# A Study of Information Literacy Initiatives between Secondary Schools and Universities in the UK

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This paper discusses the nature and conclusions of the second phase of a two-part project, CrossEd, undertaken between autumn 2004 and autumn 2005 and funded by the Joint Information Systems Committee in the UK. The study investigated collaborations taking place between secondary schools and universities in the provision of information literacy skilling relating to the use of e-resources. A survey of all university libraries in the UK was undertaken using an e-mail questionnaire to identify the incidence of current collaboration. The data from that survey provided information on the types of collaboration taking place. These were categorised and used to select the survey population of six university libraries for the qualitative study. Data collection was by means of face-to-face and telephone interviews with university librarians, using semistructured interview schedules. Six types of training for school pupils were identified, and the research revealed at least seven distinct positive aspects of cross-sectoral collaboration for school pupils. A fundamental lack of understanding of the respective roles of secondary school and university librarians was evident, and a range of issues to be addressed by librarians in both educational sectors was identified. A strategy for enhancing collaboration in the UK is also discussed.

#### Introduction

Earlier research into the use of e-resources in higher/tertiary education revealed that there was a lack of both awareness of e-resources and information skills for exploiting those resources on the part of undergraduate students (Banwell, 2004). The findings suggested to the authors that there was a strong case to investigate information skilling in schools, and how universities contributed to preparing students for tertiary education. In October 2001, the authors submitted a proposal, which recommended an investigation into the role of university libraries in supporting information skilling in secondary schools in the UK, to the body responsible for funding the initial research, the Joint Information Systems Committee (JISC). As no study had been undertaken into these issues, and given that there was scant evidence in the literature of cross-sector activity, the decision was taken by the JISC in February 2002, to fund a study, subsequently known as CrossEd-1 (Lonsdale; Armstrong and Eyre, 2002). This was initiated in March 2002, and was designed to investigate formal and informal links between the secondary and tertiary education sectors in skills development and transfer, and to determine the need for research into associated areas.

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<sup>&</sup>lt;sup>1</sup> UK secondary school education begins at Year 7 (Key Stage 3; age 11 years); Key Stage 4 begins in Year 10 and compulsory education ends in Year 11 (age 16); the 6<sup>th</sup> form comprises Years 12 and 13 (age 16-18).

A detailed analysis of the qualitative survey was published as a part of the IASL conference proceedings in 2004, and identified the existence of collaboration, its value, and the problems associated with developing a rapport between the sectors (Lonsdale and Armstrong, 2004). It also identified a number of allied fields for research, and recommended that there was a case for exploring existing collaboration in more detail.

This paper reports on a second phase – CrossEd-2 – which began in October 2004 and was completed in September 2005. It presents the findings of the study, delineating types of cross-sectoral activity, its value, and related issues, as well as offering a strategy for enhancing collaboration.

## Aims and Objectives of CrossEd-2

CrossEd-2 was designed to explore in depth the collaborations taking place between secondary schools and university libraries in the UK, and to offer exemplars of best practice. The over-arching aim was to investigate the nature, organisation and value of cross-sectoral activities associated with information skills relating to the use of e-resources.

Specifically, the objectives were to ascertain in each case of collaboration:

- Aims, objectives and rationale of the activity
- Nature and extent of activity
- Which institution initiated the activity
- The staff member(s) responsible for the collaboration within each institution
- Timescale of the activity
- Resource, access and licensing implications of the collaboration for the tertiary institution
- Nature of any evaluation of the activity undertaken by university, college or school.

## Methodology

The study comprised both quantitative and qualitative research, and several methodologies were employed. As two years had elapsed following CrossEd-1, the literature search and review were both updated, with no additional results for the UK and few relating to international developments (e.g. Mittermeyer, 2005; Ellis and Salisbury, 2004).

A new quantitative study was conducted to ascertain incidence of current collaboration, and this comprised an e-mail survey of universities, undertaken using an e-mail questionnaire. The Society of College, National and University Libraries (SCONUL) and the Colleges of Further and Higher Education e-mail lists were used to administer the questionnaire to the tertiary sector. A return rate of 36% was achieved, and the data from the questionnaire survey was analysed using Excel, and the types of collaboration were categorised. Of those university libraries working with secondary schools, 25 (43.1%) had some form of link and 20 of these were willing to take part in the second stage interview. An analysis of the qualitative data from the questionnaires and a range of demographic variables were used to select six institutions for case

studies. The numbers parenthesized below after each quotation from the transcriptions indicate the institution.

Data collection for the primary survey was by means of telephone and face-to-face interviews with the representatives from university libraries, using structured interview schedules, which were mailed to participants in advance of the interview. Interviews were recorded and transcribed for subsequent analysis.

## **Findings**

An analysis of the quantitative data revealed that training in information skills was offered to pupils (60%); teachers (28%); and school librarians (16%). Clearly, collaboration focuses on the pupils and, to a lesser extent, teachers; there is little direct support offered by the university library for school librarians. This is ironic, but also significant, in that it represents a gap between two sectors of the same profession – an issue which is highlighted later on in the analysis of the qualitative research.

### Forms of collaboration

A central aim of the research was to identify the forms of collaboration, and six distinct types were identified. In many cases one university adopted more than one approach, however approaches are discussed individually.

Facilitating access to e-resources in university libraries For the majority of university libraries, the most straightforward service that can be offered to non-members is facilitating access to the print or e-resources, and indeed this was shown to be the most prevalent collaboration with schools. The precise nature of access differed from institution to institution, and usually involved an arrangement whereby the school pupils (and occasionally their teachers) were granted external membership.

For a number of years there has been a Widening Participation scheme in operation in the UK. The main aim of this is to:

promote and provide the opportunity of successful participation in higher education to everyone who can benefit from it... Widening participation addresses the large discrepancies in the take-up of higher education opportunities between different social groups... [working] with others to raise aspirations and educational attainment among people from underrepresented communities to prepare them for higher education... and give them opportunities to return to learning throughout their lives. (HEFCE, 2006).

In certain instances, where a university sets up a Schools Liaison Unit to work with a group of partner schools as part of the Widening Participation scheme, membership would be offered to the schools:

"The Schools Liaison have a Widening Participation group, just a small group, but it's got a national profile and the work they've done on Widening Participation ...is to make contact with schools which are potential feeders coming into X. They approached us about 6 or 7 years ago to ask if we could contribute to a programme – something on using the library and information

retrieval as part of a number of other events that they would be undertaking. We said yes, that's fine, and they really left it up to us to determine what to do." (2)

This response validates a finding relating to Widening Participation from the CrossEd-1 study: "I am offering a reduced external membership to partnership schools in order to develop links with them" (6)

The issue of defining who may or may not have access to a subscription-based e-resource is governed by the licence – which should be, but often is not, negotiated between the licensor and the licensee, especially with respect to the definition of user groups. Consequently, there is a potential problem associated with facilitating access to e-resources for schools. In those instances where membership is offered, it would appear that this is usually by treating either groups or individuals as walk-in users, although some university libraries hesitate to accept this interpretation for the former:

"Actually involving a whole group of students, I think that's something that even a walk-in access arrangement wouldn't do... I think the walk-in access clauses are targeted at individuals" (2)

Licences for e-resources are particularly sensitive to the addition of non-academic groups, especially those who may be engaged in commerce or business (British university libraries might well offer an information service to specific commercial companies). However, the library may legitimately argue that school pupils and teachers, whilst constituting an additional user group, do not fall within this sphere:

"Most databases say they are accessible to those who have additional business with your organization. Well, I would include  $6^{th}$  formers amongst those, and clearly they are not in it for commercial gain" (1)

Temporary membership is another means of facilitating access, although the licensing agreements for some e-resources may not permit such as extension:

"We are moving towards the situation where we will give day passwords to students so they can access those databases and e-journals if they will allow it" (1)

However, if the university is running a formal course, such as a Saturday school (see below), then the library will be able to register the pupils and they will be entitled to use the licensed e-resources:

"If they are registered at X for a course, then they qualify. That's very different from a walk-in visitor who wouldn't get an X log-in. We do have visitor PCs which don't require a log-in and people can use those resources which are allowed through open access." (3)

University libraries provide access for pupils to a wide variety of e-resources which are available under licensing agreements, and typically these included bibliographic and full-text databases, aggregations of e-journals, and reference e-books (there was little evidence of the use of e-monographs and textbooks as at the time of the research the university libraries had only recently acquired substantive collections of e-books). Each institution provided access to free resources, including their OPACs and the e-resources section of their web sites.

To complement their provision of e-resources within the university library collection, all respondents provided *ad hoc* information literacy skilling at a variety of levels. This could include demonstration of the use and value of the OPAC, or offer guidance about e-resources types and the appropriate search strategies for their exploitation.

Day programmes and summer schools Organized day-schools and summer-schools comprised the most common form of collaboration, and the longest established (in some cases for up to a decade). On these occasions, pupils and teachers were invited to visit the university to experience different aspects of undergraduate life. As part of the programme, the university library will offer a course on information skilling, typically of one to two hours duration. These might take the form of general programmes associated with Widening Participation or be linked to special events such as National Science Week. Often, programmes focus on a subject area. A range of individuals from across the university and within the school will normally be engaged in the planning and organization of these visits:

"We've got people at [senior subject librarian] level invited to Faculty Boards for Teaching and Learning, and that can quite often be where these issues come up. In fact this week my Faculty Board, which is Joint Sciences and Life Sciences, had a meeting on school liaison and what they are doing, plus a suggestion for an annual science day." (4)

In one university, the programme comprised a series of events at Saturday schools, which were held over the school summer holidays. In other institutions, the programme would run over a single week or weekend. Commonly, the events were targeted at 6<sup>th</sup>-formers and in one case involved over 50 schools. Frequently, the course or subject teachers, or the head of the 6<sup>th</sup> form, would be involved in the planning and training. Significantly, there was no participation by the school library staff. There appears to be a range of different course structures used, even within one university:

"we talk to teachers and teachers are responsible for the induction, the 'B' model would comprise a little talk from the librarian and then the students are taken up to the library... there is going to be a 'C' model..." [a subject-oriented model involving collaboration between the History department of the University and the school. This is discussed below.] (4)

The nature of information skills training differs markedly. During the visits access is provided to print and e-resources and, as with the provision of general access, there is frequently individual face-to face support (e.g. use of OPAC, library web pages, selected e-resources). In several institutions, however, a programme of more formal training was established, which included basic induction training, and also the use of information skills workbooks designed, either by the university library alone or in conjunction with the teachers of the school: "They've got a basic information leaflet and then as part of the library session that they actually do here with library staff we have an information skills book which takes them through looking up things in the catalogue, finding things on the shelves and we use Library of Congress classification so that's probably different to what their school uses, they mainly use Dewey, so that's quite different to them. The building's a lot bigger too than school libraries. They have to negotiate their way around the shelves and things like special collections, periodicals, things like that might confuse them so they are given a kind of basic subject guide. That's the guide we would give them to take them through the very basic skills of using the catalogue and where to find things on the shelves." (3)

In other universities, the training in the use of e-resources commonly addresses the ability to construct strategies for locating information and the ability to search for and access information. There is little evidence that pupils are offered any opportunity to acquire higher-level information literacy skills such as evaluation, organization and synthesis – as defined by SCONUL and CILIP (SCONUL, 2003; Armstrong *et al*, 2004).

An exception to this was reported in one university where the university librarian offered special sessions for Year-8 gifted children:

"I've done a session with Year-8 gifted and talented, looking at different ways of using the Internet to find information. It has to be Internet-based, it can't be print-based. We talk about search engines where you go if you want to find information, and the pros and cons of using search engines. We also look at things like how a URL is constructed... at that sort of age, it is as much about giving them time to explore so they can start to build their own skills and thoughts about it, as it is about telling them about the various resources." (1)

A characteristic feature of all these programmes is the use of student mentors or 'ambassadors' – university students who will have visited and developed a rapport with the schools, and who will support the work of the teachers and librarians. The university library will endeavour to ensure that the mentors understand the significance of the library and its role in resource provision:

"Our students are trained to work with young people and accompany them on these visits, and some of them have been coming to the library with these groups for a couple of years, and are very good." (1)

Informal, and sometimes anecdotal, feedback from both the school and the university library suggests that the courses frequently led to increases in an individual's access to the library when the course ended:

"When  $6^{th}$ -formers have been here with the tutors, they sometimes come back on their own which is splendid. Sometimes they make themselves known and sometimes they don't; we do encourage them to come in in a structured way first because they get more out of it." (1)

Subject-based collaboration More elaborate forms of collaboration focused upon a particular subject field or discipline (e.g. history, business and management, sociology) are also evident. These tend to involve innovative teaching and learning methods and are designed to introduce the child to a broader range of information literacy skills:

"a project [has been] agreed with the History Department involving the library, which should make the transmission between 6<sup>th</sup> form and the university better/easier for history students. There will be much more focus upon learning outcomes and the involvement of academic staff and librarians, and there will be formal evaluation." (4)

The aims of this project are to introduce pupils to the specialist resources relevant to students of history, thus creating a context in which all aspects of information literacy skilling (using the SCONUL model) can be explored; and to expose the pupils to the types of teaching and learning methods that they are likely to encounter in universities.

Another university developed a subject-based course with similar aims for Year-11 pupils who were considering applying for courses in business and management studies. A comprehensive information literacy skilling programme was devised to extend their ability to use e-resources. The library staff believed that school children, even at 6<sup>th</sup>-form level, are not used to finding keywords and describing searches, or – particularly – to evaluating, synthesizing and presenting search results, skills which they perceived were lacking in their 1<sup>st</sup>-year undergraduate students.

The programme was designed to use scenarios as a context for a mini-case study of a current international news item:

"We gave them a small presentation before hand, but we tried to keep that to a minimum to make sure there was plenty of time for them to go and do it themselves. But we did talk to them about the best way of finding sorts of information and how to use e-resources...(2)

The sessions were designed using written instructions about what was expected and how they should present the results. Students were using searching skills which they felt they had, but the exercise allowed then to refine and hone these skills to answer specific questions in a group setting:

"The students had to work collaboratively with each other to find out answers, or make up opinions, or evaluate websites identified by us, and look at information they were retrieving from the internet with a critical eye and then assimilate that information and feed it back at a plenary session at the end... We changed ... from purely worksheet-based training to something which was more scenario-based. They were looking at a sort of idea of Macdonald misleading the public on the nutritional values of food. A group nominated somebody who would feed back, somebody who would take notes, somebody who would chair their group, and that was quite an exercise for them - it didn't appear that they had been doing work like that in the classroom". (2)

**Developmental programmes** The majority of interviews focused upon the training programmes for 6<sup>th</sup>-form pupils. In one instance only, a university library had planned and run a project which was designed to develop information literacy skilling for young people aged 11 to 18. The developmental programme began in Year 7:

"We have a little exercise, we only have a very short amount of time with them which is a bit of an obstacle, or a challenge... We talk about the school library to start with, and then we get them to walk around the library and find out what people do in libraries. They know more or less what libraries have in terms of materials and so on, but just looking at the different sorts of activities people do in libraries and they have a check list and we ask them to add extra comments. They do it when there are lots of students around. They go around in very small groups with either one of their student mentors or school mentors because obviously they can be quite disruptive. We get very good feedback from that. ... You don't get a lot at the time because they are overwhelmed by the scale of it. Then we sit them down and talk about what they've seen...

The same students come back in year 8. Before they leave after their year 7 visit we say when you come back and see us next year we'll do some work on the computers. We get them to work with the RDM virtual training suite: [resources] where the language is simpler and the approach is simpler. We get them to work through one of those depending on their subject interest, looking at where you find information and what things surprise them in that process.

It's interesting because they say you would expect to get information from a library and from books but they wouldn't necessarily think to ask their friends or family or from magazines. We have quite a high staff/pupil ratio in this. They will have their own mentors and usually 2 library staff working with a group. This can be a group as small as 7 or 8 kids and we go round and work with them to help them think about the information they might be finding. It's information literacy. It's recognising the need for information and the fact that it's not always going to be written down. They will bookmark some websites that they are directed to through the suite, through the tutorials and then go and have a look at some of those." (1)

Year 10 pupils are given specific training on using electronic databases and other eresources. Following a formal talk and demonstration, the pupils use a national database called 'Course Discover', which is about choosing courses in Higher Education, to test skills in an area of particular interest to them. To complete this developmental programme, the university runs a summer school for  $6^{th}$ -formers, in which they explore and evaluate examples of different search engines and subject gateways:

"We talk about search engines, and how nefarious organizations can wrap information up to make it look acceptable. Then we look at the subject gateways through that site from Heriot-Watt: Pinakes and they can choose to look at the gateway for their subject area ... they are absolutely cock-a-hoop because they haven't come across it before." (1)

It is worth noting that teachers, teacher librarians and school librarians were present during the  $6^{th}$ -form programme, as it was conceived as a part of the school's study skills induction.

Remote training in information literacy skills Many British universities are now creating and providing access for their students to online information literacy skills packages. National courses of instruction on topics including searching and evaluation, such as Tonic: the online Netskills interactive course developed with the support of the JISC, are also available. The 'Online Tutorials, UK' page of the Information Literacy website<sup>2</sup> lists range of institutional and national packages. Our research revealed that in several cases, the librarians perceived the potential of making available these, or – as the preferred approach expressed by respondents – specially-tailored, packages for school pupils:

"One of the things we have developed, where we could support the schools without us doing anything at all, is an information skills tutorial which is freely available to anybody and is on our web pages. As far as I'm aware we've never said to schools that this exists, but it's certainly there for anybody to use if they come to the library web pages" (3)

Although not interviewed as a part of this research, one rare example of a specialist package comes from the School of Conservation Sciences at Bournemouth University. A Webbased 'Stepping Stones 2HE' information skills programme has been developed for prospective students who are sent the URL<sup>3</sup>. The aim of the programme is to help students become confident, independent learners, and the web site contains a section about studying at University, including

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<sup>&</sup>lt;sup>2</sup> http://www.informationliteracy.org.uk/Resources\_By\_Sector/HE/Tutorials\_uk.aspx

<sup>&</sup>lt;sup>3</sup> http://www.bournemouth.ac.uk/conservation/steps/howto.html

information about study skills, and importantly, the Course Team has provided an introduction to students' studies to help them begin life at university.

Seminars for school librarians It will be evident from the results of the quantitative study and the preceding discussion that school librarians play little part in the planning and delivery of collaborative courses; nor are they often the recipients of information literacy skilling. Two institutions, however, do offer a modicum of support designed to create an awareness of the nature of information literacy skilling within the university. These commonly take the form of *ad hoc* seminars and include teachers as well as school librarians:

"We invited groups of teachers to explore the library's holdings...discuss our information literacy skills programme" (4)

"One of the most successful ventures has been the ad hoc seminars which my staff have held with local school librarians... offers insights into higher education provision and practice" (2)

## Issues arising from the research

One of the objectives of the study was to determine how collaborations were initiated. Whilst it is clear that some came about as a consequence of formal programmes such as Widening Participation, it was intriguing to note that most of the other forms of collaboration were a result of personal and informal initiatives on the part of the university library staff. For example, one of the librarians was a school governor and another was married to a head teacher of the school concerned. There appears to be little evidence of a cohesive policy framed within the school, the university or the education authority upon which ongoing programmes of collaboration might be developed or maintained.

None of the university libraries undertake formal evaluation of the collaboration – and the respondents indicated that this was as a consequence of lack of time and resources rather than a reflection of need. It is particularly surprising to note that the university library activities which constitute a part of Widening Participation appear not to be monitored or evaluated as a part of that scheme. Given the potential impact of this skilling on the development of information literacy programmes within the school and its contribution towards raising the perceptions of pupils about university life, the lack of evaluation is of especial concern. Equally, there is no evidence of any feedback from the school sector, which is similarly disappointing. One university librarian spoke of the need for "a joined-up approach" when reviewing such activities.

A group of issues surfaced that have to do with the perceptions which university librarians have of the school's role in information skilling. University librarians believed that schools should be, but are not, preparing incoming students with the requisite knowledge of e-resources for tertiary education:

"I doubt if there is an explicit knowledge of information skills, and types of e-resources are not embedded in the list of skills." (4)

"I would expect ICT capability but nothing more" (3)

"I think it would certainly be useful for us to know what type, and what level, of skills students were likely to be coming in with as a result of changes in the school curriculum; and we don't really know much about that." (2)

There was an understanding that, probably, school librarians in England and Wales were experiencing problems similar to university librarians in their endeavors to develop information literacy within the school (given developments in integrating information skills within the curriculum in Northern Ireland and Scotland, this view would not be valid across the UK): "From the conversations I've had with school librarians, and also seeing what they are being asked to do through job adverts, I would have thought that most school librarians are covering information literacy probably throughout the school or that is certainly the intention. How much they are able to achieve I don't know. It's whether they've been able to bring Heads of Department on board to see if it can be integrated into the curriculum. They suffer from many of the same sort of problems that we do. Getting the teachers to actually see the relevance, and the fact the librarian has a role in [information skilling], because I still think that is something we fight against with teachers." (1)

There was a belief that school and university librarians have different perceptions of the requisite information literacy skills. To some degree, this is a reflection of the lack of communication between library staff in both sectors, and a failure to understand their respective roles in supporting information literacy, as is shown by some questions posed by respondents during the interviews:

- How much do school library staff know about e-resources?
- How much do school library staff know about the level of provision in universities?
- Why aren't school library staff doing more information skills training?

Many school librarians might, however, take issue with the view expressed by one university librarian, which suggests that they have little involvement in delivering information skilling: "But I think we have to get the school librarians talking about information literacy and making sure that we can make appropriate the [work] that they do." (5)

It was notable that almost none of the interviewees mentioned school library staff as part of their programmes with secondary school children, although several do have specific seminars to make local school librarians aware of the university's resources. This lack of involvement was also reflected in the analysis of the quantitative data which, as stated above, revealed that training in information skills was four times higher for pupils than for school librarians. Arrangements for the planning and delivery of courses are almost invariably made between secondary school teachers and the university library. The following questions drawn from responses made by university librarians demonstrate further the concern to develop a closer rapport between the sectors:

- How can communication between the school and university sectors be improved?
- What are the most effective ways for the school and university library to co-operate?

One librarian highlighted two potential issues, which account for lack of involvement of school librarians:

"I personally am a strong believer that the school librarian ought to be delivering information literacy ... We certainly try and work with school librarians. Of course it is almost impossible to get them out of their school libraries – being one man bands. I think it's a real issue because I don't think they have the status in the schools that they ought to, to give them the time to do things." (5)

#### Benefits of collaboration

Another aim of the study was to investigate the views of the university librarians on the value of the various forms of collaboration. There was a positive response to the benefits that could be derived from enhancing cross-sectoral skills planning and delivery, and the subsequent collaboration and involvement of university library staff in skills programmes for school pupils. The values expressed by respondents matched those identified from the quantitative survey of university librarians which was undertaken as part of CrossEd-1 (Lonsdale and Armstrong, 2004). They are summerised and can be grouped as follows:

## **Influencing work in school**

- enhancing performance in the school
- pupils encounter teaching and learning methods adopted in tertiary education
- exposing pupils to large resources of the university sector

## **Conditioning for transition to tertiary education**

- encouraging pupils into tertiary education
- easing the psychological stress of moving from secondary education to tertiary education
- improving public relations

#### **Influencing work in university**

- offering pupils entering tertiary education a more level playing field if some instruction in the use of e-resources were done in school
- facilitating greater and more appropriate use of e-resources in undergraduate and postgraduate education
- involving university library staff in the collaborations results in a better understanding of the needs of new students.

"It creates a closer partnership with the university. There are people from all parts of the university bombarding schools with visits and information, it's quite a challenge for the university to come across as an organisation that actually knows what all its various parts are doing. I think it helps the schools to encourage and talks sensibly to the kids about going onto higher education. It gives them a starting point for that and hopefully it raises aspirations and expectations. Just in terms of materials it gives teachers access to a much broader range of resources... For the [library] staff that have worked with them. I'm quite sure, it helps us to understand just where our students are coming from I think. It raises the profile of the institution with the school – we're talking about applications and conversion." (2)

#### Conclusions

The advantages of secondary and tertiary education working together in a coordinated way to develop information literacy skills across the sectors has been promulgated in several major UK educational and library policy document. The CILIP publication, *Start with the Child*, notes:

The development of information literacy skills needs to be synthesized... FE and tertiary education have key roles to play. Approaches need to be co-ordinated and strategies integrated. At present... few colleges have an awareness of how information skills have already been taught to their students. Different approaches at different levels fail to build on past achievements. Until there is a consensus approach, libraries will fail to realise their potential in spreading mass information literacy. (Start with the Child, 2002. 40-41)

The significance of pupils working in different educational environments outside of the school was also emphasised in the 14 to 19 agenda (Department for Education and Skills, 2002). It underlines the need to centre on individualised learning, and the concomitant necessity of building appropriate learning packages with associated skills training to satisfy the individual needs of the student. Implicit in this policy is a requirement for institutions representing the different sectors to explore issues of transferability of skills.

Whilst only a small incidence of information skilling across the school and university sectors in the UK was identified in the research, the study revealed that this is viewed in a positive light. A variety of types of collaboration exist in which innovative practice takes place, which, characteristically, are *ad hoc;* and there is little evidence to suggest that the programmes conducted by the university libraries influence the development of an information literacy programme within the schools. The existing study was conceived to investigate the nature of collaboration within the university sector and, because of restraints in time and resources, it was not possible to extend it to embrace perceptions held within the schools. It is felt that this is an area worthy of further research.

The study revealed that university librarians are strongly of the opinion that collaboration offers a range of benefits for the pupils. Some benefits pertained to the general orientation of the prospective student to the educational processes to be encountered in undergraduate life, others relate specifically to increased knowledge of e-resources and the acquisition of associated information literacy skills.

The nature of collaboration has been shown to be *ad hoc*, and there would appear to be a need to develop a coherent national policy addressing cross-sectoral needs. In 2002, *Start with the Child* indicated that "CILIP's Policy Action Group has already identified the need for an increased focus within the library sector on information literacy as part of a National Information Policy" (Start with the Child, 2002. 41). Although this Policy (CILIP, 2002) had been in place for three years at the time of the research, it appears to have had very little influence on the development of cross-sectoral activities. Certainly, there is considerable ignorance on the part of both the school and university library sectors as to the nature of information skilling within each other's establishment, and to their respective roles in supporting pupils. Divisions exist, both between the two education sectors, and also within the Department for Education and Science,

where different sections are responsible for libraries, information and communications technology, and curriculum development. Consequently, a more 'joined-up' approach for bringing together the various parties would seem to be called for – a strategy that may transcend CILIP's policy. At present, although there is an acknowledgement of the potential importance of cross-sectoral activity, *national* agenda do not appear to address information literacy skilling *within and across* these sectors, nor do they act as a catalyst to cross-sectoral collaboration. Some steps have been taken recently, for example the JISC is now exploring cross-sectoral activities with respect to e-resource provision. The recent CILIP Community Services Group Information Literacy Group (CSG-ILG) was established for representatives of all sectors to exchange knowledge and experience; and as such facilitates the engagement of the school and universities. It is also responsible for the Librarians Information Literacy Annual Conference (LILAC), initiated in 2004, which has provided a rare forum for several papers on delivering information literacy through cross-sectoral collaboration.

Given the absence of a national agenda and the array of different organizations and bodies representing the school, tertiary education and library sectors, one suggestion which was voiced by the majority of respondents – and with which we would concur – is to hold a national seminar dedicated to the transfer of information skilling 'across the gap'. This is being investigated with potentially interested bodies, including the School Library Association, the JISC, and the CSG-ILG.

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