

## **British librarianship and information work 2001-2005**

### **Information Literacy**

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#### **The rise of information literacy**

Fairly close monitoring of the literature suggests that interest in information literacy grew steadily in UK academic libraries over this period, with the concept gradually ousting the earlier preferred terms, 'user education', 'bibliographic instruction' and 'library skills training' in university libraries and the term 'information skills' in further education libraries. The picture here is further complicated by increased use of the term i-skills in higher education to encompass a range of skills required to work with electronic information.

Information literacy also became part of the preferred nomenclature amongst UK national organisations concerned with libraries (such as CILIP and SCONUL) during this period, although the Scottish Library and Information Council opted for 'Information handling skills' for its generic course launched in January 2004 for the post-sixteen sector.<sup>1</sup> The Museums, Libraries and Archives Council-driven *Framework for the Future* (of public libraries) made sporadic reference to 'information literacy skills', but more frequently talked about access to 'digital skills and services' and 'learner support'. Interestingly, SCONUL retreated from their earlier position of rejecting the term information literacy in favour of information skills during this period, setting up a Working Group for Information Literacy in 2005.<sup>2</sup> Again, information literacy was recently adopted by some national educational organisations (such as Ofsted<sup>3</sup> and the Higher Education Academy<sup>4</sup>) when engaging with the libraries sector. However, the term was scarcely used in the workplace libraries domain: Abell and Skelton<sup>5</sup> pointed out the difficulty of 'selling' the concept in terms of business value and outcomes. It is not yet clear whether and to what extent librarians in other domains will follow the HE example or whether practice will continue to lag behind the new Linnaeans.

#### **Some definitions and frameworks**

How should we define 'information literacy' at the close of this period and what elements does it encompass? We have plenty of material to call upon: if we confine ourselves strictly to the five years of this review and to UK published sources we still find definitions offered by Webber and Johnston,<sup>6</sup> Herring,<sup>7</sup> and the Information Literacy Group of CILIP,<sup>8</sup> as well as frameworks encompassing the key elements as seen by the *Big Blue* (described below) and CILIP again.<sup>9</sup> These offerings are described more fully below:

Sheila Webber and Bill Johnston offered this definition on their information literacy website:

Information literacy is the adoption of appropriate information behaviour to identify, through whatever channel or medium, information well fitted to information needs, leading to wise and ethical use of information in society.

James Herring was less specific but tried to resolve the battle of labels with information skills advocates by insisting that "Information literacy is a broader term, which encompasses not only skills but also attitudes to and motivation for learning."

The *Big Blue* framework for information skills was developed as part of an initiative funded by the UK Universities' Joint Information Systems Committee (JISC) between 2001 and 2002. They avoided the temptation to produce their own definition, preferring to adopt the earlier (1989) version of being information literate offered by the American Library Association:

To be information literate, a person must be able to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information ... Ultimately, information literate people are those who have learned how to learn. They know how to learn because they know how knowledge is organized, how to find information, and how to use information in such a way that others can learn from them. They are people prepared for lifelong learning, because they can always find the information needed for any task or decision at hand.<sup>10</sup>

The Big Blue model focussed on the changes sought in the behaviour of information literate students. The main headings were:

- Recognises an Information Need
- Addresses the Information Need
- Retrieves Information
- Evaluates Information Critically
- Adapts Information
- Organises Information
- Communicates Information
- Makes use of Information
- Reviews the Process.<sup>11</sup>

According to Hilary Johnson,<sup>12</sup> commenting in 2003, when SCONUL established their Task Force on Information Skills they specifically rejected using information literacy as the key term because

The use of the word skills in certain sections of the UK HE scene is problematic, and we certainly feel that skills is too limiting a concept, because we feel real information literacy encompasses a range of cognitive as well as motor skills. However, literacy in some applications has a threshold meaning which we are anxious to avoid.

By 2005 SCONUL had revised their position – the website for their Working Group on Information Literacy now asserted that

Information literacy encompasses library user education, information skills training and education, and those areas of personal, transferable or 'key' skills relating to the use and manipulation of information in the context of learning, teaching and research issues in higher education.<sup>13</sup>

In introducing the CILIP definition, Chris Armstrong explained that “In an attempt to draw a line under this debate – at least for the UK – CILIP has produced a simple definition ...”<sup>14</sup> Their definition was originally published in October 2004 and consisted of 26 words:

Information literacy is knowing when and why you need information, where to find it, and how to evaluate, use and communicate it in an ethical manner.<sup>15</sup>

They explicitly excluded a key element of information-related behaviour, metacognition (or thinking about strategies for finding and using information) because

One might say that an information-literate person should have an ability to be a lifelong learner and to reflect on what they are doing. That is not part of IL ...

In other words, the CILIP definition took a fairly narrow view of 'skills'. Armstrong then asserted that:

The skills, which are listed following the definition, explain in greater detail what it means to be information-literate.

The CILIP offering was a bland delineation rather than a definition and failed to acknowledge the complexity of much forgoing work on information skills development. It is hard to envisage teachers and other educators settling for a definition of literacy that allowed for no gradation between functional literacy and higher order skills. Two decades earlier Carol Kuhlthau<sup>16</sup> was explicit about this point, firmly stating that "Information literacy is closely tied to functional literacy. It involves the ability to read and use information essential for everyday life." As to the claim about the skills then being explained in greater detail, the two pages offered with the definition duly unpacked a list of concepts:

- Understanding a need
- Understanding availability
- Understanding how to find information
- Understanding the need to evaluate results
- Understanding how to work with or exploit results
- Understanding ethics and responsibility of use
- Understanding how to communicate or share your findings
- Understanding how to manage your findings<sup>17</sup>

However, the key element "to develop new knowledge and understanding" received only this single mention, with no amplification. Essentially, we are dealing with the difference between having a broad definition covering the range of concepts, leaving librarians and others to decide what most concerns them for current attention, or a more limited outline which librarians are expected to see as manageable rather than challenging. Although the CILIP approach might be more reassuring, it is, as Lyn Robinson<sup>18</sup> asserted, "necessary to understand the range of topics falling within the boundaries of the discipline, and to decide which of them we wish to support." Put in other terms, the CILIP approach is based on a behaviourist/transmission view of education (commonly encountered amongst librarians in their training role) where the emphasis is on teaching discreet skills, whereas effective information literacy development calls for a constructivist approach. We will return to this issue later.

The SCONUL *Information skills* model was originally published in 1999, but re-presented as the *Seven Pillars of Information Literacy* model in 2004,<sup>19</sup> reflecting its increasing use in university libraries during this period. Their definition (2004 version) saw information skills as encompassing not only study skills

... but attributes of awareness and understanding of the way in which information is produced in the modern world, critical appraisal of the content and validity of the information, and some practical ideas of how information in the real world is acquired, managed, disseminated and exploited.

The model did attempt to build some progression into the process of becoming information-literate. It also referred to the iterative nature of finding and using information, but the model itself did not show where and how this might occur. The *Big Blue* model similarly implied that finding and using information was a sequence of steps. (This linear view of information seeking was, however, directly challenged by Alan Foster.<sup>20</sup>)

### **Re-labelling or change?**

Does the shift in labelling in higher education and amongst policy makers signify a corresponding evolution in understanding about the concept, about what can be done to help information users to become more information literate, or about the librarian's role in these processes? Are the many librarians who still deliver what they call 'information skills' doing something different to the advocates of information literacy? An answer to these questions can be found by looking at the formal education sector, in which information literacy and its earlier formulations have received most attention. Returning to the pioneering work undertaken in British schools in the early 1980s, the preferred term 'information skills' was conceived as encompassing nine questions:

- What do I need to do? (Formulate and analyse need)
- Where could I go? (Identify and appraise likely sources)
- How do I get to the information? (Locate individual resources)
- Which resources shall I use? (examine, select and reject)
- How shall I use the resources? (Interrogate resources)
- What should I make a record of? (Record and store information)
- Have I got the information I need? (Interpret, analyse, synthesise, evaluate)
- How should I present it? (Present, communicate)
- What have I achieved (Evaluate)<sup>21</sup>

If we make a comparison with the definitions and models mentioned above, it can be seen that they have not advanced greatly in vision or specificity. But this is not the whole picture. If we now look briefly at developments in other parts of the World during the review period it is clear that the work has advanced. Leading academics such as Ross Todd and Carol Kuhlthau in the USA and Christine Bruce<sup>22</sup> and Alan Bundy<sup>23</sup> in Australia focused on 'sense-making', creating new understandings, and the iterative and emotional aspects of information-seeking. They helped to advance thinking about the importance of transforming information (by imposing new structures, refining and reinterpreting, and constructing new knowledge).<sup>24</sup>

Looking back at the British definitions and frameworks of information literacy, we see the recurrence of a common problem encountered by education professionals when attempting to translate a set of nuanced concepts or complex reflexive practice into workable projects, usually accompanied by simple diagrams, task lists, and specified outcomes – what Lincoln and Guba characterized as “the positivist incongruencies and inadequacies of merely reliable standards.”<sup>25</sup>

As David Bawden asserted:

- To deal with the complexities of the current information environment, a complex and broad form of literacy is required. It must subsume all the skill-based literacies, but cannot be restricted to them, nor to any particular technology or set of technologies.<sup>26</sup>

In reducing information literacy to simple definitions (CILIP) or to lists of the skills involved in finding and using information, the less tangible aspects of the process are lost, as are the often complex contexts in which the information literate person is expected to operate. Some parts of the library world have tried to go even further: attempting to encompass their work into sets of measurable learning outcomes (SCONUL)<sup>27</sup> which further exacerbates this problem. Information literacy is then turned into a curriculum that the librarian can manage and deliver rather than Bawden's “complex and broad form of literacy” embedded in learning and subject knowledge.

### **Why the focus on information literacy?**

When Bawden reviewed the concepts involved in information and digital literacies in 2001, he concluded that

“Information literacy and digital literacy are central topics for the information sciences. They are associated with issues as varied as information overload, lifelong learning, knowledge management and the growth of the information society ... [but] ... they have not impinged much on the practitioner. Practical implementation of, and support for, these sets of skills, understandings and attitudes, apart from the library instruction setting, has been patchy at best. This may in part be due to the confusion caused by the varied terminologies and meanings ...”<sup>28</sup>

Fortuitously, Bawden did not select information skills as one of his search terms (thus excluding much of the schools-focussed work from this conceptual overview). As a result, his conclusions can be taken as largely sound, but only in relation to higher education libraries in Britain in 2001. How have things moved on?

If the evidence of the attendance at workshops and articles in the professional press offer any guide, librarians took to thinking and writing more about information literacy and its variants in the review period. Why is this? One obvious factor is the enormous growth in the impact of ICT on information communication and latterly on support for learning. There is little evidence to suggest that the expansion in the availability of information through the Intranet demands totally new information skills and competencies on the part of users (apart from enhanced keyboard competencies which, though desirable, are often lacking). Rather, the huge increase in the amount of (often scarcely organised or edited) e-information places greater demands on a range of information-related skills (relabelled as i-skills) that have always been important for students and scholars. In particular, the erosion of traditional methods of evaluating published information through publisher selection, peer review and editorial control, has placed new emphasis on the ability to search systematically, select and reject information, evaluate for authority, credibility and bias, and not plagiarise (knowingly or accidentally!). This in turn has created new pressures on librarians of all kinds to extend, develop and make more systematic their traditional interest in information literacy development.

ICT does not simply constitute a growing burden for librarians struggling with the consequences of the information explosion. The scope for increasingly sophisticated information-handling also offers opportunities for librarians to break out of the strait-jacket of simplistic and linear information skills training, usually based on a sequence of steps from keyword selection to assignment submission, in favour of more nuanced support for all phases of information-related behaviour mirroring the variety of ways in which people learn.

The importance of skills in the formal education curriculum was reinforced during this period by the creation, in April 2001, of the Learning and Skills Council with responsibility for planning and funding further education (post-16 education and training other than higher education) in England, as well as by the Government Lifelong Learning and Social Inclusion agendas as articulated in the *Framework for the Future*.<sup>29</sup> and their strategy for *Widening Participation in Higher Education*<sup>30</sup> which is being pushed with HEFCE funding.

Over the same period we were able to observe (through the changing demand for places at short courses<sup>31</sup>) a spread of interest in teaching and learning by librarians from the original constituency of school and college librarians to health and university librarians, and then to public, government and workplace librarians.

There is clearly scope for librarians to engage more heavily with the challenges of information literacy, but a note of caution should be sounded. For the librarian, getting involved in this work can be seen as a way of securing a recognised role in mainstream areas of teaching and learning,

but the reality is often that their efforts are marginalised because ‘information literacy’ is not recognised as central to the pedagogic concerns of teachers and curriculum managers.

### **Information skills and other options**

We have already noted that information literacy was by no means the dominant label throughout the world of libraries. During the review period, the preferred terms used in other UK library domains, as represented in published work, were:

School libraries and schools library services – information skills<sup>32</sup>

Health libraries – information literacy (especially in dual academic and NHS library services); working with users (especially in the context of evidence-based working); user education

Public libraries – user training; user education

Workplace libraries – client information skills training; other variant terms.

### **A view across the domains 1: schools**

Information literacy (under various titles) may have been taking hold in all areas of library work but the factors that were bringing this about varied and the concerns were not always the same.

Information literacy in schools might be described as a long-established sideline for librarians and a central concern for schools library services. At least three influences could be identified:

- the continuing government-led drive towards enhancing literacy in schools, through such initiatives as the ‘literacy hour’, the literacy initiatives at Key Stages and the introduction of designated Literacy Co-ordinators in schools. Although this campaign pre-dated our period, this was a time of growing awareness of the potential role for school librarians in fostering research skills and use of the library.<sup>33</sup> This period closed with a review by Ofsted (the government education inspectorate) of inspection data collected from visits to 32 schools in 2004-5. The review concluded that teaching of information literacy was rarely effective or coherent and identified provision of a coherent programme for teaching information across the school as one of the areas for development, thus setting the agenda for the next five years.<sup>34</sup>
- the New Opportunities Fund ICT training programme for school librarians in UK maintained schools (as well as their teachers) which ran from 1999 to December 2003. This programme amounted to the only major national in-service training programme so far produced for school librarians.<sup>35</sup> The scope and scale varied because training could be secured through any of a variety of approved training providers. However, some providers concentrated heavily on information literacy (e.g. two of the five modules offered by the Library Association ICT Training Consortium focussed on this area).
- As part of a more general thrust towards schools self-evaluation, the School Libraries Working Group of the Department for Education and Skills (England) commissioned self-evaluation processes for primary<sup>36</sup> and secondary school libraries.<sup>37</sup> This ‘toolkit’, published in July 2004, gave school librarians the means to evaluate, *inter alia*, the library contribution to pupils’ research and study skills, pupil reading and pupil progress in library-based work, as well as the librarian’s contribution to information literacy.
- Similarly, the Scottish Library and Information Council and HM Inspectorate of Education in Scotland produced quality indicators and illustrative case studies for evaluating Scottish school libraries as one of the Self-evaluation series for schools. Information literacy was again covered at various points.<sup>38</sup>

Although many school librarians reported a sense of isolation in professional terms, it is interesting to note that where they did a significant amount of teaching ‘information literacy’, there was convergence round a limited number of models of information skills development. Most practice in British schools was based on one of three models, all of which were published in the decade before the review period:

- *The Big Six Skills Approach*, which was developed in the USA a decade earlier by Michael Eisenberg and Robert Berkowitz<sup>39</sup> and has since been exported widely (it was, for example, the dominant model amongst international schools in Hong Kong). The Big Six was a sequential model based on task definition, information seeking strategies, location and access, use of information, synthesis and evaluation, thus providing a relatively straightforward and logical set of steps for the librarian to use with students. (In common with most other models, the *Big Six* tended to promote a more logical and sequential approach to information seeking and exploitation than even the most accomplished information users actually exhibit.)
- John Herring’s *Plus Model*,<sup>40</sup> which had the merit of being relatively simple to apply and remember, centred as it was on the four themes of purpose, location, use and self-evaluation. These concepts were expanded into a total of fourteen sub-headings.
- David Wray’s *Exit Model*; which offered ten process stages to support reading and writing of non-fiction in schools, from activation of previous knowledge through to communicating information. Uptake of this model in English schools was heavily boosted when it was referred to approvingly in the Key Stage Three *Literacy across the curriculum* guidance<sup>41</sup>.

#### **A view across the domains 2: further and higher education libraries**

British further and higher education libraries certainly became even more aware of information literacy during this period. Several influencing factors can be identified:

- The *Widening participation* agenda in HE called for student recruitment from a wider socio-economic base, linked to greater support for the new students in relation to areas where they might be at a disadvantage compared with ‘traditional’ university students – including information literacy. As a result, many university libraries looked anew at their user education programmes, with potential benefits for all students.
- The growing government-led tendency to focus on skills and competencies as part of the ‘new managerialism’ was also making itself felt in F and HE with the introduction and promotion of key skills (which overlapped at various points with information skills)
- As the ‘Internet generation’ of students who grew up using ICT progressed through into F and HE, concern was increasingly expressed by teaching staff about student over-reliance on Internet access via a search engine and their apparent unwillingness to engage with books and journals. Closer attention to enhancing student information literacy was seen as part of the response to these concerns
- A variety of factors, such as the intensification of institutional focus on student numbers and retention, shifts in the role of teaching staff towards learner support in increasingly ICT-rich learning environments, the huge uptake of e-learning and VLEs and the erosion of the knowledge custodian role of academic libraries, all seem to have contributed to more proactive librarian support for teaching and learning, as well as research in HE. All of these areas are closely allied to most HE definitions of information literacy
- Finally, advances in HE information literacy research and practice in other parts of the World (notably Australia, USA and Scandinavia) provided fresh stimulus in the UK, especially through adoption of models of information literacy and the introduction of the American and Australian literacy standards (which were adopted in some UK universities).

Practical manifestations of information literacy in HE could be seen in the emergence of UK models, (notably the *Seven Pillars* and *Big Blue* models referred to earlier), their adoption by university libraries and, occasionally (for example at the University of Cardiff), institution-wide adoption.<sup>42</sup> Evidence of service impact evaluation linked to proactive engagement via information literacy interventions could also be found: for example, seven of the ten university library teams working through year one of the LIRG and SCOUNL-funded *Impact Implementation initiative*<sup>43</sup> chose to focus their innovative activity and linked impact evaluation on information literacy interventions in their universities.

There was also a gradual cumulation of case studies based on information literacy initiatives in specific institutions, notably Andretta's work at London Metropolitan University<sup>44</sup> and the work of Johnston and Webber.<sup>45</sup>

### **A view across the domains 3: health libraries**

Information literacy in the health libraries arena continued to be driven by the evidence-based working movement, which had already generated skills training for a wide range of health service practitioners on critical appraisal of research reports and on finding research evidence. During the review period the emphasis shifted towards supporting users when interacting with a plethora of e-resources (through, for example, the peripatetic librarians introduced by various health libraries to take information skills training to practitioners) and evaluating the impact of these types of interventions.<sup>46</sup> The influence of the evidence-based approach could also be seen in the way in which health information literacy initiatives were prepared; for instance, when the London Health Libraries Group and the NHSU undertook their *Learner Support* project, their first step was to commission a literature review on facilitating the development of information literacy skills.<sup>47</sup>

### **A view across the domains 4: public libraries**

A belated large scale uptake of ICT in UK public libraries (driven by the MLA's *People's Network* programme in England and parallel offerings in the other home countries), led to growing interest in fostering Internet-related information skills amongst users, partly to try to reduce the dependence on library staff to find information and to help users with basic IT functions. The staff development programmes introduced by public library services throughout the UK as part of the *NOF ICT Training Programme* were expected to cover the use of ICT to support reader development as well as to support users in their use of ICT to ensure effective learning. This programme was intended for all public library staff; and had an added focus on the underlying educational issues through the Educator 'Advanced Role' offered to some staff as part of that programme, which finished in April 2004.

The *Framework for the Future* public library development programme, which was introduced by the Department of Culture, Media and Sport in 2003 and then handed on to the MLA to manage, only made sporadic reference to information literacy skills, but in emphasising the library role in supporting lifelong learning and in combating social exclusion, drew further attention to the importance of information literacy.

Meanwhile, national initiatives aimed at encouraging public libraries to concentrate on promoting reading for pleasure were driven by the Reading Agency<sup>48</sup> and Their Reading Futures (aimed at encouraging younger readers).<sup>49</sup>

In Scotland, the Scottish Library and Information Council and others developed a generic information handling skills course<sup>50</sup> focussing on planning, searching and evaluation, which was

made freely available to public, school and other not-for-profit libraries (and was also available commercially).<sup>51</sup>

#### **A view across the domains 5: workplace libraries**

We have already noted that information literacy was not accepted as a concept in business and industry although some companies took the information skills development of their staff seriously. Judging by enrolments on relevant CILIP courses, workplace librarians were becoming more interested in teaching skills, although their work in this area was usually restricted to providing training focussed on use of specific databases. An interesting exception was the training programme on information literacy for the (UK and US) scientific staff of a multinational pharmaceutical research organization described by Bawden and Robinson.<sup>52</sup>

A similar pattern was detected in Government libraries, where in-house teaching skills workshops were beginning to proliferate, again focussed around Intranet or Internet-specific skills training.

#### **A view across the domains 6: the information research community**

It is reasonable to begin to see this as a research community because one growth area during this period was around UK networking, with the launch of a significant website (*The Information Literacy Place* and related weblog run from the University of Sheffield)<sup>53</sup> and a national annual conference (*Librarians' Information Literacy Annual Conference* organised by the Information Literacy Group of CILIP). There was also evidence of growing awareness of international research on information literacy, with papers presented at various international events by UK researchers and with the commissioning of relevant research literature reviews.<sup>54</sup>

Turning to the research itself, this was an interesting period for schools and for higher education. A major qualitative research project conducted in Scottish schools looking at *The impact of the school library resource centre on learning*, naturally with a heavy focus on information skills work, was published in 2001,<sup>55</sup> and Sheila Webber and Bill Johnston began their three-year study of *UK academics' conceptions of, and pedagogy for, information literacy* in the following year.<sup>56</sup> The Scottish team then followed up their schools work with a study of teachers' confidence in supporting information literacy development in schools.<sup>57</sup>

In the university libraries' domain, in addition to supporting the *Big Blue* development, JISC funded two significant research projects, the JUBILEE Project and JUSTEIS. *JISC User behaviour in information seeking longitudinal evaluation of electronic information services*, based at the University of Northumbria "seeks to predict, monitor and characterise users' information seeking behaviour";<sup>58</sup> *JISC User Behaviour Monitoring and Evaluation Framework* was based at the Department of Information and Library Studies University of Wales, Aberystwyth.<sup>59</sup> The LIRG/SONUL *Impact Implementation Initiative*, referred to earlier, provided the opportunity to explore how practitioner-researchers could be supported when evaluating information literacy and related interventions.<sup>60</sup>

A significant development initiative pursued throughout this period was the *Inspiring Learning for All* programme driven by the MLA.<sup>61</sup> This programme sought to enable museums, libraries and archives staff to plan, deliver and evaluate learning opportunities for service users. The generic learning outcomes and related resources offered as part of this work were beginning to be used by libraries in evaluating the effect of their training and learning support activities.

## Strategies for delivering information literacy

The debate about how best to develop information literacy continued through this period. Some of the old arguments resurfaced, for example generic versus context-specific skills training.<sup>62</sup> The consensus seemed to be that successful programmes made information literacy training specific to the discipline, the profession or the work or study context. However, Robinson cautioned:

This is not to say that generic IL training is not possible. Publicly available on-line information literacy tutorials are largely generic ... whilst some face-to-face courses have been devised for student groups with diverse levels of initial IL skills.<sup>63</sup>

A combination of the generic and the context-specific was seen by some commentators as a good compromise. Andretta, for example, reported on a legal pilot study where students were offered common modules alongside subject-specific modules.<sup>64</sup> Parker and her colleagues suggested that:

The integration of information literacy into the curriculum will progress steadily over the next four to five years in HE, the generic stand-alone course can be regarded as a pragmatic and cost-effective short-term solution.<sup>65</sup>

This links into another long-running debate: the extent to which partnerships are necessary to effective information literacy interventions. Although some librarians offer 'exclusive' information literacy programmes, Robinson concluded from her review of the literature that "in general, effective partnerships between LIS and other players are seen as vital for the success of IL programmes"<sup>66</sup> and this view was confirmed by university library participants in the *Impact Implementation Initiative*.<sup>67</sup>

Other 'old issues' are the importance of relevance and timeliness in information literacy interventions. Markless emphasised the

crucial importance of relevance, timeliness, real needs and consequences ... the importance of these elements in learning is supported by research into adult learning ...<sup>68</sup>

There is anecdotal evidence and some corroboration in case studies,<sup>69</sup> that education libraries were attempting to schedule support at appropriate stages in the curriculum. The enhanced flexibility provided by the emergence of e-learning was beginning to help address these factors across the sector.<sup>70</sup>

An understanding of how people learn is central to effective information literacy work. This key concern was taken up in several works on information literacy published in this period, (e.g. the books by Webb and Powis,<sup>71</sup> and by Martin and Rader<sup>72</sup>). Markless stressed that

It is important to put learning at the heart of session design, choice of activities, facilitation approaches and the librarian's role in information literacy work ... the challenge is to build information literacy programmes on a sound understanding of how people learn.<sup>73</sup>

Interest in theories and principles of learning appeared to be growing throughout this period (again evinced by the CILIP short course uptake).

Perhaps the dominating influence on information literacy in this period was the explosion in e-learning. This led to a severe outbreak of publicly available on-line tutorials<sup>74</sup> and to the gradual appearance of other forms of e-learning using virtual learning environments to support information literacy. Overall, there was growing realism about the advantages and disadvantages

of e-learning to support information literacy, in specific domains such as health libraries<sup>75</sup> or more generally.<sup>76</sup>

The term ‘blended learning’ was used in this period to describe approaches that brought together the advantages of e-learning, face-to-face sessions and other methods. This was increasingly seen as the most appropriate way forward.<sup>77</sup> Booth summarised the experience of e-learning in the NHS by suggesting that:

- It should be one of several learning approaches used to provide blended learning
- It suits some, but not all, learning styles
- It provides a desirable complementary approach to face-to-face learning.<sup>78</sup>

Overall, when looking at what made IL programmes successful, Robinson concluded that:

- They are based on a clear understanding or model of information literacy ...
- They are based on a clear understanding of user needs ...
- There is a balance between the generic and context-specific aspects of information literacy.<sup>79</sup>

### **Conclusion: new skills and knowledge needed?**

Librarians have been working on information skills or user education for years. How did things change in the period under review? The shift towards e-learning and blended learning put new emphasis on the skills needed to support learners in these evolving environments. Part of the response has entailed generating the information literacy models and frameworks described in this chapter.

More fundamentally, the new ways of working required to seriously engage with information literacy have called into question how librarians have traditionally undertaken their teaching role. A transmission or demonstration model may be adequate to hone people’s basic skills but more is required when wider definitions of information literacy come into play. To develop the ‘thinking’ elements of information literacy, librarians need to understand and draw upon constructivist conceptions of teaching and learning. In this approach, learners actively construct new ideas by building and testing hypotheses, through dialogue, and via collaborative activities involving reflection, peer review and active experimentation.<sup>80</sup>

The range of skills required to support this type of learning is diverse and challenging: amongst other things it requires:

- facilitation rather than transmission
- opening up a dialogue with learners
- building on learners’ prior knowledge and experience
- setting problems for learners to tackle (with support)
- supporting reflection on different strategies and processes involved in becoming information literate
- knowing when to demonstrate, or to feed in information

All these are in addition to the more traditional teaching skills covered in some LIS courses (e.g. planning sessions, setting learning outcomes, evaluating teaching).

Robinson provided an overview of the skills needed to provide information literacy development, including working with e-learning materials (designing and customizing), choosing and recommending the best combination of training methods for their local users, high levels of

information literacy and fluency with relevant information systems, including learning environments.<sup>81</sup> In other words:

Information skills programmes provide a means for library and information service staff to engage in continuing professional development.<sup>82</sup>

What will the next five years of continuous professional development bring to information literacy?

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<sup>1</sup> [www.slainte.org.uk/infohandling/index.htm](http://www.slainte.org.uk/infohandling/index.htm) [viewed June 2006]

<sup>2</sup> SCONUL Society of College, National and University Libraries website: [http://www.sconul.ac.uk/activities/inf\\_lit/About\\_us.html](http://www.sconul.ac.uk/activities/inf_lit/About_us.html) [visited June 2006]

<sup>3</sup> Ofsted *Good school libraries: making a difference to learning* London: Ofsted 2006 [www.ofsted.gov.uk/publications/index.cfm?fuseaction=pubs.displayfile&id=4170&type=pdf](http://www.ofsted.gov.uk/publications/index.cfm?fuseaction=pubs.displayfile&id=4170&type=pdf) [viewed June 2006]

<sup>4</sup> Higher Education Academy [www.sconul.ac.uk/news/hea/heapressrelease.pdf](http://www.sconul.ac.uk/news/hea/heapressrelease.pdf) [viewed June 2006]

<sup>5</sup> Angela Abell and Val Skelton 'Intellectual Linking: Making Sense of the Dots' *Library and information update* (4) 1-2 (January/February 2005) 44-5.

<sup>6</sup> Sheila Webber and Bill Johnston 'Information literacy: definitions and models' [Definition posted in 2003] <http://dis.shef.ac.uk/literacy/definitions.htm> [viewed June 2006]

<sup>7</sup> James Herring *The Internet and information skills: a guide for teachers and school librarians* London: Facet Publishing 2004 ISBN 1 85604493 9

<sup>8</sup> Chris Armstrong 'Defining information literacy for the UK' *Library and information update* (4) 1-2 (January/February 2005), 22-25 (p.23).

<sup>9</sup> *op.cit.*

<sup>10</sup> <http://www.library.mmu.ac.uk/bigblue/litreviewupd.html> [viewed June 2006]

<sup>11</sup> Big Blue Final Report 2002 <http://www.library.mmu.ac.uk/bigblue/finalreport.htm> [viewed June 2006]

<sup>12</sup> Hilary Johnson 'The SCONUL Task Force on Information Skills' in Allan Martin and Hannelore Rader (eds.) *Information and IT literacy: enabling learning in the 21<sup>st</sup> century* London: Facet Publishing 2003, 44-52 (p.48). ISBN 1 856044637

<sup>13</sup> SCONUL *op.cit.*

<sup>14</sup> Chris Armstrong 'Defining information literacy for the UK' *Library and information update* (4) 1-2 (January/February 2005), 22-25; p.23.

<sup>15</sup> *op.cit.* p.24.

<sup>16</sup> Carol Kuhlthau *Information skills for an information society* (Report ED 297740) Eric Clearinghouse on Educational Resources, Syracuse, NY 1987.

<sup>17</sup> *op.cit.* p.24-5

<sup>18</sup> Lyn Robinson *Supporting the learner: facilitating the development of information literacy skills* [unpublished report 2004].

<sup>19</sup> [http://www.sconul.ac.uk/activities/inf\\_lit/sp/model.html](http://www.sconul.ac.uk/activities/inf_lit/sp/model.html) [viewed June 2006]

<sup>20</sup> Alan Foster 'A model of non-linear information seeking behaviour' *International Conference on Information Seeking in Context*, Dublin 2004.

<sup>21</sup> Michael Marland (ed.) *Information skills in the secondary curriculum: the recommendations of a Working Group sponsored by the British Library and the Schools Council* London: Methuen Educational 1981 ISBN 0 42350910 1

<sup>22</sup> Christine Bruce 'Information literacy as a catalyst for educational change: a background paper' July 2002 White Paper prepared for UNESCO, The US National Commission on Libraries and Information Science, and the National Forum on Information Literacy <http://www.nclis.gov/libinter/infolitconf&meet/papers/bruce-fullpaper.pdf> [viewed June 2006]

<sup>23</sup> Alan Bundy 'Changing and connecting the educational silos: the potential of the information literacy framework' Paper presented at the Lilac 2005 Conference, Imperial College, Uk 5 April 2005.

<sup>24</sup> Notably Ross J Todd 'Evidence-based practice: overview, rationale and changes' in David V Loertscher with Ross J Todd *We boost achievement: evidence-based practice for school library media specialists* Salt Lake City, Utah, USA: Hi Willow Research and Publishing 2003.

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For an interesting overview see: David Loertscher and Blanche Woolls *Information literacy: a review of the research: a guide for practitioners and researchers* Salt Lake City, Utah, USA: Hi Willow Research and Publishing 2002.

<sup>25</sup> Yvonna S Lincoln and Egon G Guba *Naturalistic enquiry* London: Sage 1985.

<sup>26</sup> David Bawden *op. cit.*

<sup>27</sup> SCONUL *Learning outcomes and information literacy* London: SCOUNL 2004

<http://www.sconul.ac.uk/>

<sup>28</sup> David Bawden 'Information and digital literacies: a review of concepts' *J of Documentation* 57 (2) 2001 218-59 (p. 251).

<sup>29</sup> Department of Culture, Media and Sport *Framework for the future: libraries, learning and information in the next decade* DCMS 2003

[http://www.culture.gov.uk/global/publications/archive\\_2003/framework\\_future.htm](http://www.culture.gov.uk/global/publications/archive_2003/framework_future.htm) [viewed June 2006]

<sup>30</sup> Department for Education and Skills *Widening participation in higher education* London: DFES 2003 ISBN 1 841859680

<http://64.233.183.104/search?q=cache:hkYW3pNndIJ:www.dfes.gov.uk/hegateway/uploads/EWParticipation.pdf+%22widening+participation+in+higher+education%22&hl=en&gl=uk&ct=clnk&cd=1> [viewed June 2006]

<sup>31</sup> Notably the range of short courses on aspects of teaching and learning offered by the Chartered Institute of Library and Information Professionals throughout this period.

<sup>32</sup> Ralph Tabberer claimed that the term 'information skills' "was agreed upon at a meeting of 16 educationists, researchers and practitioners, brought together in 1980 by the British Library Research and Development Department and the Schools Council to discuss overlapping concerns in library and user education, resource management, study skills, educational technology and reading and language development, at all levels of schooling." See: Ralph Tabberer *Study and information skills in schools* Windsor, Berks. NFER-Nelson 1987, ISBN 0 7005 1136 9 (page 1).

<sup>33</sup> Department for Education and Skills *Literacy across the curriculum* London: DfES 2002. See especially module 10 'Using the library/learning centre' The Standards Site

[http://www.standards.dfes.gov.uk/keystage3/downloads/lit\\_xc2\\_023501mod10library.pdf](http://www.standards.dfes.gov.uk/keystage3/downloads/lit_xc2_023501mod10library.pdf) [viewed June 2006]

<sup>34</sup> Ofsted *op. cit.*

<sup>35</sup> Teacher Training Agency *The New Opportunities Fund ICT Training Programme for Teachers and School Librarians: a report on the quality assurance findings in England* London: TTA 2001 Training and Development Agency for Schools website [www.tda.gov.uk/about/mediarelations/2001/20010508.aspx](http://www.tda.gov.uk/about/mediarelations/2001/20010508.aspx) [Viewed June 2006]

<sup>36</sup> Sharon Markless and David Streatfield *Improve your library: a self-evaluation process for secondary school libraries and learning resource centres* 2 volumes London: Department for Education and Skills 2004. Teachernet website: [www.teachernet.gov.uk/schoollibraries](http://www.teachernet.gov.uk/schoollibraries) [Viewed May 2006]

<sup>37</sup> David Streatfield and Sharon Markless *Improve your library: a self-evaluation process for primary schools* London: Department for Education and Skills 2004. [www.teachernet.gov.uk/schoollibraries](http://www.teachernet.gov.uk/schoollibraries)

<sup>38</sup> Scottish Library and Information Council and HM Inspectorate of Education *Libraries supporting learning. How good is our school Self-evaluation series E* Edinburgh: HMIe 2005 ISBN 0 70531065 5 [www.hmie.gov.uk/documents/publication/hgioslsl.pdf](http://www.hmie.gov.uk/documents/publication/hgioslsl.pdf) [viewed June 2006]

<sup>39</sup> Michael B Eisenberg and Robert E Berkowitz *Information problem-solving: the Big Six skills approach to library and information skills instruction* Norwood, New Jersey: Ablex 1990.

<sup>40</sup> James Herring *Teaching information skills in schools* London: Facet Publishing 1996

<sup>41</sup> Department for Education and Skills *Literacy across the curriculum* *op.cit.*

<sup>42</sup> Cathie Jackson and Rebecca Mogg 'Embedding IL into the curriculum' *Library and information update* (4) 1-2 (January/February 2005), 32-3.

<sup>43</sup> Philip Payne and Angela Conyers 'Measuring the impact of higher education libraries: the LIRG/SCOUNL Impact Implementation Initiative' *Library and Information Research* 29 (91) Spring 2005 [Whole issue devoted to the Initiative]

<sup>44</sup> Susie Andretta *Information literacy: a practitioner's guide* Oxford: Chandos Publishing 2005 ISBN 1 84334066 6

<sup>45</sup> Bill Johnston and Sheila Webber 'Information literacy in higher education: a review and case study' *Studies in Higher Education* 28 (3) 2003, 335-352

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- <sup>46</sup> For example, through the *Folio* Course run by the University of Sheffield School of Health and Related Research in 2004-5.
- <sup>47</sup> Lyn Robinson *op.cit.*
- <sup>48</sup> [www.readingagency.org.uk/](http://www.readingagency.org.uk/) [viewed June 2006]
- <sup>49</sup> [www.theirreadingfutures.org.uk/](http://www.theirreadingfutures.org.uk/) [viewed June 2006]
- <sup>50</sup> [www.slainte.org.uk/infohandling/about.htm](http://www.slainte.org.uk/infohandling/about.htm) [viewed June 2006]
- <sup>51</sup> Rhona Arthur, Carol Stewart and Christine Irving 'Bite-sized Learning for all Scottish Citizens' *Library and information update* (4) 1-2 (January/February 2005), 40-41.
- <sup>52</sup> David Bawden and Lyn Robinson 'Promoting literacy in a digital age: approaches to training for information literacy' *Learned Publishing* 15 (4) 297-301.
- <sup>53</sup> <http://dis.shef.ac.uk/literacy/default.htm> [viewed June 2006]
- <sup>54</sup> e.g. Dorothy Williams, Caroline Wavell and Louisa Coles *Impact of school library services on achievement and learning: critical literature review ...* London: DfES and Resource 2001; also the announcement of funding for a research review on information literacy (in higher education) by the Higher Education Academy in December 2005 [www.sconul.ac.uk/news/hea/heapressrelease.pdf](http://www.sconul.ac.uk/news/hea/heapressrelease.pdf) [viewed June 2006]
- <sup>55</sup> Dorothy Williams and Caroline Wavell *The impact of the school library resource centre on learning Library and Information Commission Research Report 112* Aberdeen: Faculty of Management, Robert Gordon University 2001 ISBN 1 901 085 67 8
- <sup>56</sup> <http://dis.shef.ac.uk/literacy/project/index.html> [viewed June 2006]
- <sup>57</sup> Dorothy Williams and Louisa Coles Teachers' use of research information: information literacy, access and attitudes. A report on research funded by the ESRC Aberdeen: The Robert Gordon University 2003. [www.rgu.ac.uk/files/ACF2B02.pdf](http://www.rgu.ac.uk/files/ACF2B02.pdf) [viewed June 2006]
- <sup>58</sup> JUBILEE Project:  
[http://online.northumbria.ac.uk/faculties/art/information\\_studies/imri/rarea/im/hfe/jub/hfjubilee.htm](http://online.northumbria.ac.uk/faculties/art/information_studies/imri/rarea/im/hfe/jub/hfjubilee.htm)
- <sup>59</sup> JUSTEIS Project: <http://www.dils.aber.ac.uk/dils/Research/Justeis/JISCTop.htm> [viewed June 2006]
- <sup>60</sup> Sharon Markless and David Streatfield 'Facilitating the Impact Implementation Programme' *Library and Information Research* 91 (29) (Spring 2005) 10-19; Sharon Markless and David Streatfield 'Gathering and applying evidence of the impact of UK university libraries on student learning and research: a facilitated action research approach' (with Sharon Markless) *International Journal of Information Management* 26 (2006) 3-15.
- <sup>61</sup> [www.inspiringlearningforall.gov.uk/](http://www.inspiringlearningforall.gov.uk/) [viewed June 2006]
- <sup>62</sup> Ann Grafstein 'A discipline-based approach to information literacy' *J of Academic Librarianship* July 2002 28 (4) 197-204; David Bawden and Lyn Robinson *op. cit.*
- <sup>63</sup> Robinson *ibid* p.11
- <sup>64</sup> Susie Andretta 'Legal information literacy: a pilot study' *New Library World* (2001) 102 (7-8) 255-264.
- <sup>65</sup> Jo Parker et al 'Is a standalone IL course useful?' *Library and information update* (4) 1-2 (January/February 2005), 34-5.
- <sup>66</sup> Robinson *ibid* p.11
- <sup>67</sup> *Library and Information Research* 29 (91) Spring 2005 [Whole issue devoted to the Initiative]
- <sup>68</sup> Sharon Markless 'Learning about learning rather than about teaching.' Paper presented at IFLA Glasgow August 2002
- <sup>69</sup> Cathie Jackson and Rebecca Mogg 'Embedding IL into the curriculum' *Library and information update* (4) 1-2 (January/February 2005), 32-3.
- <sup>70</sup> Allan Martin and Hannelore Rader (eds.) *Information and IT literacy: enabling learning in the 21<sup>st</sup> century* London: Facet Publishing 2003, 44-52 (p.48). ISBN 1 856044637
- <sup>71</sup> Jo Webb and Chris Powis *Teaching information skills: theory and practice* London: Facet Publishing 2004 ISBN 1 85604513 7
- <sup>72</sup> Allan Martin and Hannelore Rader *ibid*
- <sup>73</sup> Sharon Markless 'Information literacy: a learning-focussed approach.' Paper presented at *Creating Knowledge III: Information literacy – bridging the gap between teaching and learning* Akureyri, Iceland September 2003.
- <sup>74</sup> Ruth Stubbings and Alan Brine 'Reviewing electronic information literacy training packages' *ITALICS* 2 (1) (2003) [www.ics.ltsn.ac.uk/pub/italics/issue1/stubbings/010.html](http://www.ics.ltsn.ac.uk/pub/italics/issue1/stubbings/010.html) [viewed June 2006]

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<sup>75</sup> Andrew Booth 'E is for e-learning: essential ingredient or artificial additive' *Paper presented at CILIP Health Libraries Group Conference* September 2004.

<sup>76</sup> N Joint 'Information literacy evaluation: moving towards virtual learning environments' *Electronic Library* 21 (4) (2003) 322-334.

<sup>77</sup> Lyn Robinson *et.al.* 'Healthcare librarians and learner support: a review of competences and methods' *Health Information and Libraries Journal* 22 (2) (December 2005) 42

<sup>78</sup> Booth *op.cit.*

<sup>79</sup> Robinson *ibid* p.10

<sup>80</sup> See: JISC e-Learning and Pedagogy [www.jisc.ac.uk/elearning\\_pedagogy.html](http://www.jisc.ac.uk/elearning_pedagogy.html)

<sup>81</sup> Robinson *ibid* pp.14-17.

<sup>82</sup> Big Blue Final Report *ibid.*