Information Resources** tab. Click on the small triangle on the right of the **My RSS** portlet and select **Personalise**.

- Paste the URL from your RSS feed into the empty URL box underneath **URL list of additional RSS feeds to display:** and click on **+Add** followed by **Save**.

- Now whenever you look at the **MWE Portal Information Resources** tab any new results matching your Avery search will be displayed underneath the **CSA Illumina Alert** heading.

ⓘ You may prefer to receive new Avery content on subjects that interest you via email, in which case select **Email** as your **Delivery Method**.

- Return to the Internet Explorer window displaying **Avery Index to Architectural Periodicals** and leave Avery by clicking on **Logout**.

ⓘ Look out for the orange RSS button on a website to identify those with feeds.

---

* RSS feeds provide regular updates of newly added content to web sites including online journals, news sites and blogs.

Go to the Architects' Journal website at **www.architectsjournal.co.uk** and scroll down to the orange RSS button on the left hand side. Click on the **RSS** link.

Select to receive the **News** RSS feed and copy the w into the URL box in your **My RSS** portlet.

Some other databases with their own current awareness services are:

ICONDA	Run a search. Click on **SDI**. Save the search and select to have search results emailed to you each time the database is updated.
Wilson Art Abstracts	Run a search. Click on **SDI**. Save the search and select to have search results emailed to you each time the database is updated.
Web of Science	Run a search. Look at your **Search History**, click on **Save History / Create Alert** and follow the on-screen instruction to register for an account. Give your search a name and click on **Save**. Click on the orange **XML** button and copy the URL from the address bar into the RSS URL box in the **My RSS** portlet.
IDOX	Select the **Topic Updates** option to set up a personalised email alerting service.
Ei Compendex	Run a search. Go to **Search History** and check the **E-mail Alert** checkbox to receive a weekly email.
Zetoc	To receive RSS feeds with architecture journals table of contents, go to **http://zetoc.mimas.ac.uk**. Click on **Zetoc RSS**. Search for a journal title *e.g.* **Detail** and click on the corresponding orange **RSS** button for the URL.

Watch the presentation.

6. The Internet

ⓘ You should now feel confident using databases to review the available literature before beginning any project or essay. But there may be times when you want to use the Internet as a supplementary information source. Always ensure that you find good quality information by using authoritative, reliable sources.

Go to **www.vts.intute.ac.uk** and select **Architecture**, then **Judge** - **Quiz**.

Complete the quiz. This will test whether you know how to identify quality, authoritative and reliable sources of information on the Internet.

What three questions should you always ask yourself when judging which Internet sites to trust?

____

____

____

In your own time, take a look at the remainder of this interactive guide to finding quality online resources in architecture, focusing on the **Tour** section. You may also want to visit the **Image Searching** tutorial available via **www.vts.intute.ac.uk**.

ⓘ Never use information from a web page if there is insufficient information to cite it correctly.

For further information or assistance contact the Architecture Library
Tel: 029 2087 5974
Email: ArchLiby@cardiff.ac.uk

November 2008 / SN

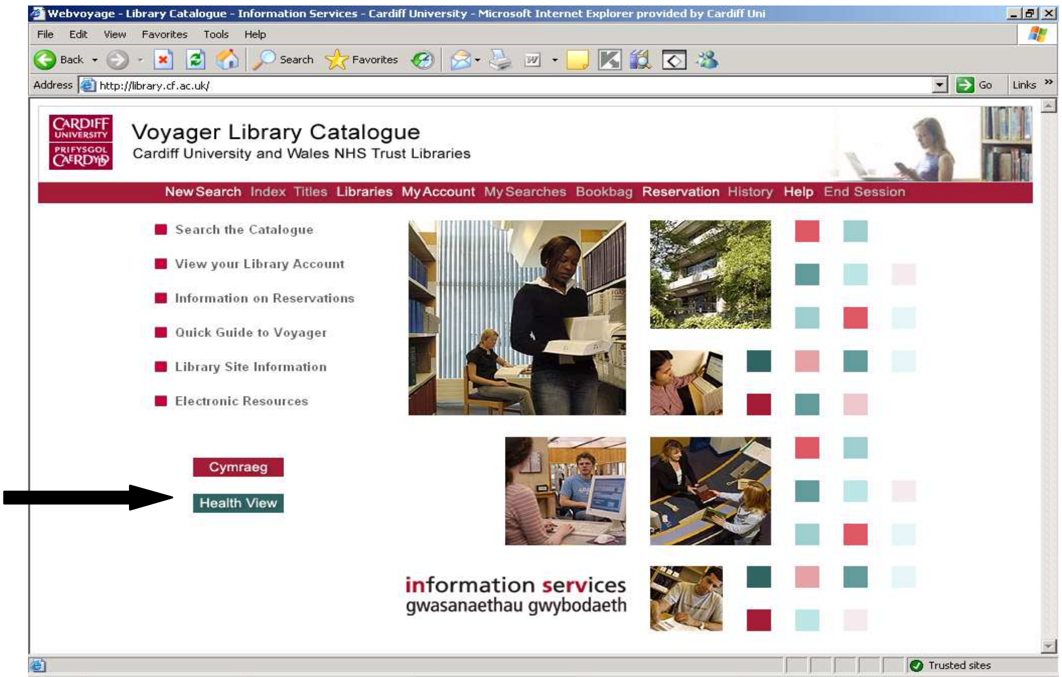
Information Services

Using the Voyager Catalogue Bachelor of Nursing (BN)

What is Voyager?

Voyager is Cardiff University's online library catalogue. Voyager gives information about books, journal titles, conference proceedings and other materials held in the 18 Cardiff University Libraries and other Post-graduate Hospital Libraries throughout Wales.

The main voyager screen can be seen below. You can view the catalogue in English and Welsh and also in full view and health view. Full view will search all Library holdings whereas health view will restrict your search to health related titles only. To search health view, click on the button shown below.



Accessing Voyager

Load Internet Explorer and log in to the MWE Portal at **http://mwe.cf.ac.uk**. Click on the **Information Resources** tab. Then **Use the Voyager library catalogue**

Finding references using Voyager

In this exercise you are going to use the Voyager library catalogue to:

1. Search for a named book off a reading list
2. Search for a topic area
3. Search for print and electronic journals

1. Searching for a named book off a reading list

First you will need to click on **Search the Catalogue.** The best way to find a named book is to run a **Keyword Anywhere** search and type the first author's surname and a distinctive word or two from the title into the **search for** box. You will need to use the **Search In** box on the right-hand side of the screen to select the type of search (i.e. keyword anywhere).

► To find the book:
Interpersonal relationships: professional communication skills for nurses, by E C Arnold and K U Boggs (2007)
You could type **arnold interpersonal** into the search box and then click **Search**.

► The screen will now display one or more books which match your search. If you are given a list you will now need to click on the title of the book to take you into the book record. Click on the title of the 2007 edition.

► This screen will give you the publication details of the book, and if you scroll down the page, a list of libraries which hold the book.

✎ Where was the book published?

…………………………………………………………………………………………

✎ What is the name of the publisher?

…………………………………………………………………………………………

✎ Which two Cardiff University libraries hold this item?

…………………………………………………………………………………………

✎ How many copies are there in the Nursing and Healthcare Studies Library?

……………………………………………………………………………………

✏ How many copies are available for loan in the Nursing and Healthcare Studies Library?

…………………………………………………………………………………………

✏ Where is the book located on the shelves?

…………………………………………………………………………………………

Please Note: Each book in the library has a classmark number on its spine to make it easier for you to locate on the shelves.

2. Searching for a topic area

You can also search Voyager for topic areas. Please note that when searching for topics the database will be searching the title of the book and subjects used to describe the book not the full contents. You will therefore need to search for broad topic areas and not specific clinical queries. For example, you can search voyager for books on the topic of health promotion but not for information on the efficacy of a school-based cardiac health promotion intervention program for African-American adolescents.

Click **New Search.** Using the **Keyword Anywhere** search again:

✏ How many items does Voyager retrieve when you do a keyword anywhere search for the following:

Wound Healing: ……………………………………………………….
Health Promotion:…………………………………………………….
Communication:……………………………………………………….

3. Searching for print and electronic journals using Voyager

Imagine the following journal article has been recommended by your tutor:

Manias, E. Williams, A. (2008) Managing pain in chronic kidney disease: patient participation in decision making. *Journal of Advanced Nursing* 61 (2): 201-210

Cardiff University subscribes to journals in two formats: in print and electronic. To search Voyager to see if Cardiff University subscribes to a particular journal you will need to select to do a **Journal Title Begins With** or a **Journal Title Keyword** search. It is important to note that to find the journal on Voyager you must search for the journal title i.e. *Journal of Advanced Nursing* and NOT the title of the article i.e. *Managing pain in chronic disease…….*

► To search Voyager to see if you can access the above reference:
Click **New Search.** Select to do a **Journal Title Begins With** search, type **Journal of Advanced Nursing** into the search box and then click **Search**.

► If the journal is available the screen will display the details of the journal and how it can be accessed. Any libraries holding the journal in print will be listed, with the years that they hold. If an electronic copy is available there will be an Internet link (in red) at the top of the page, with the years that are available.

► If the title is not available Voyager will state that '*your search resulted in no hits*'. If you would like a copy of this article you will need to apply for it via the Inter-Library Loan Scheme.

Search for the above reference, as described, and answer the following questions:

✐ Can you access the full-text journal article in both print and electronic versions?

……………………………………………………………………………………

✐ Scroll down the page and note down what years are available in print in the School of Nursing and Midwifery Library, Caerleon?

……………………………………………………………………………………

Now scroll back up to the top of the screen and look at the Internet Links for this journal for details of the electronic copies available. Select a link which covers the date of the article you wish to find i.e. the year 2008. Once it takes you into the journal follow the links on screen to access the full-text article i.e. select the year (1998), Volume Number (61), Issue Number (2) and page numbers (201-210).

When you have found the article in full-text, note down the first line of the introductory paragraph below. (HINT: Look at the full-text in PDF format)
✐

……………………………………………………………………………………
……………………………………………………………………………………
……………………………………………………………………………………

4. Your Voyager Account

You can access your own account in Voyager either in University or at home. Click on '*my account'* or *'view your library account'* and type in your library card number (the long number on your CU ID card underneath the barcode) and your surname.

✎ What information can you access once you have logged into your account?

……………………………………………………………………………………

✎ What reasons may prevent you from renewing your books online?

……………………………………………………………………………………

5. Bookbag

You can also save books into your bookbag so that you have a record of any books of interest to you saved to your account. Search for a book of your choice until you have a list of titles on screen. Select any of interest to you by clicking in the box to its left and then scroll to the bottom of the page. Click on **'save to bookbag'** and type in your login details. To view the books in your bookbag, click on **Bookbag** on the very top toolbar in Voyager.

Beyond Google! Using subject gateways

Subject gateways are web sites which provide links to web resources which have been selected by subject experts on the basis of their quality and authority.

The advantage of using a subject gateway is that they will retrieve a smaller, more focused, set of results than Google and they are guaranteed to be of a high standard.

There are many useful nursing and health related gateways. A listing of them is available via the MWE Portal at http://mwe.cf.ac.uk. Click on the Information Resources tab then Find resources for your subject. Select Information Resources for Nursing and Midwifery. Click on Useful web sites and then Web Gateways and Directories.

IP3 Year 1 Medicine

Using the Web ethically and effectively: Introducing Tara Brabazon!

Please read the following short article. Spend a few minutes discussing this with the person next to you.

1. To what extent do you agree with the comments made by Professor Brabazon?
2. To what extent do you think she is being deliberately controversial?

From *The Times*, January 14, 2008

White bread for young minds, says university professor

[Text removed for copyright reasons]

[Text removed for copyright reasons]

Web Page Evaluation Quick Checklist

Title of Website:

Examine the URL			
Is it a personal page or site? i.e. no official sanction *Sometimes there is a personal name in the URL. This will usually be preceded by a tilde ~*	☐ Yes	☐ No	
Is the page/site owned by an organisation?	☐ Yes	☐ No	
Which domain extension does the site have? *Consider whether this is appropriate to the content of the site*	☐ .com ☐ .edu	☐ .org ☐ .gov	☐ .ac.uk ☐ other
Authority			
Is there a named author/authors?	☐ Yes	☐ No	
Are the author's credentials indicated? *If not check them out! Try searching for the author on Google.*	☐ Yes	☐ No	
Is the author an expert in the field? *Check to see if he /she has published widely in the field. You could use an appropriate bibliographic database to help you investigate.*	☐ Yes ☐ Insufficient details	☐ No	
Are the author/organisation contact details given? *This will be useful if any information needs to be verified*.	☐ Yes	☐ No	
Currency			
Is a publication date given?	☐ Yes	☐ No	
If so, how recent is it?			
Is there an indication when the information was last updated?	☐ Yes	☐ No	

Example 14: Evaluation checklist (p. 23)

Quality / Reliability	
Are the sources of the information identified, referenced and cited?	☐ Yes ☐ No
What is the character of the information?	☐ Factual ☐ Opinion ☐ Combination of both
Is the site well laid out and easily navigable?	☐ Yes ☐ No
Is the writing style informed /scholarly and appropriate for an academic audience?	☐ Yes ☐ No
Are any provided links appropriate and still active?	☐ Yes ☐ No ☐ N/A
Is the information available in a different format? Eg. As a published report, factsheet etc. *This may give some general indication of quality.*	☐ Yes ☐ No
Does it all add up?	
What is the overall purpose of the page? *You then need to consider whether this is commensurate with your requirements.*	☐ Inform, provide facts, data ☐ Explain ☐ Entertain ☐ Persuade ☐Sell
The bottom line: *In your opinion is the **information** of comparable quality with the information that you will find in a journal article, book, or other conventionally published source?* ☐ Yes ☐ No *If **YES** you should be able to use the information with confidence. If **NO** LOOK ELSEWHERE!*	

Information Services NJM / 2009

Some points to consider when evaluating search engines

1. Is the interface clear or is it cluttered with advertisements and other ephemera?
Search engine 1 …………………………………………………………………………………………………… Search engine 2 ……………………………………………………………………………………………………
2. Is there an 'advanced' search screen and if so, does it provide a good range of search options / limits? Are there any which you may find particularly useful?
Search engine 1 …………………………………………………………………………………………………… …………………………………………………………………………………………………… Search engine 2 …………………………………………………………………………………………………… ……………………………………………………………………………………………………
3. Does the search engine helpfully suggest related searches which you could follow-up?
Search engine 1 – **YES / NO** Search engine 2 – **YES / NO**
4. Does the text displayed beneath the link give a good indication of the content of the site (like an abstract) or is it jumbled and unhelpful?
Search engine 1 …………………………………………………………………………………………………… …………………………………………………………………………………………………… Search engine 2 …………………………………………………………………………………………………… ……………………………………………………………………………………………………
5. Are the results categorised by type e.g. *images, multimedia sites* etc or are they displayed in one continuous list?
Search engine 1 …………………………………………………………………………………………………… Search engine 2 ……………………………………………………………………………………………………

Example 15: Evaluation checklist (p. 23)

6. Are there any useful or unique features in the way the results are displayed?

Search engine 1

....

....

Search engine 2

....

....

7. Do the first 20 or so results look more relevant than those further down the list i.e. does the ranking seem effective?

Search engine 1

....

....

Search engine 2

....

....

8. How does the engine compare with *Google* in terms of general usefulness and functionality?

Search engine 1

....

....

....

Search engine 2

....

....

....

9. Finally, would you use this search engine again?

Search engine 1 – **YES / NO**

Search engine 2 – **YES / NO**

NJM / SHS. Intelligent Web Searching, Information Services 2009.

IP3: January / February 2009

Medical Information Research: the essentials Part 2

Nigel Morgan / Jane Sparks

BDS. Dentistry Year 1.
Information Research Quiz

Suppose that you have been asked to produce an essay on the following topic:

"Bone regeneration and its role in implant dentistry"

Based on your knowledge of information sources, please answer the following questions.

---

1. **Where would you go to find information to help you produce this essay? *(please tick all that apply)***

   A. Search the Net
   B. Textbooks
   C. Ask a friendly librarian
   D. Encyclopedias
   E. Journals
   F. Other

2. **Which one of the above options would you choose as your starting point?**

   ……………………………………

3. **How would you go about finding suitable textbooks on this topic? *(please tick one option)***

   A. I'd check on Amazon
   B. I'd probably ask my lecturer / librarian
   C. I'd try searching on Voyager using a "keyword" search
   D. I'd nip down to the Hayes and check in Waterstones
   E. Text books are old fashioned! I wouldn't bother using them in this instance

4. **Why do you think it is important to use articles / scientific papers from journals? *(tick all that apply)***

   A. They are useful for providing more detailed /specialised information than textbooks
   B. They will provide me with "up-to date" information
   C. They are reliable as they are written by experts in the field
   D. Using journals will impress Dr. Tasker
   E. Many are accessible online so they will save me some leg work!

5. **How would you go about finding which journal articles are available on your topic?** ***(please tick <u>one</u> option)***

   A. I'd check with my tutor / lecturer
   B. I'd do a search on Voyager
   C. I'd scan through the issues of appropriate journals in the Library to find out what is relevant
   D. I'd use an appropriate database
   E. I'd search on Google Scholar

6. **How important is it to use the World Wide Web for your academic research?** ***(please tick <u>one</u> option)***

   A. It's essential. The WWW can provide all the information I need for my assignments.
   B. It's useful as the information can be found quickly and conveniently
   C. It's a useful supplementary source but there are better places to look
   D. It is a reliable/authoritative source of information for my work
   E. My tutor/lecturers will be impressed if I include information from websites

7. **Why is it vital to cite (acknowledge) the information sources you have used within the text of your work and then to append a full references list?** ***(please tick <u>one</u> option)***

   A. It's not important. My lecturers do this to torture me!
   B. A references list makes my work look more academic!
   C. It's done by all academics so I guess I just have to follow suit!
   D. It's a fun & challenging academic exercise – gets the grey matter working!
   E. If I don't give full credit to the work of others, I could be accused of plagiarism and sent packing!

8. **And finally….a "million" is "1" followed by six zeros. A "googol" (from which the title of the famous search engine is derived) is "1" followed by how many zeros?**

   A. 10
   B. 50
   C. 100
   D. 1000
   E. 1,500

Please complete your
Information Research quiz sheet

Thanks!

insrv

Session outcomes

At the end of this session you will

- Understand the structure of the literature in your topic area
- Know how to construct an information search strategy
- Be able to identify key information resources
- Have the information handling skills required for your poster project

insrv

Question 1:

Where should you look for information ?

A: World Wide Web
B: Text books
C: Ask a librarian
D: Encyclopedias
E: Journals
F: Other?

insrv

Question 2

Where should you start?

A: World Wide Web ✗

B: Text books ✗

C: Ask a librarian ✗

D: Encyclopedias

E: Journals ✗

F: Other? ✗

insrv

Reference Sources

- Provide overview of topic
- Identify the terminology
- Suggest further reading

Examples:

- *Oxford Textbook of Surgery*
- Encyclopedia of Life Sciences (ELS)

insrv

Question 3

How should you go about finding textbooks?

A. Check on Amazon ✗

B. Ask lecturer / librarian ✗

C. Perform a Voyager keyword search

D. Waterstones ✗

E. Don't bother using textbooks ✗

E.g. Garg, A.K.Bone biology, harvesting, grafting for dental implants. 2004.

insrv

BA Journalism, Film and Media Year 1: MC1113 Academic Study 2007-2008

Library Skills Assignment – Research Trail

Due date: 16th November.

Proportion of overall module assessment: 15%

Instructions:

1. This assignment is linked to the essay assignment for MC1113. **State the essay title** you chose at the top of your submission.

2. Provide a list with full bibliographical details of each of the items you included in your references list for the essay. There will be more marks available to those who display a variety of sources of information used, for example, journal article, chapter in an edited book, book, web page, etc.

3. For each item:

    a. Outline how you identified it, including details of information resources searched to find it (e.g. reading list, SCOPUS, LexisNexis, Voyager) and any search strategies used including keywords, combining words, truncation symbols, as applicable.

       The Information Resources for Journalism, Media and Cultural Studies web pages will help you to identify information resources: www.cardiff.ac.uk/insrv/bysubject/journalism

    b. Explain why the item was selected for inclusion in the references list, evaluating them against these four criteria: relevance, objectivity, currency, authority.

4. There is **no word count** for this assignment. Present your assignment in the format which you feel most effectively and clearly explains how you carried out research for your module essay. This might be in the form of a table or expanded list.

5. Hand in **one** typed copy of the research trail via the JOMEC essay submissions box and email **one** copy to BAEssays@cardiff.ac.uk by 3pm on 16th November. Submit the research trail with a cover sheet.

Library Skills Assignment – Research Trail

Marking Scheme

Criteria	Marks available
Sources referenced • Complete? • Appropriate for academic work? • Relevant? • Wide-ranging?	5 marks
Search strategy • Clear evidence of use of a variety of resources to find information? • Keywords – appropriate to resources, relevant to topic? • Correct use of combining words and truncation symbols as applicable?	8 marks
Evaluation • Logically reasoned, taking into consideration criteria of relevance, objectivity, currency, authority?	8 marks
Presentation of research trail • Well structured and clear? • Accurate spelling and punctuation?	4 marks

Total Marks available = 25. Marks will be provided as a percentage.

Example 19: Multiple choice test (p. 65)

[Example removed]

[Example removed]

Politics – Year 1

Assignment 1

A Choose **<u>one</u>** topic from this list:

a) direct democracy
b) constitutionalism
c) political culture

B

i) Locate an article from a reputable journal that is relevant to your topic (N.B. it should <u>not</u> be an article on your reading list).

ii) Provide a full reference for this article using the Harvard referencing system.

iii) Explain why this source of information is reputable, backing responses with evidence.

iv) Summarize the main arguments made in this article.

C

i) Locate an article from a reputable online news source or organisation that is relevant to your topic (N.B. it should **not** be an article on your reading list).

ii) Provide a full reference for this article using the Harvard referencing system.

iii) Explain why this source of information is reputable, backing responses with evidence.

iv) Summarize the main arguments made in this article.

D

i) Conclude by explaining which article contains the most convincing argument.

Practice Assessment

Marking Sheet

Name: Andrew N Other

Cohort / Group: A5

A Planning of the research

Objectives of the research identified and evidence of some thoughtful planning. However, the value of news and international sources overlooked.

B Implementation of the research

Good use of most sources drawing out information relevant to the solution of the problem. But, some of the most recent developments have been overlooked - query, through lack of skill in using paper supplements and electronic sources containing latest information.

C Presentation of results

Poor structure and layout; example in model answer not followed. Little use of headings or sub-headings. Different elements of answer jumbled together and lacking a clearly flagged conclusion. This contrasts with the well laid out and documented bibliography.

Overall Assessment: Borderline Pass

Marked by: Peter Clinch

Research Trail

Marking Sheet

Name:

Cohort / Group:

1 Bibliographic list (20 marks) **Score:**
Comprehensive?
Follows School code of citation practice?

2 Search process (15 marks) **Score:**
Appropriate?
Logical?

3 Keywords (15 marks) **Score:**
Appropriate?
Appreciation of hierarchies?

4 Reflection (24 marks)
Critical? Logically reasoned? Persuasive?
4.1 Relevance (6 marks) **Score:**

4.2 Reliability (6 marks) **Score:**

4.3 Authority (6 marks) **Score:**

4.4 Objectivity (6 marks) **Score:**

5 What learnt from exercise? (10 marks) **Score:**

6 Layout and style of responses (16 marks) **Score:**
Logical and attractive layout?
Fluent and grammatical style?
Accurate spelling and punctuation?

Total score:
Total score as percentage: **Score as classification of degree:**

70%+ First; 60%-69% II 1; 50%-59%: II 2; 45%-49% III; 40%-44%: Pass; 0%-39%: Fail.
Marked by:

Practical Legal Research
Criteria and feedback sheet

Assessment : PLR1

Assessment number…………………………….

Section	Criteria	Very Poor	Poor	Competent	Good	Very Good
Planning	1. Establish the objectives of the client					
	2. Identify the facts relevant to those objectives					
	3. From those facts identify relevant areas of law					
Implementation	4. Identify and correctly state the effect of any relevant primary or secondary legislation					
	5. Identify and correctly state the effect of any relevant cases, identifying cases under appeal					
	6. Select comment, opinion and guidance from periodicals, encyclopaedias, textbooks or other relevant publications, acknowledging the use of all such sources					
Advice and other requirements	7. Relate the legal principles to the facts and draw appropriate conclusions					
	8. Present the results of research in a clear, logically structured way, using correct spelling, grammar and punctuation and giving advice where appropriate					
	9. Provide a bibliography of all sources used as authority for your answer					
	10. Select appropriate resources and use them effectively, as demonstrated by your research trail, whether or not you have relied upon them					

COMMENTS

Information Services

Finding Quality Information in Biosciences BI2001

23rd February 2009

When I came to this session my expectations were:

The session is now over and I would like to say:

MSc Planning Practice and Research

Information Resources for the Literature Review: Evaluation Sheet

Please take a few moments to give your feedback on the session

1. Please indicate your views on the following statements:

	Strongly Agree	Agree	Disagree	Strongly Disagree
The aims and objectives of the lesson were clear				
The handout was easy to follow				
The lesson was at the right pace				
The teacher's explanations were clear				
The tasks were engaging				
I learned what I expected to about Digimap				

2. What did you like about the session?

3. What did you dislike about the session?

4. Please provide any other comments you would like to make about the session:

Example 26: Feedback form (pp. 71, 73)

Information resources for MA Philosophy

Your comments will be used to evaluate the sessions and to plan future training.

1 Tick one box for statements **a-c** using the scale:					
	☺☺ Strongly agree	☺ Agree	😐 Maybe	☹ Disagree	☹☹ Strongly disagree
a) As a result of the library skills training, I feel better prepared to research and complete my academic work.					
b) The presenter introduced the topics covered clearly and effectively.					
c) The venue and equipment were satisfactory.					

2 Was there one thing you specially **liked** about the sessions?	
3 Was there one thing you specially **disliked** about the sessions?	
4 Can you list 3 things that you have learnt?	1. 2. 3.
5 Is there any topic you would have liked more information or help with?	
6 Any other comments?	

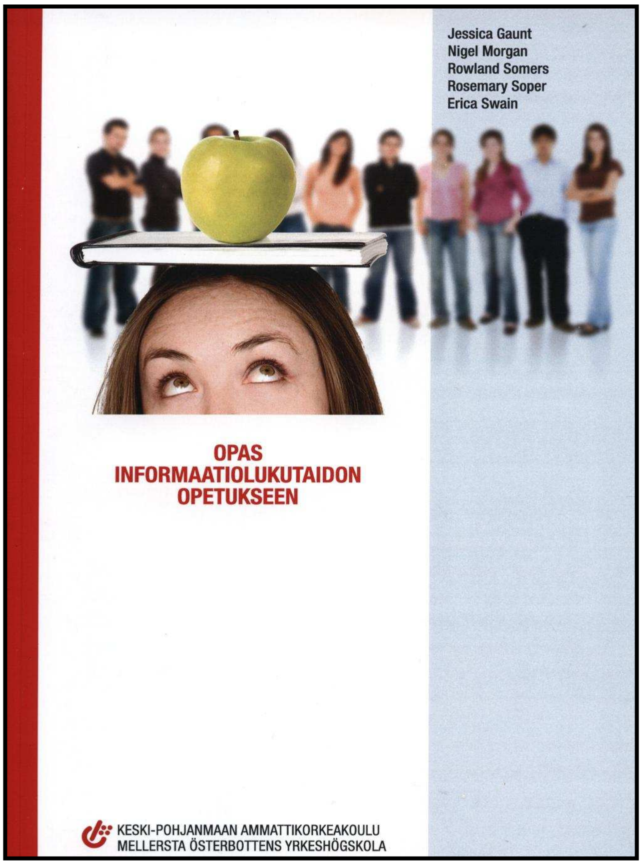
Thank you for taking the time to complete this form.

Information Services, Cardiff University

Examples from Opas Informaatiolukutaidon Opetukseen

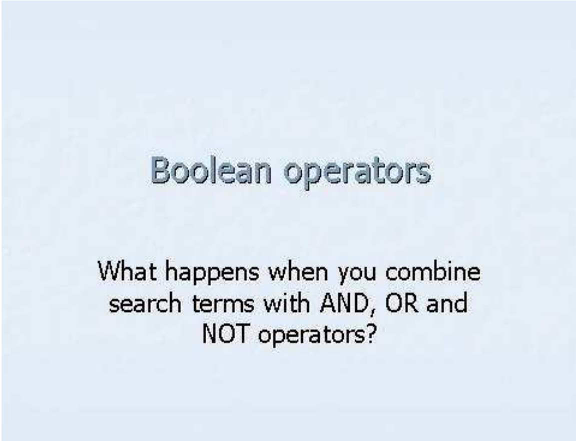
In March 2008, a delegation of librarians from the Finnish Universities of Applied Sciences visited Cardiff to learn about our IL initiatives. As a result of the visit, Päivi Hollanti (Finnish Online University of Applied Sciences) organised a translation of this Handbook tailored to the requirements of Finnish IL practitioners. *Opas Informaatiolukutaidon Opetukseen* was launched at Haaga-Helia University of Applied Sciences, Helsinki on April 16th 2009. The following examples are taken from this publication and were kindly translated by their contributors, Anitta Örn (Kemi-Tornio University of Applied Sciences) and Kaisa Puttonen (Laurea University of Applied Sciences).

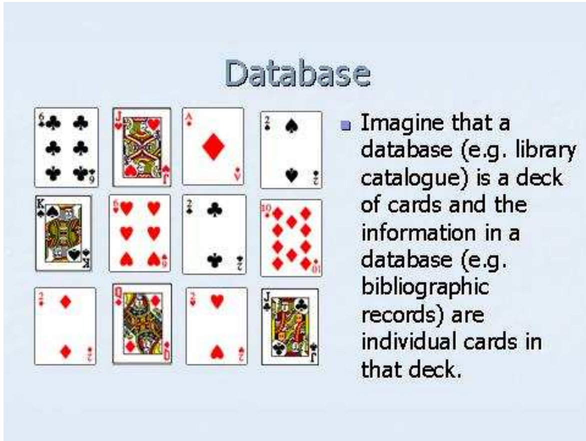
The HILT Group is delighted that our Finnish colleagues have found our material useful and encourages other external practitioners to make use of the Handbook under the terms of our Creative Commons licence.

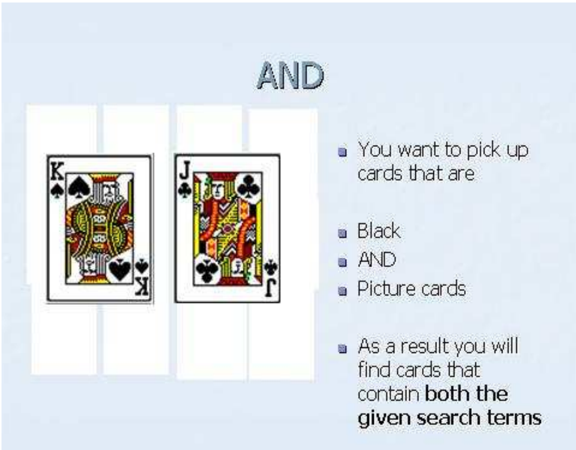


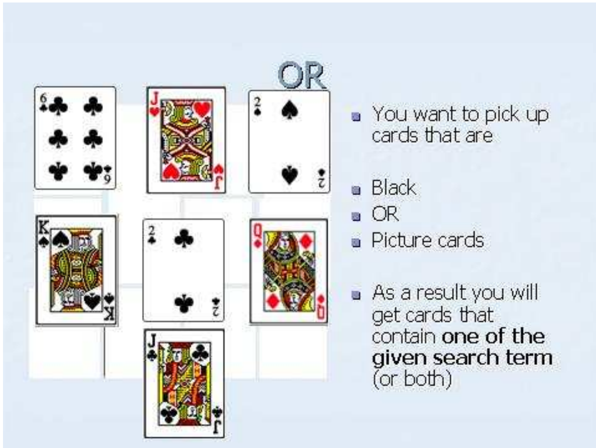
Cover of *Opas Informaatiolukutaidon Opetukse*, the Finnish translation of HILT.

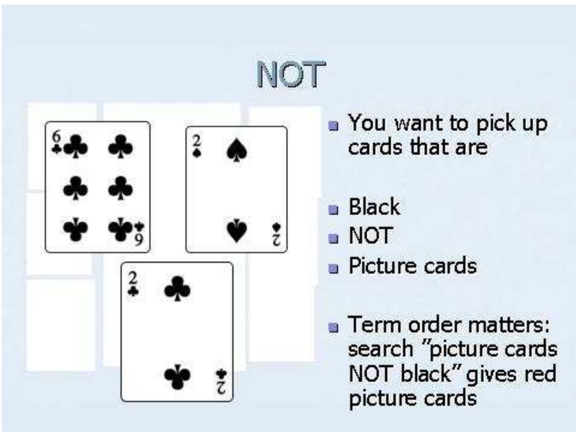
Example 27: Example from Anitta Örn, Finland

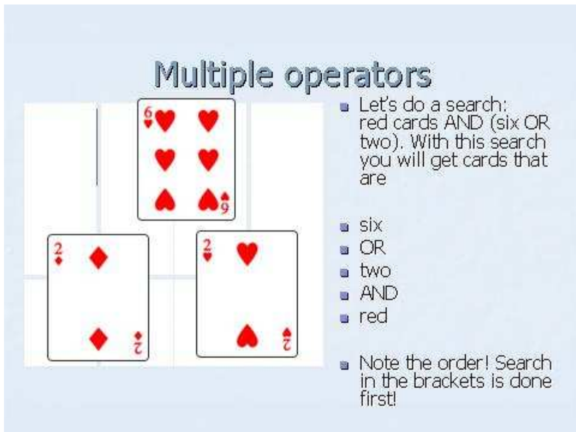




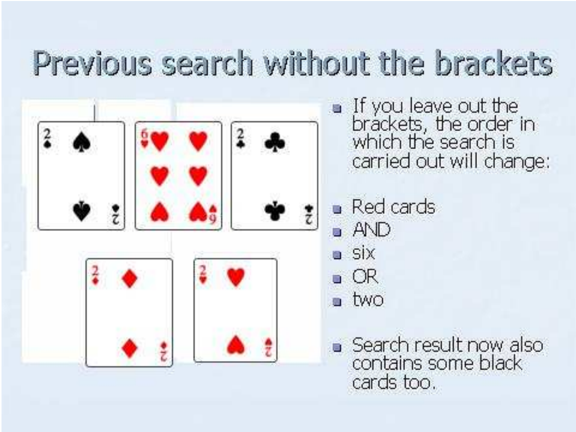


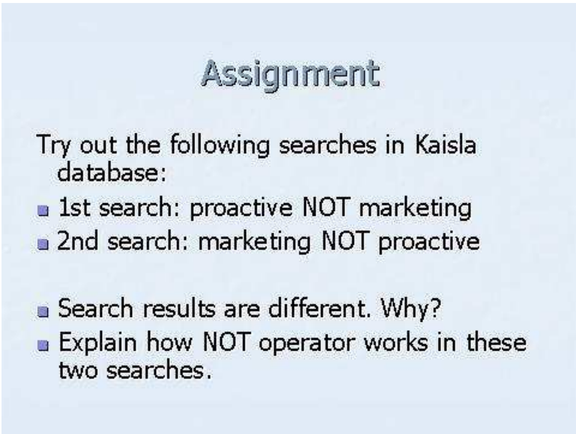


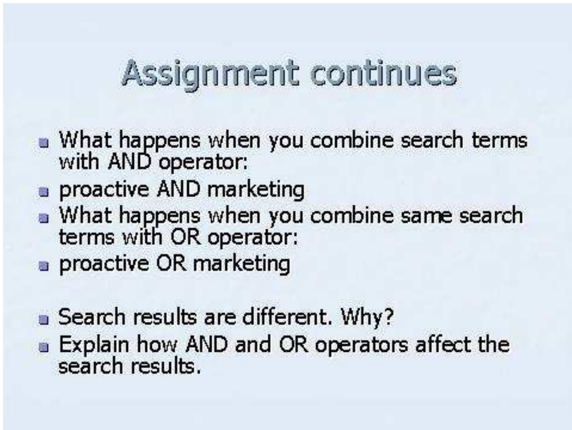


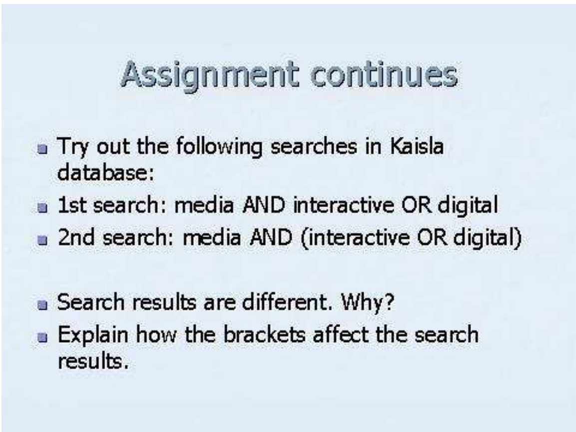


Example 27: Example from Anitta Örn, Finland









LAUREA

Laurea Library assignment for a course in the Degree Programme in Tourism (Laurea University of Applied Sciences, Finland).

Course: Productization and quality in the tourist industry

Aim:

- to introduce evaluation and criticism of information sources
- to find background material for the course report
- to provide collaborative material
- to practice writing references

Write your answers in a word document, save it as “Productization + your name” and email it to kaisa.puttonen@laurea.fi by May 15, 2009.

The material will be compiled into one document and saved on the Optima studying platform under the file for this course. The teacher in tourism will also check the chosen information sources when assessing the course.

1. CRITICAL EVALUATION

a)

Read the University of Tampere Library website on evaluating internet sources: http://www.uta.fi/laitokset/kirjasto/oppaat/arviointi.php

Think how you might evaluate web sources and compare with the given information. Write down the points you haven’t thought of before.

This is a corresponding example of a similar task from a page in English:

Search Google: “the good, the bad & the ugly” Beck

First read the information under ‘Criteria’. Reflect on your own way of evaluating web sources compared with the criteria and write down the points you haven’t thought of before.

Then choose one set from ‘Examples’ and analyse briefly which page you find most trustworthy and why.

(Beck, Susan. *The Good, The Bad & The Ugly: or, Why It is a Good Idea to Evaluate Web Sources*. 1997. http://lib.nmsu.edu/instruction/eval.html, updated April, 2009) b)

Go to Google and recap on the search tips. First view “Google basic search help” and check the page, then “Google advanced search help”. Remember that the basic ideas in information retrieval technique apply also to the library’s electronic databases!

Go to the pages of the Finnish Online University of Applied Sciences: www.amk.fi

Click “Tietoa opiskelusta-> Tiedonhallinta, Tiedonlähteet -> Kompassi, tiedonhallinnan perusteet (Compass, basics in information management).

The course Compass consists of many topics to guide you in information retrieval. In this exercise you will study two of them. *(Even though the course referred to is in Finnish, the exercise can easily be used in similar contexts)*

- Internet Module
    1. Try the test ‘The internet as an information source’. How many did you get correct?
    2. Why doesn’t Google find information relevant for you? Do the test in the module.
    3. Look at the table about advantages and disadvantages of Google Scholar. You will find out that it is also important to use the databases provided by the library.

- Evaluating sources Module
    1. What to do, if...? Open the table and read the guidelines. Have you refined your search accordingly when you find too much, too little or irrelevant information?
    2. Review the criteria for evaluating content in general and evaluating web pages. Do the tests on evaluation skills. How could you improve your skills?

    Remember the criteria when you choose information sources during your studies, and also when retrieving information at work. If you are not critical, you might be fooled! Check http://pdos.csail.mit.edu/scigen/

2. BACKGROUND MATERIAL FOR COURSE REPORT

- Search for two articles on the topic “Future trends in the tourism industry”. Search from scientific e-journals found through the library’s information portal Nelli. Note! Remote database access is also available; sign in with your personal password through the library’s web pages.

- Find two articles or links from the free web with an example of developing or planning a product in tourism. Remember also conference websites and presentations, discussion forums by specialists, blogs...
- Compile a reference list from the sources you have chosen. Please be sure that the information sources are written correctly according to the Laurea thesis standards. I'll send your lists back until they are correct. You can check the instructions from Laurea's website and the book by Hirsjärvi, S. (2009). Tutki ja kirjoita. Helsinki: Tammi.
- Summarize the information from each source into one or two paragraphs.

Please be sure that your word document has answers for:
1: 1a, 1b internet: point 1; evaluating: point 1, 2
2: Two scientific articles and two free web references correctly cited with a summary after the reference

All the information found by the group will be saved on Optima by May 20, and you can use this "information bank" when writing your final course report.

Ms. Kaisa Puttonen, Information specialist, Laurea University of Applied Sciences, Finland

Further Reading

All suggested reading is available either in the University libraries or, where web addresses are given, the material can be found online. If you have any further reading suggestions for the next edition of the Handbook then we would like to hear from you. Please contact a member of the HILT Group. Happy reading!

General

Boden, D. et al. eds. 2007. The information literacy cookbook: ingredients, recipes and tips for success. Oxford: Chandos.

A highly readable and inspiring guide. Includes a wealth of practical tips and recipes for success for novices and experienced practitioners alike. The text is clear, concise and is as entertaining as it is useful.

Cook, D. and Sittler, R. eds. 2009. *Library instruction cookbook.* Chicago: ACRL.

A lively and extremely readable compendium of nearly 100 snappy recipes for innovative IL sessions. Includes a contribution from Nigel Morgan and Linda Davies from Cardiff University.

Cook, D. and Sittler, R. eds. 2008. Practical pedagogy for library instructors: 17 innovative strategies to improve student learning. Chicago: ACRL.

A practical casebook of novel methods grounded on pedagogical theory which have been used to engage students in the library classroom. Readable and relevant.

Cox, C. and Lindsay, E. N. 2008. *Information literacy instruction handbook*. Chicago: ACRL.

Designed principally for new practitioners, this slim but wide-ranging volume contains a wealth of sound and practical advice. Chapters include ‘The psychology of learning: connecting theory to practice’, ‘Collaboration’, ‘Instructional technologies’ and ‘Student academic integrity’.

Webb, J. and Powis, C. 2004. Teaching information skills: theory and practice. London: Facet.

A thorough and practical introduction to all aspects of information skills teaching. The numerous case studies are particularly helpful.

Section 1: Information Literacy - Key Issues

Andretta, S. 2005. Information literacy: a practitioner's guide. Oxford: Chandos.

A sound introduction to the principles and practice of IL, aimed at the HE practitioner. Andretta takes an international perspective, focussing on the IL frameworks of the US, Australia and the UK. Includes two detailed and thought provoking case studies.

Watson, G. and Pope, A. eds. 2006. *Information literacy: recognising the need*. Oxford: Chandos.

This set of papers from a national conference provides a snapshot of themes and trends occupying the attention of UK practitioners. Themes include: working towards the information literate university, engaging the Google generation and IL as a catalyst for educational change.

Section 2: Library Orientation

Burnett, S. and Collins, S. 2007. Ask the audience! Using a Personal Response System to enhance IL and induction sessions at Kingston University. *Journal of Information Literacy* [online] 1(2). Available at: http://jil.lboro.ac.uk/ojs/index.php/JIL/article/view/AFP-V1-I2-2007-1 [Accessed: 8 July 2008].

Describes how Personal Response Systems might be used in a number of Library teaching contexts, including orientation sessions.

Jackson, A. 2007. Are we having fun yet? Interactive lecturing techniques for librarians. *ALISS Quarterly* 2(4), pp. 35-39.

ackson reminds us that students' perceptions of the library service are strongly influenced by their first experience of the service – usually at an orientation session – and that we need to work hard to make that experience as engaging as possible. Tips on using the Cephalonian Method, Library Bingo, small-group interactions and audience response technology ('clickers') are included.

Thompson, K. et al. 2008. From tourist to treasure hunter: a self-guided orientation programme for first-year students. *Health Information and Libraries Journal* 25(1), pp. 69-73.

Focuses on dental students at a New Zealand University with a multi-site library service. The treasure hunt-based orientation encourages participants to explore the campus visiting various different library sites of relevance to them. Another innovative orientation idea to take you beyond the suggestions already outlined in this Handbook.

Walker, B. 2008. This is jeopardy! An exciting approach to learning in library instruction. *Reference Services Review* 36(4), pp. 281-388.

Walker describes a highly participative 'quiz show' approach to library orientation, where students form teams and accrue points for answering library-related questions correctly, while the instructor takes on the energising role of quiz show host!

Section 3: Lesson Planning

Baume, D. 2006. *First Words* [online]. Oxford: Oxford Brookes University. Available at: http://www.brookes.ac.uk/services/ocsd/firstwords/fwconts.html [Accessed: 8 July 2008].

Useful sections include ‘Planning a presentation’ and ‘Writing aims and learning outcomes’. Principally designed for lecturers rather than librarians, but still highly relevant.

Chivers, B. [No date]. *Learning styles for information literacy* [online]. Loughborough: Loughborough University. Available at: http://www.ics.heacademy.ac.uk/limes/CONTENT/information-literacy/Learning%20Styles%20for%20Information%20Literacy.doc [Accessed: 8 July 2008].

A readable summary of the nature of learning styles, including a discussion of learning styles in the context of IL teaching.

SCONUL. 2004. *Learning outcomes and information literacy* [online]. York: The Higher Education Academy. Available at: http://www.heacademy.ac.uk/resources/detail/id515_learning_outcomes_and_information_literacy [Accessed: 8 July 2008].

Includes a range of case studies on embedding IL in University courses. Useful if you want to see a number of authentic examples of learning outcomes.

Webb, J. and Powis, C. 2004. Planning a learning experience. In: Webb, J. and Powis, C. eds. *Teaching information skills: theory and practice*. London: Facet, pp. 78-101.

A helpful overview of aspects of planning, offering practical advice on writing learning outcomes and useful case studies.

Section 4: Lesson Formats

Amsberry, D. 2008. Talking the talk: library classroom communication and international students. *The Journal of Academic Librarianship* 34(4), pp. 354-357.

Language can be a significant barrier for international students in library instruction classes. This article provides tips on maximising communication between the teacher and the international students within a group.

Craig, J. L. et al. 1994. Visiting librarian program. *Journal of Continuing Education in the Health Professions* 14(4), pp. 232-238.

Describes and assesses a programme of one-to-one teaching for physicians at home or in the workplace by a librarian.

Gordon, J. 2003. ABC of learning and teaching in medicine: one to one teaching and feedback. *British Medical Journal* 326(7388), pp. 543-545.

Although focussing on a medical context, the principles can be applied to other fields.

Jones, R. W. 2007. Learning and teaching in small groups: characteristics, benefits, problems and approaches. *Anaesthesia & Intensive Care* 35(4), pp. 587-592.

Provides an overview of small group learning and teaching including its characteristics and challenges. Describes the potential causes of less than optimal sessions, and summarises specific approaches.

SCONUL. 2008. *Library services for international students* [online]. London: SCONUL. Available at: http://www.sconul.ac.uk/groups/access/papers/international_students.pdf [Accessed: 7 July 2009].

Includes discussion of a number of 'Key Concepts' in providing services to international students which are relevant to IL. Covers ways of catering for different learning styles and levels of IT capability, along with advice on ensuring students are equipped to avoid plagiarism and maintain academic integrity.

Webb, J. and Powis, C. 2004. Delivery: tools, techniques and approaches. In: Webb, J. and Powis, C. eds. *Teaching information skills: theory and practice*. London: Facet, pp. 102-127.

The ‘Teaching methods’ section (p.10 -107) provides useful summaries of the benefits and drawbacks of particular lesson formats. Includes practical advice on matching the delivery method to the learning outcomes.

Section 5: Teaching Technologies (August 2011 update)

2010. *Technology, Pedagogy & Education* 19(2), whole issue.

Issue devoted to articles on developments in interactive whiteboard (IWB) technology and other ‘whole class interactive technologies’, including teacher views on IWB use and skills required to teach with IWBs.

Bruff, D. 2010. *Backchannel in education - nine uses.* In: *Teaching with classroom response systems blog* [Online]. 21st Jan 2010. Available at: http://derekbruff.com/teachingwithcrs/?p=472 [Accessed: 14th June 2011].

Outlines ideas for using *Twitter* in education, based on a book by Cliff Atkinson. Suggestions include using *Twitter* for notetaking, commenting, asking questions and building community.

Diamond, S. 2010. *Prezi for dummies*. Hoboken, New Jersey: Wiley.

Another addition to the popular series of books which 'does what it says on the tin'. Provides a clear, accessible introduction to *Prezi* with plenty of guidance and examples.

Godwin, P. and Parker, J. eds. 2011. *Information literacy beyond library 2.0.* 2nd ed. London: Facet.

Edited book of contributions providing an excellent overview of Web 2.0 and its implications for IL teaching. Covers topics such as Wikipedia, blogs and podcasting. Now in its second edition, with enhanced coverage on mobile technologies.

Marcoux, E. B. and Loertscher, D. V. 2009. Achieving teaching and learning excellence with technology. *Teacher Librarian* 37(2), pp. 14-22.

This article looks at how technological devices and applications may motivate student learning, contribute to deeper understanding of topics, develop individual and collective learning skills, and increase efficiency among teachers and students. The use of educational technology in developing digital literacies and collaborative skills is also discussed.

Mollerup, P. 2011. *PowerNotes: slide presentations reconsidered* [Online]. Melbourne: International Institute for Information Design, Faculty of Design, Swinburne University of Technology. Available at: http://hdl.handle.net/1959.3/191214 [Accessed: 7th June 2011].

This paper gives a broad range of advice on increasing the impact and professionalism of *PowerPoint* presentations, covering the three stages of planning, design and delivery. The author believes that we should learn the rules first before we consider breaking them for artistic effect.

Raman, M. et al. 2005. Designing knowledge management systems for teaching and learning with wiki technology. *Journal of Information Systems Education* 16(3), pp. 311-320.

This paper discusses a case study of use of a wiki for academic study in a postgraduate level setting. The authors found the exercise successful, but outline some of the requirements, e.g. that teachers must be familiar with wiki technology,

class sizes need to be appropriate, and students need to be motivated to engage with this style of 'discovery learning'.

Sellar, M. 2011. Poll Everywhere *The Charleston Advisor* [Online] 12(3). Available at: http://charleston.publisher.ingentaconnect.com/content/charleston/chadv/2011/00000012/00000003/art00015 [Accessed: 13th June 2011].

The strengths and weaknesses of the *Poll Everywhere* service are reviewed with examples of use in higher education and libraries. Covers pricing, functionality and a critical analysis of the software as a HE teaching tool.

Singh, A. et al. 2010. Bolstering teaching through online tools. *Journal of Information Systems Education* 21(3), pp. 299-311.

Summarises some of the technologies that provide either free or low-cost solutions to the challenges of teaching online courses. Discusses some of the pedagogical methods which can be supported with these technologies, with reference to the purposes they are geared towards. The authors note that such technologies also have value in more conventional face-to-face teaching.

Walsh, A. 2010. QR codes: using mobile phones to deliver library instruction and help at the point of need. *Journal of information literacy* 4(1), pp. 55-65.

Outlines the practical uses staff at University of Huddersfield library have found for QR codes, and gives details of their reception by library users, some of whom have been reticent to engage. Walsh also discusses the possible use of other technologies, e.g. RFID, to deliver comparable information, without the barriers which may restrict access to QR code technology.

Walsh, A. and Inala, P. 2010. *Active learning techniques for librarians: practical examples.* Oxford: Chandos.

Good coverage of the use of technology in library teaching. Covers theory and practical applications, acknowledging that much library teaching is 'one-off' and that students need to be engaged and motivated as effectively as possible through 'active learning' to attract and sustain their interest.

Section 6: Lesson Delivery

2005. *Public speaking with confidence* [DVD]. UK: Ashgate. Running time 17 minutes.

A discussion between public speaking experts Eve Ash and Peter Quarry, containing useful hints for delivering high quality presentations in a variety of contexts. Not specifically focussed towards IL sessions, but the content is nevertheless highly applicable.

Section 7: Evaluating your Teaching

Cardiff University. *Providing Effective and Efficient Feedback to Learners* [online]. Available at: http://medic.cardiff.ac.uk/feedback [Accessed: 29 April 2009].

This Cardiff University e-module on feedback is intended for teaching staff . It is interactive and easy to use. The aim of the module is to facilitate learning regarding the purpose of feedback and how effective feedback can enhance student learning.

Hammersley-Fletcher, L. and Orsmond, P. 2005. Reflecting on reflective practices within peer observation. *Studies in Higher Education* 30(2), pp. 21-224.

Emphasises the importance of reflective thinking in teaching and makes a case for the centrality of peer observation in professional development initiatives and programmes. The detailed case study focuses on peer observation practices at a post-1992 university.

Webb, J. and Powis, C. 2004. Feedback and evaluation. In: Webb, J. and Powis, C. eds. *Teaching information skills: theory and practice*. London: Facet, pp. 156-180.

Excellent advice on collecting, interpreting and using feedback to enhance and strengthen your teaching.

Section 8: Assessment

Reece, I. and Walker, S. 2006. Assessment of learning and achievement. In: Reece, I. and Walker, S. eds. *Teaching, training & learning: a practical guide*. 6th ed. Sunderland: Business Education Publishers, pp. 321-384.

A detailed exploration of the principles of student assessment (both formative and summative), methods of assessment and the use of technology in the assessment process.

Walsh, A. 2009. Information Literacy Assessment: Where do we start? *Journal of Librarianship and Information Science* 41(1), pp. 19-28.

Andrew Walsh from the University of Huddersfield reviews the literature relating to IL assessment. Provides an overview of popular methods and includes a selection of case studies.

Useful Websites

ACRL – Information Literacy

http://www.ala.org/ala/acrl/acrlissues/acrlinfolit/informationliteracy.cfm

Maintained by the Information Literacy Advisory Committee of the Association of College and Research Libraries, this is a useful gateway to a range of resources on IL, including standards, guidelines and practical advice.

Cardiff University Learning and Teaching Support

http://www.cardiff.ac.uk/learning

Cardiff University's Learning and Teaching Support pages are intended both as a comprehensive resource for learning and teaching and a gateway to the learning and teaching support activities across the University. Details of past and upcoming QUILT (Quality and Innovation in Learning and Teaching) seminars may be particularly useful.

Discover

http://www.otaselvaa.fi/en

The website of the IL campaign of the Finnish Universities of Applied Sciences created by Paivi Hollanti. Highly imaginative and relevant.

The Information Literacy Weblog

http://information-literacy.blogspot.com

Highly informative and current. Sheila Webber and Stuart Boon from the Department of Information Studies, University of Sheffield, offer a lucid overview of the latest IL developments and initiatives in the UK and abroad.

The Information Literacy Website

http://www.informationliteracy.org.uk

As well as providing news of IL developments in the UK, this site is a gateway to a wealth of high quality information including websites, blogs and case studies.

Intute Virtual Training Suite

http://www.vts.intute.ac.uk

An excellent set of free Internet tutorials for most disciplines which aim to develop sound internet research skills.

Journal of Information Literacy

http://www.jil.lboro.ac.uk/ojs/index.php/JIL/index

A peer reviewed online journal featuring articles on a diverse range of IL topics.

LILAC

http://www.lilacconference.com/dw/index.html

The website of the Librarians' Information Literacy Annual Conference which was held in Cardiff in 2009.

Safari

Available at: http://www.open.ac.uk/safari

Safari (Skills in Accessing, Finding and Reviewing Information) is an online module produced by the Open University. It consists of seven sections, each of which is intended to help learners feel more confident about finding, evaluating and using information. The approach, content and interactivity can provide useful inspiration for teachers planning IL teaching.

Index

Page numbers for complete section on a topic are given in **bold**.