

Working towards the Information Literate University

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Introduction

Universities are challenged in many ways: measured, questioned, and criticised. In this paper we develop the concept of the Information Literate University (ILU), and propose that by moving towards the goal of becoming an ILU, universities could meet some of these challenges. We draw on visions of the ILU provided by academics in four disciplines, contributed as part of a research project. We also identify some characteristics of library progress towards the ILU. Our own definition of information literacy is "the adoption of appropriate information behavior to obtain, through whatever channel or medium, information well fitted to information needs, together with critical awareness of the importance of wise and ethical use of information in society." (Johnston and Webber, 2004, 3)

What do we mean by the Information Literate University?

We started developing our idea of the ILU several years ago. It emerged from our concept of the 'information literate person in the changing world', identifying factors in the internal and external world that may require a person to develop his/her information literacy through the course of his/her life. Examples of these factors are: changing personal goals and priorities; the changing legal and ethical framework; and the information culture of the organisation that person works in.

However, personal information literacy is not enough. Indeed personal information literacy cannot be developed fully without support from the external environment, including the environment in which one studies and works. We were stimulated by our understanding of the learning organisation; defined as one which "facilitates the learning of all its members and continually transforms itself" (Pedler et al., 1989: 2) Additionally, UK Higher Education is being challenged to find new organisational and curricula forms which are not based on disciplinary "silos" (Macfarlane and Ottewill, 2001).

If organisations are truly to "learn" then they need employees who are able to identify when they need to learn, who can find out what the opportunities are for learning, and are able to find, use and communicate information as an integral part of their learning. The organisation itself needs to have procedures, policies, rewards, networks and services in place that encourage and enable organisational as well as individual learning to take place. This means people learning from each other, but also people empowered to change how the organisation works and even its goals and outcomes, in the light of new knowledge.

We have developed a diagram of the ILU which, unfortunately, because graphics were not accepted in this volume we cannot reproduce here. This diagram identifies as linked constituents of the ILU:

- Management for information literacy: strategy, resourcing, policy and infrastructure;
- Information literate research;
- Information literate students and graduates;

- Information literate curriculum; acknowledging information literacy as a subject of study, and encompassing learning, teaching and assessment;
- Staff development for information literacy;
- Information literate librarians.

Our vision of the ILU requires everyone in the university become information literate, whether administrators, students, researchers, librarians or academics. Management for information literacy implies rethinking internal communication and structures. It could also mean greater ability to function as a knowledge-creating organisation and more a creative response to an increasingly complex external environment. *Academic peers elsewhere* and the *Wider society* (including employers) are also represented on our diagram as elements in the ILU. An ILU can be seen as a response to a fast changing Information Society.

The main way in which we have been collecting other academics' views about the ILU is through our project on UK academics' conceptions of information literacy (Webber et al, 2005; Webber and Johnston 2005), funded by the Arts and Humanities Research Council. The last question which Stuart Boon, our research associate, asked in the interviews was 'What is your conception of the Information Literate University?'. Of the 80 academics he interviewed (in Marketing, English, Civil Engineering and Chemistry) only a couple baulked at the question. Most interviewees took the opportunity to think beyond their current constraints, to sketch out a utopia (or occasionally, a dystopia) and think about what was needed to achieve change.

Academics and the ILU

Some key themes emerged: more interaction and sharing within and beyond the university, more access, better IT, better learning and teaching. We will illustrate some of those ideas here: interviewees are represented by the name of their discipline and a number between 1 and 20 allocated within each discipline.

There were a few cases where the response seemed to arise from fundamental beliefs about what a university stood for: "It would be unacceptable not to be a university that is information literate" (Chemistry 16) For a few academics this meant that it was a "paradox" to suggest that a university was not an ILU: "Any university, even if it's crap—they have to impart information, they have to be a reservoir of information. There have to be levels of information literacy present. That much is transparent. Otherwise we could not call ourselves universities." (Marketing 04). However, at the other end of the scale, a number of academics felt that not only was their university not information literate, but that it would take a good deal to make it so (according to one academic it would need "a bomb"!)

A variety of possible goals for the ILU emerged. One focus was the student learning experience, for example: 'Just more learning. It's as simple as better, fuller, student learning experience that goes beyond the confines of the classroom and the university, and you know, better research, more informed research.' (English 16) This could reach beyond the university 'to teach students better: to give them, not just more information, but more skills and more confidence they can go out and they can have a good life with.' (English 07)

As an extension of this, all staff are seen as skilled and benefiting from their information literacy in an ILU "A university where everyone, professors, students, professional staff, are all literate with information. I suppose where everyone involved is comfortable with information and its use. Everyone knows how to access it and retrieve it. Everyone knows how to use it for their benefit, possibly for everyone's benefit. " (Marketing 09)

This flags up a focus on increased access and sources, and the skills to exploit this, which was the central idea for some: 'the aim would be to make available every bit of information that is possible to have accessible' (Chemistry 16); 'to be able to use information more efficiently and accurately, of course' (Engineering 18). "I think it was a sort of kind of utopia where people knew [laughs] about internal information and links to external information that would avoid wasting time ..." (Civil Engineering 10) To achieve this version of the ILU you need 'big enough computer labs' (English 01), 'access to a lot of quality databases' (Chemistry 08) and 'the best software packages.' (Chemistry 16) However there is the danger of information overload, so filters are needed too: "It would be nice to have a personal [librarian], wouldn't it? [snickers] Somebody who would literally sit outside your office and stop all this information coming in unless you wanted it, that would be literally speaking, but they could be anywhere in the library I suppose. " (Marketing 18)

The focus was not just on technology and traditional information. For some, the goal would be interaction, communication and knowledge creation. "Flexible access that, um, and access that creates a much more of a synergistic interaction between the academics and the librarians." (Chemistry 18) 'I don't know that I would be doing anything differently..., it would just be that I would have so much more freedom to interact and engage with others.' (English 13)

Some of the visions that we found most exciting talked about development and creativity. An ILU might have a more meaningful and creative relationship with the information society around it – including the local society:

'I might be expecting to work, well, be more involved in the local community, being more obviously tied to a city and a place, and, know more about what is going on, a more holistic view of the university's place, and what's happening across the university. I might be able to deploy all the resources of the library rather than just the ones I have encountered so far, and I would be able to do that in a way that is both meaningful to me, to my students, and also to those from outside who might be peers.' (English 08)

'it's almost like an ideal like an exchange of knowledge and experience and skills, um... and an university that is highly information literate would provide access to information and advice to a much larger constituency than just students [...] an information literate university, I would say, is one that enables those kinds of enriching process of where people interact in many, many unplanned and unlooked-for ways, but you have to enable that... you need buildings and communication methods that break down barriers and help people to bump into one another so that ideas flow.'" (Civil Engineering 16)

Thus, communication does not just rely on a good technological infrastructure, it also implies changes in the physical environment and changes in organizational culture.

One lecturer (Marketing 18) expressed the value to the academic, to the university and to others in having this increased access and interchange of ideas:

"all the different departments would be aware of what is going on in departments and in universities[...] so everybody would be in a sort of loop and would know what is going on, because they would have access to all this information that was around—relevant information, so you would be, I suppose, more up to date, more on the ball, more able to do contemporary research, I guess, because you would know what other people are doing, teaching style, teaching content, you would know what other universities are doing for business studies, for example. So you would have more of an idea, rather than sitting in your little—I am not going to say ivory tower, because that is such an old-fashioned phrase—sitting in your office in your university and being isolated, you'd be in contact with relevant people elsewhere, knowing what they are doing, they would know what you are doing, so it would be the dissemination of knowledge as well. It would be easier and more efficient, so that would be a good objective for the university, because that would help with its image, its PR, its standing, especially overseas as well. People would know what you are doing overseas as well, um, so it would be a way of marketing yourself without actually marketing yourself, um... So I think it would be a good objective to go for, a good goal to go for, an information literate university."

This external role is expressed neatly by another lecturer "an ILU would be one that could communicate with the surrounding society about what it's doing and convince or be convincing about its goals or aims" (English 08)

We asked interviewees what they saw as challenges for the ILU. Some people saw their current resources as inadequate (wanting better "kit", improved networking and more journals). Lack of money was identified by some as a barrier, as was lack of time (e.g. lack of time to become educated for the ILU, or to filter out the good information), though for some the ILU would be time *saving*. However, for others, change in attitude or skill level was key to achieving an ILU. Various stakeholders were identified as needing an attitude change: managers, those in Estates, students, and also academics themselves: 'I think all the technological side is there. The challenge would be changing the way that academics provide teaching or learning provision, or whatever you want to call it.' (Civil Engineering 19)

The visions of an ILU that emerged from our academics were, as with their conceptions of information literacy itself, diverse. They illuminate and extend parts of our own vision of an ILU. In particular, it was after engaging with the data from our research that we realised the importance of the ILU communicating and interacting with the outside community, and of enabling good communication at all levels within the university.

Librarians and the ILU

A number of documents have been produced by librarians identifying ways in which librarians can put information literacy higher up the agenda, or can measure achievement in progressing information literacy institutionally. Examples are the ACRL "Best practice" guidelines (ACRL, 2002) and the Critical Success Factors (CSFs) developed via workshops organised by the Society for College, National and University Libraries (SCONUL) (Town, 2003). Indicators often include: extent and nature of collaboration with academics; the extent to which information literacy is "embedded" in subjects; mention of information literacy in key documents (e.g. Learning and Teaching Strategy); development of an institutional information literacy framework; library representation on key committees. The SCONUL CSFs identify measures relating to staff, resources, students, partners, strategy and pedagogy.

Our own contribution in this area is a list of characteristics (see Appendix 1) relating to three levels of information literacy: embryonic; intermediate and what we term "Threshold ILU" (note that the "ILU" was not a term actually used in the interviews). Characteristics are identified in relation to

Management; Librarians; Approach to learning and teaching; Students; Academics. The lists were developed by Webber, following a visit to Australia in June 2002 which was part-sponsored by the John Campbell Trust. The work was based primarily on informal interviews about information literacy development and strategy with librarians and library managers in five universities (University of South Australia, Adelaide; Queensland University of Technology; University of Queensland; Griffith University; Central Queensland University).

It should be stressed that these universities do not fall into one single category of IL progression, and they were all chosen because they had already engaged with information literacy for some time and had examples of best practice. However, librarians were able to describe past situations, or in other cases the level of advancement was not even in all areas. The characteristics of being on the threshold of an ILU were variously: cited by librarians as things they were proud to have achieved, or which they admired in another programme and would like to emulate, or which formed part of their own vision of a successful information literacy programme; mentioned on institutional websites or observed by Webber during visits. Some data was drawn from articles written by librarians at the institutions concerned, or from presentations at the Lifelong Learning Conference that was part of the same trip. The emphasis on graduate attributes is something which has been important in Australian universities for some time, but it seems to be increasingly relevant in the UK context.

One interesting aspect to emerge was the extent to which key events could move institutions down the information literacy ladder, not just up it. On the whole, one tends to celebrate the catalysts that have produced positive changes. For example, at Sheffield University, collaborative work by academics from different departments on a successful bid for a Centre for Excellence in Teaching and Learning (the CETL CILASS) resulted in greater understanding of information literacy (one of the key elements in the bid) and greater attention at the institutional level (inclusion of information literacy in the Learning, Teaching and Assessment Strategy, which has had beneficial knock-on effects as Departmental versions are developed). However, Webber also heard on her Australian trip of information literacy going **down** the agenda because a new head of Teaching and Learning thought it was "not measurable" and therefore not suitable as a graduate attribute, or of information literacy going off the agenda because it was "last year's theme". It would be useful to investigate these "down" factors more fully.

Towards the ILU

Although the situation may have moved on in the Australian institutions concerned, the characteristics are still recognisable, and certainly there are still not many libraries that have achieved everything in the "Threshold ILU" list. We feel that it can still be useful as a basis for discussion about directions and progress of the library towards an ILU. However, we also realise now that this is not the whole picture. Our AHRC-sponsored research has made us aware of the way in which academics can envision an ILU which extends outside the university, and into all areas of their academic life: teaching, research, administration and professional work. For some, it can extend further, linking the university into society: and not just the society of potential student "customers". Then there are the students themselves, who might well have their own vision of an ILU.

Additionally, there are groups of people who are present in a more shadowy form in both academic and library perspectives on information literacy: namely administrative staff and managers. They tended to emerge from our academics' accounts as, in the main, barriers to IL: people who are failing to provide resources, creating bureaucracy, or blocking innovation. However they are an integral part of a university, and it could be that understanding and acknowledging their needs in an

ILU is one of the keys to achievement. Hou (2004) investigated Sheffield University administrators' conceptions of information literacy. One notable aspect which emerges here, as with other research into workplace information behaviour, is the importance of internal and specialist information, and the importance of personal channels of information. Becoming information literate in this environment requires a different kind of education and support than education for "academic" information literacy. Everyone would benefit, though, from a truly information literate university administration.

Key points that emerge are that an ILU does not depend on library activities, and that changes to achieve an ILU require more than librarians' intervention. If one were to design afresh an organisation that was effective at identifying, locating, organising, using and communicating information between all its stakeholders, then the compartmentalised, hierarchical and often secretive university structure is not necessarily one would come up with. Whilst reorganising university structure and curriculum around the concept of information literacy may seem a bold idea, the nature and purpose of universities are already being questioned: challenged by issues of widening participation, employability, globalisation and financial sustainability.

Whether the emphasis is a pragmatic Government view of producing graduates who are able to engage with the world of work, or Barnett's (1997) vision of "higher education for a critical life" with students and academics willing to be challenged by new perspectives, information literacy can be seen as an important factor. However if the institution itself becomes information literate, with systems that reward information literate behaviour and organisational structures that encourage and enable the sort of access and exchange envisioned by our academic interviewees, then it will be a good thing for higher education itself, and not just for librarians.

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Appendix 1

1. Information Literacy: Embryonic

Students

- The majority of students would not recognise the concept of information literacy, and if they are information literate when they graduate, it is not something they are really aware of
- If interviewed on the subject in their final year, they might see that information literacy is useful, but would agree with their lecturers that it would be difficult to fit it into the busy subject curriculum

Management

- People mostly talk about information literacy "training" and about "giving people information skills"
- Information literacy is not mentioned as such in strategic documents, although some documents may contain statements which could imply interest in information literacy.
- Information literacy is not considered something which is of relevance in marketing the university
- Senior managers confuse IT literacy and information literacy, and are most interested in the former
- The management view of the library is focused on the resources it provides and on quantification of use (number of books borrowed, e-articles read etc.)
- None of the key committees consider fostering information literacy as a key part of their remit

Academics

- Most could not define "information literacy"
- Most are unwilling to give more than an hour of their class time to information literacy, and many will not even give that much
- They assume that students will have certain information literacy knowledge/skills (e.g. the ability to find relevant articles, or to cite material properly) but most do not discuss these knowledge/skills with students. They may think that librarians are giving support or training in these areas, but if questioned they would admit that they do not have a good idea of what the librarians are actually doing
- Most academics would be unwilling to involve librarians in curriculum design e.g. feeling that it was a waste of time or inappropriate
- Librarians are chiefly perceived by them as service providers concerned with specific resources, such as books or e-journals

Librarians

- Librarians are doing their own thing: there is a wide diversity of approach and attempts to coordinate are rather resented
- The majority of librarians do not see education as a key role, and some of them positively dislike the idea of being educators. There is little discussion of learning, teaching and assessment: it is the interest of a dedicated few. Most librarians do not have teaching qualifications
- There is a variety of conceptions of information literacy. Many librarians focus on a few aspects of information literacy (e.g. searching), and may talk about "library skills".

- Librarians are concerned with efficiency, constraints, their low status, proving the cost-effectiveness of what they are doing
- Most librarians either do not work with academics, or have limited contact (e.g. being asked to give a short introductory session to the library each year) and feel that they are not treated as peers
- The person in charge of library and information services does not have a holistic conception of information literacy and/or does not see information literacy as a strategic issue that he/she needs to push forward

Approach to Learning, Teaching and Assessment

- Information literacy training has not been embedded in most courses
- In training sessions, the dominant approach is behaviourist (e.g. a presentation; a demonstration followed by a task following set steps)
- There is no clear distinction between assessment of student learning and evaluation of teaching: evaluation instruments cover both together
- Assessment of information literacy is mostly not credit bearing, and in those few cases where it is, the percentage of marks awarded is very small (e.g. 5% of a class mark)
- Information literacy is taught mostly in short stand-alone sessions, or in very brief sessions within curricula
- An online tutorial is seen as a good and sufficient solution to the "problem" of information literacy
- Where assessment of students is considered, there is an emphasis on multiple choice questions, diagnostic tests, and compilation of bibliographies
- There is little tailoring of information literacy training to specific level/discipline, except in terms of providing training on different subject databases

2. Information Literacy: Intermediate

Management

- Information Literacy is part of a graduate attribute, but it is a minor part, or information literacy is not mentioned explicitly
- The person responsible for information and library services is included in some strategic discussions, but not all

Academics

- Some departments (e.g. law and medicine) are working with library staff on significant embedding of information literacy and identification of learning outcomes for information literacy at different levels
- Some academics have a holistic conception of information literacy
- Some academics see librarians as partners in educating their students

Librarians

- There is a post (perhaps temporary) of "information Literacy Coordinator", who does not have line management responsibility for most (or any) of the staff who are engaged in information literacy work
- Librarians are being asked to reflect and report on their information literacy work. Some do this enthusiastically and others reluctantly

- There is reliance on informal channels to exchange experience and information between all those engaged in information literacy education
- The relationship with academics is variable, with some resentment towards academics, who are still often seen as information illiterate
- Some have teaching qualifications and/or have developed knowledge/skill in pedagogy, which also gives them confidence when collaborating with academics, but they are outnumbered by librarians who lack confidence in their teaching ability or who are unaware that they are poor teachers.

Approach to Learning, Teaching and Assessment

- Many people (academics, management, librarians) think that a generic approach to information literacy is sufficient and desirable
- There is an online tutorial which most or all students have to go through, in some cases integrated into the curriculum. By some librarians and academics this is seen as a good and sufficient solution to the "problem" of information literacy
- Information literacy education has been embedded in some courses, including linkage to credit-bearing assignments
- The approach is moving away from the behaviourist, with increasing numbers of sessions in which a variety of teaching, learning and assessment methods are used. However short lectures and demonstration/set exercise sessions still dominate, standardisation is valued, and there is a tendency to see e.g. "the PowerPoints" as being the key teaching resources
- Assessment of information literacy is mostly not credit bearing, and in those few cases where it is, the percentage of marks awarded is very small (e.g. 5% of a class mark)
- Information literacy is taught mostly in short stand-alone sessions, or in very brief sessions within curricula

3. Towards the information literate university

Students

- Information Literacy is named as a Graduate Attribute
- Students cannot graduate until they have demonstrated that they are information literate
- Students understand what is meant by "information literacy" and can give an account of the stage they have reached in their education for information literacy
- Students recognise the value of information literacy. They recognise it as a real subject of study upon which they have to expend effort in order to achieve success and they see its relevant to their future lives

Management

- Information literacy is mentioned in strategic documents, such as the teaching and learning plan
- The person with management responsibility for information and library services (i.e. including information literacy) is involved in decisions on, and is informed about, issues which are strategic to the university.
- A good information literacy programme is seen as a Unique Selling Proposition (USP) which the university mentions when it is promoting the university to prospective students etc. Librarians are involved in recruitment and retention campaigns.
- Academics and senior managers have an understanding of what information literacy is
- People talk about information literacy "education" rather than "training"

Academics

- Discussion of/ information on Information literacy is included routinely as part of a new lecturer's induction programme.
- Academics cite their teaching of information literacy as evidence of their own good teaching (e.g. in applying for teaching excellence awards)
- Librarians work with academics in developing new courses and modules
- Academics consult with them on information literacy education when changing a course
- Academics respect librarians' expertise and use librarians as consultants in areas concerning information literacy
- Academics and librarians have worked together to map information literacy progression into individual courses of study, and can indicate learning outcomes for each level of study

Librarians

- Librarians, academics and students have a clear idea of their own and each others' involvement and responsibility in the learning process
- A substantial proportion of librarians have "Information Literacy" in their job title and/or information literacy education is described in their job description as being a key part of their job.
- The majority of librarians understand and enjoy their role as educators, and are reflective practitioners, developing their own approach to teaching
- Some librarians have teaching qualifications gained with the support of the library.
- There is regular discussion and exchange of experience amongst librarians about teaching, learning and assessment. There are formal and informal channels to foster sharing of experience
- Librarians are able to identify good and bad teaching practice amongst their colleagues and academics, and are confident in their dealings with academics
- There is collaboration with IT services and those providing academic support
- All librarians have a good, holistic understanding of information literacy and many keep up-to-date with developments in the subject

Approach to Learning, Teaching and Assessment

- Academics and librarians have worked together to map information literacy progression into individual courses of study, and can indicate learning outcomes for each level of study
- Information literacy is assessed and assessed work is credit bearing
- A variety of teaching learning and assessment modes and methods are used, as appropriate to the specific topic.