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Abstract

The JISC funded Big Blue Connect project investigated the information skills of staff working in the Higher and Further Education sectors in the UK. In this paper librarians from two institutions in the University of London present case studies from their own work with academic teaching staff and evolving relationships with Learning Technologists and Computing support staff. After examining the research evidence, we ask questions about what levels of information literacy academics might reasonably be expected to develop and why it matters. The two case studies explore traditional approaches which might encourage academics to become more information literate and examine the changing needs of teachers, students and librarians in an increasingly electronic environment. The JISC funded DiVLE programme focused on exploiting electronic resources by linking virtual learning environments to digital library systems. However, of equal importance to technical solutions is the need to address the wider issues of e-literacy, including the development of appropriate computing skills and understanding of moral issues such as copyright, plagiarism and intellectual property rights. Both institutions have well developed provision of electronic course packs requiring careful attention to copyright legislation and all aspects of digital rights. Both case studies suggest that the use of e-learning makes it essential for academic staff to be information literate and propose a variety of approaches to support the development of appropriate skills. We suggest that organisational structures may help or hinder that support but that ultimately the future development of e-learning is dependent on the e-literacy of academic teachers as well as their support teams.

Introduction

In this paper librarians from two institutions in the University of London present case studies from their own work with academic teaching staff and evolving relationships with learning technologists and computing support staff. After examining the research evidence, they ask questions about why information literacy matters. The two case studies then explore traditional and less conventional approaches which might encourage academics to become more information literate and examine the changing needs of teachers, students and librarians in an increasingly electronic environment.

The two institutions: similarities and differences

Both London School of Economics and Political Science (LSE) and the Institute of Education (IoE) are part of the University of London. Moreover they are both relatively small, specialist institutes, with a particular focus on research and a strong international student body. They both teach within the social sciences although at LSE the range of subjects is obviously far greater than the IoE. Some of the key differences between the institutions are the differing ratio of undergraduates to

postgraduates. At the IoE the student body is almost entirely postgraduate, whereas at LSE approximately 50% of the students are on Masters or PhD programmes. The emphasis on teaching is particularly notable at the IoE because of the nature of the institution. At the IoE there is also a growing interest in distance education, with a number of courses now being taught in this way. This is in contrast to the situation at LSE, where the student body is currently largely campus based.

In terms of library and IT support there are structural differences. The IoE have a converged library and IT service, whereas the departments at LSE are converged at the top level only. Finally, although there are similarities in the work the two authors of the paper are doing, their job titles and roles are different. Gwyneth Price is Student Services Librarian at the Institute of Education and has responsibility for academic liaison, reading list purchasing and Information Literacy. Meanwhile, Jane Secker is the Learning Technology Librarian, working in the Centre for Learning Technology at LSE, supporting academic staff who are building online courses.

What do we mean by e-literacy?

Allan Martin defines e-literacy as computer literacy coupled with information literacy, moral literacy, media literacy and teaching and learning skills. It has been described as:
> "a crucial enabler of individuals and institutions in moving successfully in a world reliant upon electronic tools and facilities" (eLit Conference website)

E-literacy is referred to in the Big Blue Connect project report (JISC,2004b) and HEFCE's e-learning strategy consultation document (HEFCE, 2004).

What do we mean by information literacy?

Information literacy has been defined in numerous ways by authors in the field, but it is generally understood to include the following skills:

- Knowledge of information resources in one's subject
- Ability to construct effective search strategies
- Ability to critically appraise information sources
- Ability to use information sources appropriately, cite and create references

In 1998 in the US the Association of College and Research Libraries (ACRL) established a Task Force on Information Literacy Competency Standards and charged it to develop competency standards in this area for higher education. In 2000 the group published its Information Literacy Competency Standards for Higher Education (ACRL, 2000). Meanwhile, following the work of the ACRL, the Council of Australian University Librarians published its Information literacy standards (CAUL, 2001).

In the UK, SCONUL (Society of College, National and University Libraries) acknowledged the need to address the issue of information literacy and information skills training for students with the formation of the SCONUL Information Skills Task Force in December 1998. The SCONUL taskforce in their paper "Information skills in higher education: a SCONUL position paper" (SCONUL, 1999) went some way toward

achieving this and highlighted a number of issues which have formed the basis for further evaluation. SCONUL also developed what are known as the 7 Pillars of Information Literacy, which have been used by a number of UK universities, notably the University of Sheffield and University of Leeds, to develop an information literacy programme.

In the UK the term 'Information Skills' is still used in many institutions, however Bruce (1997) writing her thesis on the seven faces of information literacy, argued that information literacy should not be regarded as skills and training, but as seven stages to becoming information literate. She maintained that:

> Information literacy is about peoples' ability to operate effectively in an information society. This involves critical thinking, an awareness of personal and professional ethics, information evaluation, conceptualising information needs, organising information, interacting with information professionals and making effective use of information in problem-solving, decision-making and research. (Bruce, 1997)

Research

Much of the research work on information literacy has concentrated on skills and education for students or learners, however, a crucial area must be the information literacy levels of staff who are responsible for the development and implementation of e-learning. In 2003 JISC funded the six month Big Blue Connect Project (Big Blue Connect, 2003).   This project carried out a survey of academic, managerial, administrative and technical staff, to establish how staff access and use information within their work environment. The research found there was a general lack of staff awareness about information skills and a lack of training for staff, in particular non-teaching staff. Where training existed it focused primarily on the development of ICT skills and where staff had received training in the development of information skills, this was mainly in the form of a one-off training session to support the introduction of a new service or resource.

Other projects which have examined information literacy of staff include the JISC funded JUSTEIS project (JISC, 2004a), which found that academic and tutorial staff are the main influence on students' decisions to use (or not to use) particular Electronic Information Services (EIS). The project therefore recommended that library and learning resource staff need a flexible approach to working with academic and teaching staff to support use of EIS for learning.

Similarly the DELIVER Project which examined how library resources can be integrated into the Virtual Learning Environment carried out a user needs analysis of academic staff (Harris, 2003). This suggested that students rely heavily on the resources promoted by their lecturer through the reading list, but that the level of information literacy amongst academic staff was often not high.

Research at the University of Sheffield (Webber and Johnson, 2004) is currently being undertaken to examine UK academics' conceptions of and pedagogy for information literacy. This research should shed further light on this issue.

Why does it matters to us?

Information literacy is increasingly recognised as an essential element of the researcher's toolkit and our roles within research led institutions are obviously key, but in addition, staff at the IoE are also very aware of the need for information literacy in the wider world of education. With its strong emphasis on initial and continuing teacher education, the IoE plays an important role in the development of future teachers who, in their turn, will provide future pupils with an environment which nurtures and develops information literacy.

Information literacy is of crucial importance in the increasingly electronic environment. As Diana Laurillard stated:

> "It is as absurd to try and solve the problems of education by giving people access to information as it would be to solve the housing problem by giving people access to bricks" (Diana Laurillard, THES, 2002 quoted in the Big Blue Blue, JISC 2002)

The phenomenon has been described by some authors (Borah et al, 2004) as the 'Access Paradox' where an increasing amount of information is available in electronic format, but that users are unable to find it because they don't have the appropriate information skills.

E-literacy at the Institute of Education

Twenty years ago, in 1984, Norman Beswick wrote:

> "The skills of a cook are important, but, as Mrs Beeton told us, before cooking one's hare, it is important to catch it. Until we have articulated to our teaching colleagues why the library is important to them in everything they do, it may well be that we are standing in the kitchen before we have done the shopping" (Beswick, 1984).

Norman Beswick was Librarian at the Institute of Education from 1978 to 1986; he fully understood the importance of grasping every opportunity to spread the word and published widely, particularly in the field of school librarianship. Sadly there are times when it seems that little has changed and many librarians bemoan the difficulties of persuading teachers and other academic colleagues of the importance of libraries in the learning process. Librarians at the Institute of Education try to take advantage of every opportunity that comes their way, and create new opportunities, to emphasise the library's partnership with teachers.

Opportunism

The aim is to meet every new student at an Induction session which provides an introduction to all aspects of Information Services (Library, Media and Computing Services). An introduction generally takes between one and two hours depending on the

needs of the group, with some groups, particularly initial teacher education students (PGCE), being offered a hands-on session which includes basic ICT and information literacy skills.

Wherever possible students are provided with additional information literacy development opportunities as part of their course. These are seldom embedded in the true sense of the word, but they are generally at least timely. Evaluating resources is increasingly a major concern for academics as well as students, so this is sometimes a good way in to embedding information literacy into courses. On one recent occasion the library was asked by a course leader to provide a series of four sessions on search strategies and use of electronic databases because student feedback had suggested this would be helpful. The fact that librarians had suggested such a strategy for a number of years did not seem to have had any impact.

Library staff have been involved in a number of professional development courses for teachers, but it is unusual to be allocated sufficient time to do more than present an overview of resources and services along with the complexities of passwords and our individual classification scheme (London Education Classification). A recent face to face version of an online training course provided an opportunity to meet with 40 students, of whom nine were librarians, to discuss information literacy in the context of e-learning.

Another opportunity which has recently presented itself is a focus on Internationalisation. With students from more than 80 countries studying at the Institute of Education, many courses have a strong international flavour. The Institute's strategic plan aims to increase the international element of individual courses. The Library is therefore offering support to course leaders who need to update reading and resource lists. Providing support in search methods and the use of appropriate databases also, of course, provides an opportunity to academics to update and enhance their basic information literacy.

Research projects
Membership of the Institute's Learning and Teaching Committee provides opportunities for involvement in new developments across teaching programmes and the Student Services Librarian is now also a member of the TQEF (Teaching Quality Enhancement Fund) projects steering group. TQEF funding is distributed to Higher Education Institutions by the Higher Education Funding Council for England (HEFCE) to support implementation of Learning & Teaching Strategies.

The first funding the library received for an information literacy project was actually provided internally by the then Dean of Research. Small grants of £1,000 were offered to academic staff to provide support for research into learning and teaching. As Academic Related staff, librarians challenged the status quo by applying for a grant and were delighted to be awarded one. The project explored the role of information literacy in the professional development of new teachers. This topic was chosen

because of concerns that poor information literacy of students at all levels is self perpetuating: if teachers don't develop and appreciate these skills they won't develop them in their students.

During the academic year 2002 – 2003, Beginning Teachers (students on the one year PGCE course) were sent a questionnaire, asking about their perceptions of their own information literacy and their own experience of the teaching of information skills. Responses showed that the input of librarians was effective at early Secondary level and at undergraduate level but there are still considerable gaps at Primary level and in Further Education Colleges. For librarians there were no particular surprises in the results, although there were some very encouraging comments from the Beginning Teachers, but the Project Leader was able to present the findings to a group of academics and teachers at an ESCalate Conference, "Reflections on the Impact of Pedagogic Research", organised by the Institute of Education in April 2003 and funded by the Learning and Teaching Support Network (now part of the Higher Education Academy). A brief report of the research was published in *Education Libraries Journal* (Price, 2003).

Library staff are currently working on a TQEF funded project exploring the use of electronic resources at the Institute of Education. The project is still in the early stages and an email questionnaire has been sent to all Primary & Secondary Beginning Teachers (BTs) (about 800 students). The response rate has been good (about 12%) and early results have already produced useful quantitative data. These students will be teaching in schools in September 2004.

Beginning Teachers: responses at Easter 2004

86% are confident or very confident of their ICT skills
67% are confident or very confident of their information skills

38% use electronic resources daily
19% use electronic resources less than once a month

Which resources?	Search engines	90%
	Internet gateways	15%
	Library catalogue	92%
	Journal indexes	16%
	E-journals	48%
Awareness of ATHENS		75%

The questionnaire will now be sent to all other Institute of Education students and it is hoped the results will help to improve the induction programme, web pages and other

support for information literacy development. There are also plans to interview teaching academics and support staff to discuss findings and the notion of the "information literate university" using a similar methodology to that used by Sheila Webber and Bill Johnston on their AHRB funded project looking at UK academics' conceptions of, and pedagogy for, information literacy (Webber & Johnston, 2004).

Dissemination through presentations and publications is obviously an essential element of these research projects and helps library staff develop their own expertise and confidence in writing and public speaking. While sharing our research results with fellow librarians is important, we also need to develop a dialogue with colleagues across our own institutions and academics elsewhere. This is often difficult for practitioners who have a service to maintain within the library but it makes a huge difference.

Within the IoE there are a number of groups with specific interests in areas of e-learning. The Student Services Librarian was recently invited to make a presentation to the "ICT and Pedagogy Special Interest Group" where a lively discussion explored the concept of e-literacy in e-learning. The Pro-Director for ICT, an experienced teacher both face to face and at a distance, was clearly challenged by the idea of e-literacy and its implications and recognised that he can either continue to play safe with specified readings, provided electronically, or take more risks in his expectations of student learning.

When challenged, academics do think again about their assumptions and the discussions we have help to shine a light on the differences in our views and often in the language and terminology we use. But in order to challenge the "experts" we need to have confidence in our own abilities and expertise. For some that means asserting our role as a teacher; while others will be happier with maintaining a predominantly librarian focussed role. What really matters is that we are confident about our work in the field of information literacy.

While continuing to work to embed information literacy in courses, library staff are also about to put forward a proposal to offer an information literacy module as part of the Institute's Masters degree offer. The idea has been greeted with considerable interest among academic & library colleagues, but it does challenge the status quo and may or may not succeed.

Introduction to e-literacy at LSE

Developing an e-literacy programme at the LSE is an on-going process that involves working with several different training providers across the School. The growth in e-learning and e-resources has generated an increased demand for new types of training and support. Additionally existing training is being re-branded or updated to meet the evolving needs of academic staff. The evidence from LSE is more anecdotal than IoE, but suggests that the growth in e-learning is helping develop the e-literacy of our academic staff.

Several different providers are contributing towards staff development in e-literacy at the LSE, including:

- The Centre for Learning Technology (CLT) who support staff in all aspects of learning technology initiatives
- The IT Services Training department
- Information Services division in the Library who provide information literacy training
- The Teacher Accreditation Programme offered through the Teaching and Learning Centre.

E-literacy education is made up of several discrete sections as the following diagram demonstrates.

Figure 1: E-literacy at LSE, adapted from Martin (2003)

Media Literacy
CLT workshops, training and documentation

Moral Literacy
CLT workshops, training and documentation

Information Literacy
Face to face & online classes from library staff

Learning & Thinking Skills
TLC Teacher Accreditation & staff development programme

Computer Literacy
Face to face & online classes from IT Services
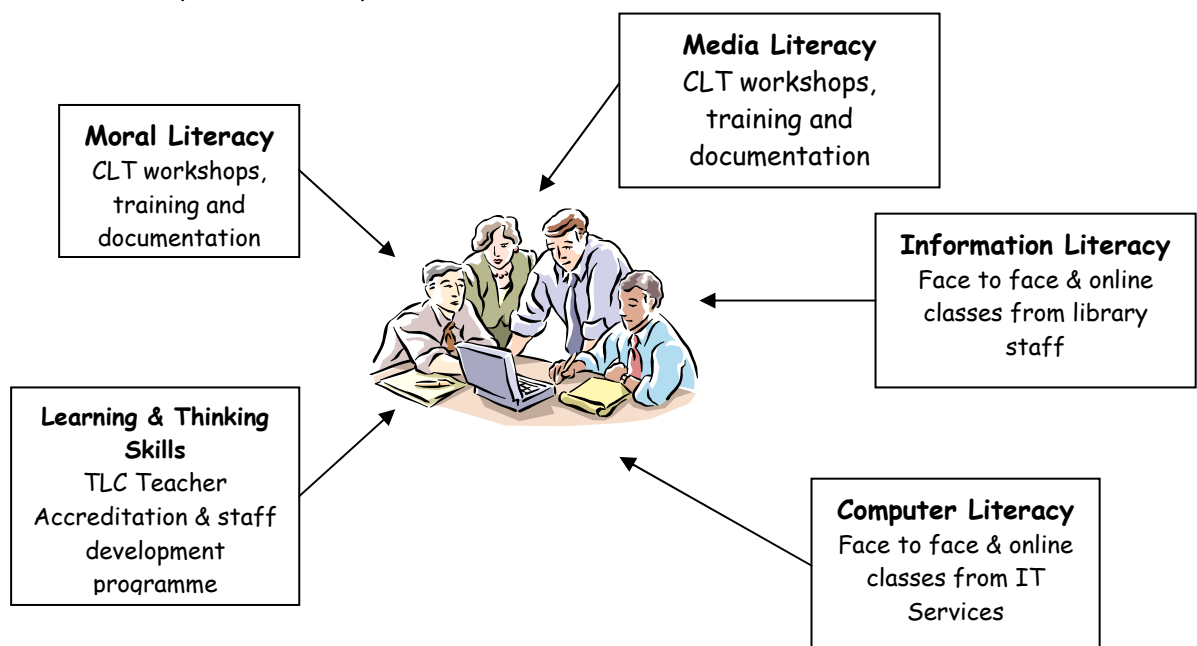
All four providers in the programme: IT Services, LSE Library, the Centre for Learning Technology and the Teaching and Learning Centre (TLC) work together closely. Two accreditation programmes are available; in IT training the European Computer Driving Licence is offered and in TLC the Teacher Accreditation Programme is available. However in two areas the LSE has seen an increased demand for training and support and meeting the demand for the services is problematic.

The need for moral literacy

Moral literacy is characterised by Martin (2003) as the important moral dilemmas that are thrown up by "e-encounters". He describes plagiarism from online sources and downloading of copyrighted texts or music as two examples of these moral dilemmas. At LSE moral literacy is an area where both library and CLT staff are anxious to ensure there is adequate information available to academic staff. In the electronic environment it is important to raise staff awareness of copyright and licensing issues. Unfortunately it seems that copyright issues are often perceived as a barrier by

academic staff, that prevent them from doing what they want in the online environment. The librarian in CLT is striving to challenge this perception and to ensure library staff are perceived as enablers rather than guardians of information.

All academic staff who wish to put a course online are given a printed guide with information about copyright and the virtual learning environment (VLE). The guide gives some basic copyright facts and has specific information about issues such as deep linking to websites and linking to electronic journal resources. Staff are also given information about the electronic course pack service, where scanned readings can be made available from the VLE once appropriate copyright permissions have been obtained. Recently, the CLT carried out a survey to evaluate support services for the VLE and the electronic course pack service. They were particularly interested in satisfaction levels with the services. While satisfaction with overall support for the VLE was very high, staff were less happy with the electronic course pack service.:

Satisfaction with e-course pack Service

	Yes	No	No answer
Series1	13	11	23
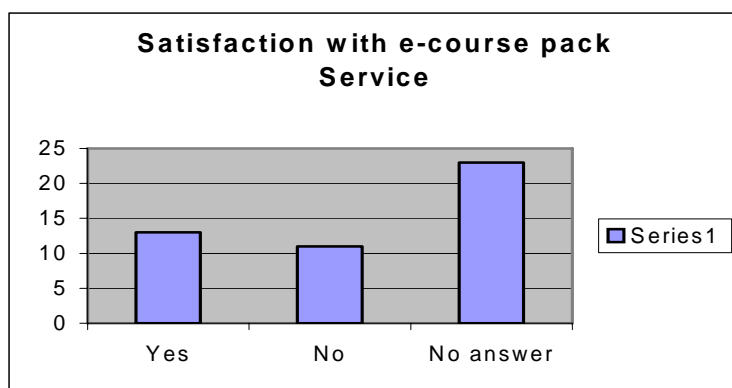
Approximately half of all online courses at LSE have electronic course packs therefore it is unsurprising that only 24 of the 47 respondents answered this question. Of the respondents, just over half (13 respondents) were satisfied with the service and 11 respondents were not. Staff recognised the value of the service to students, as it saved them time and ensured equity of access. However, complaints about the service included:

- Not enough readings available
- Readings not available on time for date required (this was by far the greatest problem cited)
- Images were missing from the readings
- Readings couldn't be included in the pack because they were too expensive
- Staff were disappointed with the quality of the readings – readings marked by students
- Staff would have liked more information about which publishers will not grant permission

Academic staff frequently request to use a variety of resources that require copyright permission, including images, text, video and audio material. However, the findings suggest that staff often think about copyright issues after they have chosen the

resources they would like to include in their course. Increased availability of copyright cleared resources for teaching and learning would help. For example, collections such as the Education Image Gallery or Education Media Online are excellent resources and provide resources that can be used for teaching. Nevertheless, academic staff need to recognise that copyright is an issue they should think about before they start designing their online course. The survey also found that support in this area is very important with 32% of staff requesting copyright advice from the CLT. Although seminars and staff development sessions are run throughout the year staff frequently book one to one sessions with the Learning Technology Librarian. This suggests that services need to be tailored to the needs of staff and be available at point of use.

The need for Media Literacy

Media literacy is the ability to use material in a range of different formats. At LSE there is increasing demand for the use of multimedia resources in online courses. In the recent staff survey cited above, when asked which training sessions would be most valuable to them, "using a range of digital media" was cited as the joint most popular topic. Additionally, from a list of new VLE features that staff would like to use, video and audio material was the joint top most popular feature. Academic staff are creating online resource lists, which differ from traditional reading lists as they can link to any form of online resource. Increasingly staff are requesting copyright permission to include video and audio excerpts from their resource list.

Last year for the first time the CLT ran a staff development session on using audio and video in your teaching. However staff found that there is a real need for pedagogic as well as technical support, with staff wanting to know about how to use these resources appropriately. There are also problems of cataloguing these resources and the CLT have recently developed a media database to ensure these resources are properly managed. Clearly there is a growing need for support in this area and appropriate services will be developed.

E-literacy for E-learning

CLT and library staff have observed that by developing online courses the information literacy of academic staff has improved. Staff are encouraged to use existing library resources available through subscription databases. Part of the training they are offered shows staff how to identify library resources. Therefore they often discover new resources and learn more about the library. The following example demonstrates how this might happen:

A member of staff is building an online reading list for their WebCT course and is encouraged to link to the articles available in electronic journals. They are given training to show them how to establish which titles are available in electronic format and then how to establish stable links to the articles. In doing this they discover a number of titles they previously thought were only available in paper format.

However, sometimes, when moving over to e-learning staff do not understand fully the copyright issues that are involved. For example, the CLT provide a copyright clearance service for academic staff who wish to make chapters from books available in electronic format. While staff claim that this service is extremely valuable, when problems occur, for example a publisher cannot be traced, or wants to charge an extremely high fee for permission to reproduce the article, this is perceived as a failing in the service. By offering the copyright clearance service academic staff are arguably 'protected' from understanding the issues. The challenge is to offer the service, but also provide them with enough information to understand how it operates and why it might not always be successful.

Training and support – what works well at LSE?

The LSE find that one to one training and support at the point of need is the most valuable type of e-learning support for academic staff. In this way staff can be offered integrated advice about pedagogy, copyright issues and technical issues, which are often inter-related. However, this model of one to one support is increasingly difficult to support as the demand for the service rises. In response to this in 2004/5 the CLT and the Library are launching E-literacy for E-learning classes as a trial. Staff will be trained in small groups on specific issues relating to e-learning and information literacy. In the past, generic information skills training was offered to staff alongside students. However, staff attendance was generally very low as they were reluctant to attend classes alongside their students. When staff did attend it could be difficult for library staff to manage a session that had a senior professor working alongside an undergraduate student because of their differing needs.

Other ways to encourage staff participation in training and support is through accreditation. At LSE the Teacher Accreditation Programme (TAP) is available to all new lecturers and class teachers. The qualification leads to HEA (Higher Education Academy) accreditation. For the first time in 2004/5 the programme will have a technology strand and staff will be encouraged to attend the E-literacy for E-learning classes.

LSE provide a large amount of documentation and help on the web, but find that to encourage e-learning and e-literacy it needs to be linked to teaching quality reviews and to the promotion prospects of staff.

Conclusions

At both of our institutions, it is possible to categorise some of the approaches that do and don't work. One of the least helpful things to do if you want to change hearts and minds is to criticise your academic colleagues and don't ask them to attend training events alongside students. In general staff training workshops don't work either and this is often because of genuine pressures on time rather than an unwillingness to develop new skills.

What works well for us?

Library staff (particularly those involved in academic liaison) need to maintain a high profile, attending committees and working parties and publishing our research and making it publicly accessible. Professional membership, paticularly of the Higher Education Academy, is also important to maintain credibility and boost our own confidence. We have to be available and we have to be involved in, and happy with, change. We also have to be comfortable working alongside academic colleagues and helping them to achieve success. In order to capitalise on our successes we must spread the word, get out of our libraries and speak at high profile conferences, as well as write and publish.

Dr Jane Secker is the author of *Electronic Resources in the Virtual Learning Environment: a working guide for librarians*. Chandos Publishing: Oxford. 2004. Gwyneth Price is co-author with Claire Drinkwater of *How to find out in education: a guide to information sources*. LISE, 2003

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