FINDING INFORMATION FOR YOUR TEACHING AND RESEARCH WORK IN TEACHING AND LEARNING

Helen Fallon
National University of Ireland Maynooth,
E-mail: helen.b.fallon@may.ie

Introduction

While most academics will be aware of the key people and information sources in their specific discipline they may be unaware of the people who are writing about teaching and learning in these disciplines. This chapter is aimed at those involved in exploring the topic of teaching and learning in various disciplines. Librarians will also find it useful in identifying key resources for collection development.

The chapter is divided into three sections.

Section *"Planning a literature search"* describes the process of doing a literature search. There are common steps in executing a literature search across disciplines. However, researching the literature of teaching and learning may necessitate a review of a much broader range of literature than that which academics are familiar with in their own discipline. It can be argued that teaching and learning is in itself a discipline. A body of research relating to teaching and learning has grown up and much of the applications and findings can be applied across disciplines. For example articles in the *"Journal of Chemical Education"*, may be relevant for research in other science or indeed in the social sciences or humanities.

Section *"Directory of Resources"* is a directory of resources. This gives details of resources, including books, journals, websites, conference papers and databases in the area of learning and teaching. The directory is selective rather than exhaustive and draws on a survey of the information needs of education developers carried out by the author in Summer 2004. It is aimed primarily at education developers, new academic staff and experienced academic staff who wish to develop their teaching and learning.

Section *"Publishing your findings/research on your teaching"* gives brief guidelines on publishing your research are included in this section.

The chapter emphasises the vital link between the new lecturer, the experienced lecturer who wants to improve his/her teaching practice and the Librarian.

Planning a literature search

The points may by summarised as follows:

1. Clarify the purpose of your research

2. Define the topic

3. Discuss with your subject librarian and identify information sources of potential use

4. Break your topic into keywords

5. Consider alternative spelling

6. Identify key people in the area

7. Identify key journals

8. Begin searching

The following case study illustrates a structured approach to finding information. The reader might like to parallel this when sourcing information.

The author – a librarian – engaged in detailed discussion with an education developer who wanted information on the topic of student-centered learning.

Clarifying purpose

The purpose of your research will significantly influence the range and type of information sources used. The range of information consulted for a PhD thesis will greatly exceed that needed for a book chapter.

Define the topic

After establishing the purpose begin to define the topic. It can be useful, when you are defining your topic, to write it as a question.

Discuss with a Subject Librarian and identify information sources of potential use.

While there are increasing moves towards consortium purchasing particularly in the area of journal databases, different libraries have different resources. It is useful to discuss your topic with a Librarian in order to identify:

1. what resources are available in your library

2. what resources you can access via other libraries and through other methods e.g. inter-library loans

Break your topic into keywords

Keywords are concepts which describe topics and are sometimes assigned by the authors of articles, or in the case of large databases, there may be a thesaurus of terms using for indexing articles.

While academics will have built up an expertise in the keywords of their particular research area, the keywords and vocabulary of teaching and learning may be new. Generally, if you can find one very useful article it is useful to look at the keywords assigned to it as this can lead to further articles.

While the process of defining search terms as keywords may take some thought and time, the investment of time defining very specifically what you are looking for, will save time in the long run.

When selecting keywords consider alternative spelling and whether the term might be hyphenated e.g.,

Student-cen**ter**ed learning

Student-cen**tre**d learning

Student centered learning

Student centred learning

Databases and library catalogues have variant indexing practices. The term might or might not be hyphenated.

A library catalogue will always list a book under the exact title as it appears on the title page of the book. Each book in the catalogue is assigned subject headings. Most Irish university libraries use the U.S. Library of Congress subject headings. Therefore, a keyword or subject search under student centred learning would only yield those books which had these words, with this spelling, in the title. Some library catalogues offer "see also" links which are useful.

To have gone with only one of these options for example the first which is British spelling, would exclude useful articles which used American spelling.

Consider alternative terms

In addition to considering if there are alternative spellings consider if there are alternative terms by which a topic may be known. For example student-centered learning is sometimes referred to as client-centered learning and learner-centered learning.

Key people

If you know of a key person working in a particular area, in addition to being able to identify papers by this person, you can also check who is citing the work of this person. Much of the philosophical base of student-centered learning came from the 1970s work of the psychologist Carl Rogers. Using the "Social Science Citation Index" it is possible to check who cited the work of Carl Rogers in subsequent articles and this may be useful in identifying current perspectives on Carl Rogers' work.

Key journals

A list of journals in the area of teaching and learning is given in the resource guide. In addition to this, journals in other subject disciplines may carry articles on applying the principles of student-centered learning in those disciplines. A search across a large multidisciplinary database such as the Web of Science, which encompasses the social sciences, the sciences and arts and humanities, will retrieve journal articles relating to teaching and learning in different disciplines."

Where to begin

Start by discussing your topic with a librarian.

The nature of the topic being researched will to a large extent, influence where you begin your search. If you want a few current articles on thinking in a particular area, a search of a database such as "Web of Science" by keyword may rapidly yield some useful results. A search by keyword on a major search engine such as Google may also yield useful current information and identify places where research on the topic is being carried out.

For more detailed in-depth research on a topic the library catalogue is generally a useful starting point.

Information Sources

Books

Journals and journal articles

Databases

Websites

Conference Papers

Finding books

Books as information sources, were identified as slightly more important than journals, in the questionnaire survey I carried out earlier in the year. This is in keeping with trends across the social sciences. In the sciences, journals are rated as more important than books.

Check the library catalogue using the various keywords you have identified.

Student-centered learning

Student-centred learning

Student centered learning

Student centred learning

When you retrieve a useful record check if the record includes the subject headings assigned to the book. Entries in library catalogues are assigned broad subject headings. Keyword searches only search the subject headings and the details given such as title and author. At present, catalogue records generally do not have a breakdown of individual chapters. Thus a book on new methods of teaching and learning might well have a chapter on student-centred learning but might not have added this as a subject heading. If the term were not in the body of the catalogue record i.e. the title of the book, it would not be retrieved.

Going to the Library and looking at the contents pages and indexes of books on education methodologies is a useful way of identifying relevant chapters in books. Within the Dewey Decimal Classification system (used by most Irish and UK university libraries) 378 is the Dewey number for higher education. Within that 378.17 is the number for methods of instruction and study. This number is further lengthened to reflect individual methodologies, for example discussion as a method of instruction and study is classified at 378.1795. Most automated library catalogues allow searching by classification number, so it is possible to select the classification search option, enter 371.17 and get a listing of books at that number in the Library. Doing this on the UCD catalogue, I retrieved 47 titles. Interestingly the title "Teaching students to Learn: a student-centered approach" by Graham Gibbs was retrieved in this way, while it had not been retrieved using a keyword search using the keywords "student-centred learning" or "student-centered learning." Going back and using the keyword "student-centred approach" retrieved one more book that had not been identified earlier.

While knowing the classification number for a subject area is useful, particularly if you want to browse the shelves, it is important you know that books on related topics are often scattered through the library collection and the application of classification numbers can vary between libraries.

Information on how to identify books not held in the Library is given in the directory section of this chapter.

Finding journal articles

While no university library will carry all the journal titles any researcher would like, those involved in the study of teaching and learning may face additional challenges in that most libraries allocate funding for journals to departments or faculties. Many education developers may be attached to a centre rather than a faculty or department and this centre may not be allocated a budget for the purchase of books and journals. Because of the recurrent nature of journal purchasing i.e. subscriptions must be maintained and paid annually, getting relevant journals may prove to be particularly challenging.

Individual journal titles are listed in the library catalogue. It is well worth going to the shelves and browsing through titles.

The key journal publishers in the area of innovations and developments in teaching and learning are Carfax, who are part of the Taylor and Francis publishing group.

A list of key titles with details is given in section II.

Tables of contents - generally with abstracts – for all Taylor & Francis titles are available online free of charge from their website at `www.taylorandfrancisgroup.com`

It is possible to buy individual articles and to subscribe to a free contents alerting service, SARA (Scholarly Articles Research Alerting) via the website. The requestor indicates the keywords he/she wants searched. As new issues of Taylor & Francis journals are produced, they are searched for occurrences of these words in the title or abstract of articles. Bibliographic details of the articles are then e-mailed to the person who signed up for the alert. If the fulltext of the article is not available in print or electronic form in the Library, it can be obtained via inter-library loan or ordered – via credit card payment - from the Taylor and Francis website.

Databases of journal articles

While institutions may take out subscriptions to individual electronic versions of journals, titles are also increasingly becoming available as part of larger packages of fulltext electronic journals known as databases. Databases generally contain either the abstract or fulltext of journal articles. Individual databases such as "Academic Search Premier," may offer access to thousands of journals. Databases are expensive and generally libraries or groups of libraries take out annual subscriptions to particular databases. To ensure libraries do not cancel their subscriptions to individual print titles, there is often an embargo or time restriction placed on when the database can release the fulltext of an article. While many of the Carfax titles are available in fulltext via the database "Academic Search Premier" most of these do not have the fulltext posted until six months to a year after publication. The contents of most of the Carfax journals are available fulltext from 1990 forward with a six to twelve month embargo. This is a very useful way of doing a retrospective search. The ability to search individual journal titles by subject over a ten or more year period in a single search is extremely useful.

Details of a number of databases of potential use to education developers, are given in the directory section. These include "Academic Search Premier" "ERIC," "Research into Higher Education Abstracts," "Professional Development Collection," and "Education Complete."

In addition to these databases, for information relating to teaching and learning in specific disciplines, the databases and journals of that discipline should be consulted and the multidisciplinary Web of Science which includes science, social sciences and arts and humanities.

The above databases are available on subscription (generally via libraries because of the costs involved).

Websites

A number of very useful websites dealing with teaching and learning have been created by education developers and their associations. These generally provide notification of forthcoming conferences, address issues of concern to education developers, including integrating information technology tools into teaching and managing educational organisations, promote innovation and best practice, give useful contacts and provide links to additional web resources.

A listing of useful websites is provided in the directory.

Conference Papers

Websites, meetings, and electronic discussion lists are useful sources of information on forthcoming conferences. Details of past conference papers are available via the database Institute for Scientific Information (ISI) Proceedings. See the directory for further details.

Directory of Resources

The material listed here has been identified in consultation with education developers.

The directory is selective rather than exhaustive. Individual libraries have different collections and have access to different resources electronically. It is best to discuss your information needs with your local librarian, who may suggest additional resources.

Books

The books listed below are a mixture of types reflecting different traditions and different concerns.

- Bates, A. & Poole, G (2003) *Effective Teaching with Technology in Higher Education.* Jossey-Bass

  Considers the appropriate use of technology within the curriculum and examines the differences between face-to-face teaching and teaching through technology from a pedagogical perspective.

- Biggs, J. (2003) *Teaching for Quality Learning at University.* Maidenhead: Open University. 2nd edition.

  This revised edition of *Teaching for Quality Learning at University: What the Student does* includes a variety of new material including a chapter on how electronic technology can be used to enhance learning.

- Brown, G., Pendlebury, M. & Bull, J (1997) *Assessing Student Learning in Higher Education.* London: Routledge.

  Provides background information on different aspects of assessment including methods and strategies, assessing oral communication and issues relating to quality and standards.

- Brown, G. & Atkins, M (1990) *Effective Teaching and Learning in Higher Education.* London: Routledge.

- Laurillard, D. (2002) *Rethinking University Teaching: A conversational framework for the effective use of learning technologies.* New York: (Routledge) Falmer. 2nd ed.

  Includes information on traditional and technological learning methods.

- Newble, D. & Cannon, R (2000) *A Handbook for teachers in universities and colleges: A guide to improving teaching methods.* London: Kogan Page. 4th ed.

  Covers a variety of topics including group teaching, curriculum planning, assessment, problem based learning and preparing class material.

- Race, P. (2001) *The Lecturer's Toolkit: a Practical Guide to Learning, Teaching & Assessment.* London: Kogan Page. 2nd ed.

  Offers practical suggestions and guidelines on issues such as using handouts, working with small groups and self-care and management.

- Ramsden, P. (2003) *Learning to Teach in Higher Education.* New York: Routledge Falmer. 2nd ed.

  Reflects the changing education environment and addresses issues such as quality and professional development. It includes case studies.

- Sue Habeshaw & Graham Gibbs have written a number of practical books

- The Staff and Educational Development (SEDA) Association has a useful series of publications. Details are available from its website at `http://www.seda.ac.uk`. Click on *publications*.

Ways to identify more books:

- Publishers catalogues and websites (including Taylor & Francis, Kogan Page, Routledge Falmer, Kluwer)

- Library catalogues including merged catalogues (union catalogues) COPAC (catalogues of 24 major university libraries, includes TCD, plus the British Library and the National Library of Scotland) `http://www.copac.ac.uk`

- IRIS (project to develop a combined catalogue of Irish university library catalogues) `http://www.iris.ie`

- Library of Congress Online Catalog (12 million records)

  `http://catalog.loc.gov`

Most academic libraries in Ireland and the UK have joined SCONUL Research Extra which allows access with borrowing to the collections of participating libraries. For further information and to get a list of participating libraries consult `http://www.sconul.ac.uk/use_lib/srx/`

The above library catalogues are available free of charge via the Internet. Major libraries will also subscribe to commercial databases of book in print. These include "Libweb" which gives publication details of English-language books in print. Resources such as "Libweb" can be useful for checking information for ordering books and verifying the latest edition of a book. However, they give no indication of the quality of a title.

Journals

As mentioned in Section I, the tables of contents with abstracts, for journals in the Taylor & Francis Group, are available free of charge from the Taylor & Francis website at `http://www.taylorandfrancisgroup.com`

It possible to buy individual articles and to subscribe to a free contents alerting service.

It should be noted that many journal publishers are now making their titles available electronically and more will in the coming years. Therefore it is worth checking if your Library has access to electronic versions of these journals on a periodic basis.

- Active Learning in Higher Education, 2000-, 3 times a year

  Sage

- Assessment & Evaluation in Higher Education, 1976-, Bimonthly

  Carfax

  Available fulltext from 1991 (with a six month embargo) from "Academic Search Premier" database.

- British Journal of Educational Technology, 1970-, Quarterly

  Blackwell

- Higher Education: the international journal of higher education and educational planning, 1971-, 8 times a year

  Kluwer

- Higher Education Quarterly 1946-, Quarterly

  Blackwell

- Higher Education Review 1968-, 3 times a year

  Tyrrell Burgess Associates

- International Journal for Academic Development (IJAD) 1996-, Semi-annually

  Routledge

- Innovations in Education & Teaching International, 1964-, Quarterly

  Routledge

  Fulltext available from 1998 to present, with a twelve month embargo, from "Academic Search Premier" database

- Reflective Practice, 2000-, 3 times a year

  Carfax

  Available fulltext from 2000 (with a twelve month embargo) from "Academic Search Premier" database

- Studies in Higher Education, 1976-, Bimonthly

  Carfax

  Available fulltext from1990 (with a six month embargo) from from "Academic Search Premier" database

- Teaching in Higher Education

  Carfax

  Available fulltext from1996 (with a six month embargo) from from "Academic Search Premier" database

Discipline specific journals include

- Journal of Chemical Education, 1924-, Monthly

  American Chemical Society

- European Journal of Engineering Education, 1975, Quarterly

  Taylor & Francis

Finding out about more journal titles
Websites (see below) & publishers catalogues

- Ulrich's International Periodicals Directory (subscription based, enquire from your librarian)

Databases

Check with your library to find out if they have a subscription to any of the following databases.

- Academic Search Premier (EBSCO)

  Fulltext of a wide range of titles of interest to education developers.

- ERIC (Education Resources Information Center)

  Produced by the US Department of Education, this database abstracts journal and non-journal education literature from 1966 forward.

- Research into Higher Education Abstracts (Carfax)

- Professional Development Collection (EBSCO)

  Designed for professional educators, this database gives the fulltext of 500

  peer-reviewed journals

- Education Complete (Proquest)

  Contains more than 500 journals on education, including primary, secondary and university. 300 of the titles are fulltext.

- Web of Science (Institute for Scientific Information)

  Provides abstracts of articles across all disciplines

- ISI Proceedings (Institute for Scientific Information)

  Gives abstracts of conference papers and publication details.

Websites

- All Ireland Society for Higher Education

  http://www.aishe.org

  Promotes the professional recognition and enhancement of teaching and learning in Higher Education through a range of activities including seminars, conferences, publications, and provision of online community forums and services.

- ESCalate (Education Subject Centre: Advancing Learning and Teaching in Education)

  http://www.escalate.ac.uk

  ESCalate is a for staff working in Higher Education and Further Education who teach Education and Continuing Education. It is involved in a wide range of staff development activities related to promoting high quality learning and teaching in Higher Education.

- The Higher Education Academy

  http://www.heacademy.ac.uk

  Formed from a merger of the Institute for Learning and Teaching in Higher Education (ILTHE), the Learning and Teaching Support Network (LTSN), and the TQEF National Co-ordination Team (NCT), the Higher Education Academy is a UK-wide organisation, set up to support quality enhancement in teaching and the student experience in higher education.

  Provides a large range of useful information including subject centres.

- Horizon

  http://horizon.unc.edu

  Grew out of a 1992 publication *On the Horizon* which informed educational leaders of the implications of change and made recommendations on how to address these changes. It provides notification of forthcoming conferences, online workshops and seminars. It produces *Innovate*, an online peer-reviewed journal that focuses on the creative use of information tools to enhance active learning and *The Technology Source,* a peer-reviewed bimonthly periodical that gives full text of articles that aim to help address the issue of integrating information technology tools into teaching and managing educational organisations.

- Learning and Teaching Support Network

  http://www.ltsn.ac.uk/home.asp

- Staff and Educational Development Association

  http://www.seda.ac.uk

  Professional association for staff and educational developers in the UK which promotes innovation and good practice in higher education.

  Catalogue of SEDA publications, links to a range of education-related organisations

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- UCD Centre for Teaching and Learning

  http://www.ucd.ie/teaching

  Provides information on good practices in teaching and learning, teaching portfolio practices, teaching and course evaluations, teaching and learning research methodologies.

Publishing your findings/research on your teaching

Presenting papers at conferences is a useful method of getting feedback on your research and can be a useful precursor to publishing a journal article. Consider targeting papers at conferences outside the ones you normally attend. Consider presenting a paper on teaching and learning at your discipline based conference.

Consider collaborating with a colleague from an education development unit or centre when writing a journal article. They will know the literature of teaching and learning.

When considering a journal for possible submission of a manuscript, study the style of the journal in some detail. What is the average length of article? Are articles generally descriptive, evidence-based or reviews?

Consider two journals in some depth as possible outlets for your research. Study a recent issue. Examine back-issues and see if your topic has been covered recently. If it has, is there new information in your article which will add to the knowledge on the topic? If it has not been covered is there a particular reason, for example, is it something which would not fit into the scope of the journal.

Submission guidelines are given in the inside front cover of most journals and on the journal website, study these guidelines before submitting.

Two journals you might consider are

- British Journal of Educational Technology

- Active Learning in Higher Education

These have short papers and do not require a rigorous evidence base.

Before submitting a paper to a journal, it is useful to send a query e-mail.

Murray (2004) suggests the following in relation to query e-mails.

> This enquiry should be short, should state what you are researching
> "I am writing a paper about. . . "

> It should give some indication of your approach
> "I'm making a case that. . . "

> It should state why you think it should appear in this particular journal.
> "I think readers of [journal name] would be interested in this topic because. . .

> It should ask if the editor is interested in seeing a copy of the article.

If the editor expresses interest, after you submit the article it will be passed to referees just as would be the case in your own discipline. They are likely to suggest changes. Make these changes as quickly as possible and resubmit the article.

Conclusion

The range of information available in both print and electronic formats may seem quite daunting. The availability of these sources vary from institution to institution. It is best to use the resources listed in this chapter in conjunction with discussions with a Librarian who will be able to advise you as to their availability and also help you identify additional sources.

References

Murray, R. (2004). *Writing for Academic Journals*. Maidenhead: Open University Press/McGraw Hill.