

Demythologising librarianship: Future librarians in a changing literacy landscape

Submitted to Middlesex University in fulfilment of the requirements for the degree of Doctor of Professional Studies by Public Works

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Date of submission: January 2016

The views expressed in this research project are those of the authors and do not necessarily reflect the views of the supervisory team, Middlesex University, or the examiners of this work.

Acknowledgements and thanks

Our friends, family and colleagues for supporting us throughout this journey.

The academic participants for their generous gift of time and insight.

Dr Sharon Markless and Dr Jane Secker for expert consultation and guidance.

Sunil Patel for technical support during the interviews.

Dr Kate Maguire for guiding us to places we never thought we would visit and for which we are profoundly grateful.

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1 Abstract

This statement explores the potential role of librarians in the development of information literacy and research integrity in higher education. We contextualise this in a critical reflection of our own professional careers and practice, within continually changing information, social and political landscapes. We illustrate our development through a critique of our core public work, *Enhanced pedagogy for improved information literacy*, and a number of other smaller but significant previous public works. We also examine some of the narratives which surround the 'Google Generation', academia and librarianship and demythologise the context in which we operate.

To inform the future development of our professional role we investigate information literacy concepts and models, the obstacles to the wider adoption of information literacy in higher education curricula, the skills and attributes that the librarian of the future can bring to its achievement and how the public works are a continuous response to change. Our insight and understanding are further informed by the opinions of academic colleagues following a series of in-depth interviews. We consider their views and the implications these have for our own learning and the development of our professional identity, within both higher education and our own university.

Throughout this statement we show how our previous and core public works have influenced and informed our thinking, our practice and the recommendations that we make.

2 Acronyms

| | |
|----------------|---|
| ACRL | Association of College and Research Libraries |
| ALA | American Library Association |
| ANCIL | A New Curriculum for Information Literacy |
| ANZIL | Australian and New Zealand Information Literacy |
| ARLIS | Art Libraries Society |
| AWL | Academic Writing and Language (Lecturers) |
| CAUL | Council of Australian University Libraries |
| CIBER | Centre for Information Behaviour and the Evaluation of Research |
| CILIP | Chartered Institute of Library and Information Professionals |
| HE | Higher Education |
| HEA | Higher Education Academy |
| IFLA | International Federation of Library Associations and Institutions |
| IL | Information Literacy |
| ILTHE | Institute for Learning and Teaching in Higher Education |
| L&T | Learning and Teaching |
| LDU | Learner Development Unit |
| LILAC | Librarians' Information Literacy Annual Conference |
| LLD | Library and Learner Development (Directorate) |
| LSS | Library and Student Support (Service) |
| LTSL | Learning and Teaching Strategy Leader |
| MAHATMA | (Tempus) Masters in Higher Education Management: Developing leaders for managing educational transformation (Project) |

| | |
|-----------------|--|
| NCIHE | National Committee of Inquiry into Higher Education |
| NSS | National Student Survey |
| PGCertHE | Post Graduate Certificate Learning and Supporting Teaching in HE |
| QMUL | Queen Mary University of London |
| REF | Research Excellence Framework |
| SCONUL | Society of College, National and University Libraries |
| STEM | Science Technology Engineering Maths |
| TD | Transdisciplinarity |
| UCD | University College Dublin |
| UK | United Kingdom |
| UKLP | UK Libraries Plus |

3 Overview of our roles

3.1 J. Adam Edwards, BA, MSc, PGCertHE, MCLIP, FHEA

I am the Library Liaison Manager for the Schools of Law and Science & Technology located in the Library and Student Support (LSS) service at Middlesex University. I lead the team of Liaison Librarians who support the two Schools, manage the delegated resources budget (£661,000 in 2015) and attend the School Quality Committees to ensure library liaison at a strategic level.

I have worked in academic libraries throughout my career in various roles, including Kings College London, Roehampton University London, Central School of Speech and Drama, South Bank University, University of Hertfordshire and University of Nottingham. I have worked at Middlesex University since January 2010 and have been Vanessa's line manager since 2011.

I have a degree in French from the University of Manchester (1984) and an MSc in Library and Information Studies awarded by Loughborough University (1986). I became a Chartered Librarian in 1988 and qualified as a teacher of higher education (HE), gaining a Post Graduate Certificate Learning and Supporting Teaching in HE (PGCertHE), in 2013. I am a Fellow of the Higher Education Academy (HEA).

3.2 Vanessa Hill, BLib, MCLIP, FHEA

I have worked as a Librarian at Middlesex University since 1990 on several campuses including eighteen years as an art and design librarian. I currently support staff and students within the School of Science and Technology (Computing Science, Product Design, Design Engineering, Mathematics and Statistics), based in The Sheppard Library. The main focus of my role within LSS is the provision of resources, their promotion and information literacy (IL) skills training for staff and students. Figure 1 below illustrates how librarians are situated in the provision of IL training at Middlesex University.

I graduated from University College of Wales Aberystwyth in 1990 (History/Librarianship) and became a Chartered Librarian in 1992. I am a Fellow of the HEA (2001) and achieved a Teaching Fellowship at Middlesex University in 2005.

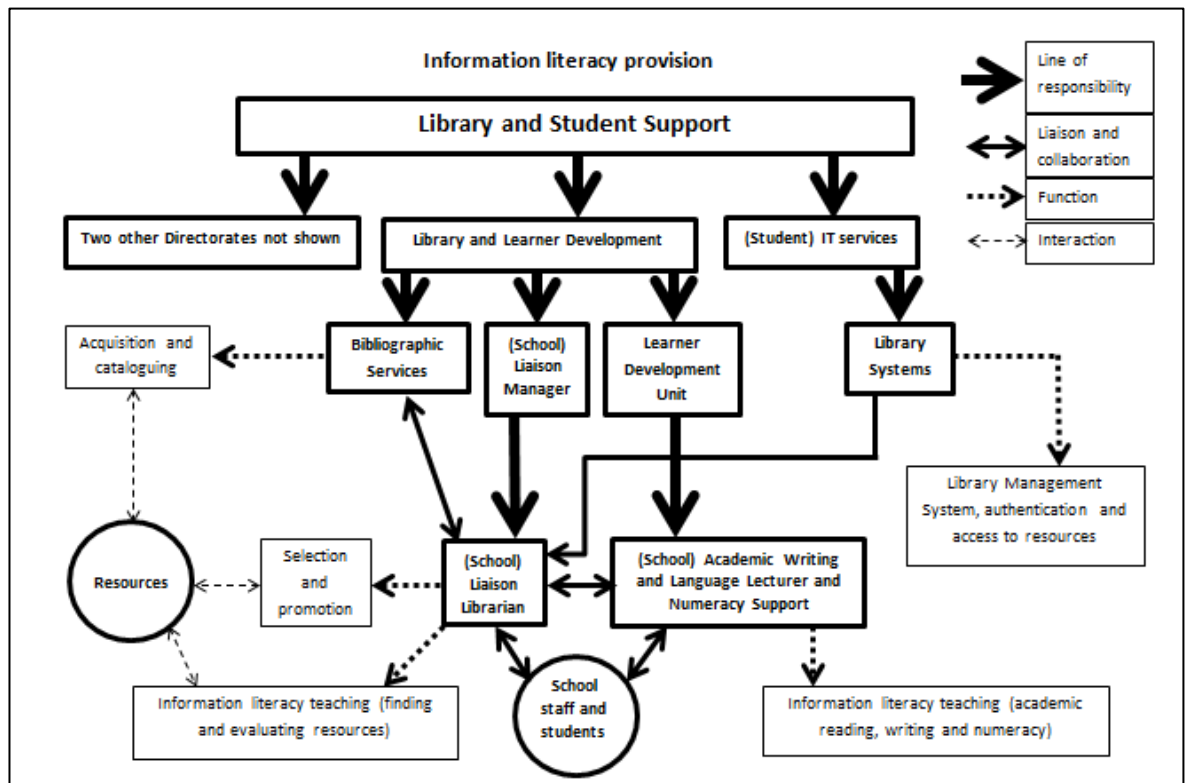


Figure 1: Information literacy provision at Middlesex University

4 Summary of public works

4.1 Public works

In our early careers, we individually produced four public works significant to our community of practice which influenced our more recent joint works. These are described in more detail in section 9:

- Adam Edwards:
 - UK Libraries Plus (Edwards, 2007 and section 9.1)
 - Ask the Right Question (section 9.2)
- Vanessa Hill:
 - Interior design fieldtrips (Appendices 4 and 5, section 9.3)
 - Exhibitions (Appendix 6, section 9.4)

Our more recent public works have focussed on:

- Major changes to our pedagogical practice and how we develop IL (sections 10, 9.6)
- Sharing best practice within our own institution (section 9.5), with other librarians (section 9.7), industry practitioners and academics.

Our work has been publicised in a variety of ways, often in collaboration with academic colleagues:

- External conferences include Information Literacy Satellite Meeting of the International Federation of Library Associations World Library and Information Congress 2014 (Edwards and Rushe, 2014), Librarians' Information Literacy Annual Conference (LILAC) 2013 (Edwards, Hill and Walsh, 2013), LILAC 2012 (Smith and Edwards, 2012a), the Higher Education Academy STEM conference 2012 (Smith, Bernaschina and Edwards, 2012), and at CILIP 2015 (Edwards and Hill, 2015b). Our presentation at the M25/CILIP one day conference at the British Library (Edwards and Hill, 2014a) was key in publicising our work as it led directly to the NHS workshops listed below and increased interest in our practice.

- Workshops for external peers including National Health Service librarians (Edwards and Hill, 2014c, Edwards and Hill, 2014f, Edwards and Hill 2015a), school librarians (Hill, 2015), Art Libraries Society (Edwards and Hill, 2013c) and the University Science and Technology Librarians meeting in 2012 (Edwards, 2012), which resulted in visits by librarians from other universities to observe our teaching. A workshop for cpd25 (Edwards and Hill, 2013d) led to a request for a one day workshop for Queen Mary University of London (QMUL) librarians (Edwards and Hill, 2014b; Hill and Syratt-Barnes, 2014) which is described in full in section 9.7.
- Other workshops have been presented for local and visiting international academics, as well as for the Science, Technology, Engineering, Maths (STEM) industry sector including a Middlesex University mini-conference (Hill and Edwards, 2012), academic staff at Middlesex University (Smith, Bernaschina and Hill, 2012), HEA STEM seminar hosted by Middlesex University (Smith *et al*, 2013) and workshops for Tempus (Edwards and Hill, 2013e) and the MAHATMA Project (Edwards and Hill, 2014g). We have also shared our pedagogical practice with Middlesex University librarians in a one day training event (section 9.5).
- Our work has been made available in a number of professional publications including a Teaching Fellows newsletter (Edwards and Hill, 2013b), *SCONUL Focus* which is distributed to university librarians in the UK and Ireland (Edwards and Hill, 2012), *ALISS Quarterly* (Smith and Edwards, 2012b), and, most significantly, through the Proquest corporate website. Proquest are worldwide publishers of online information, who hosted the 2013 Summon and Information Literacy conference at Manchester Metropolitan University (Edwards and Hill, 2014 d&e).
- Our lesson plans, games, activities and instructions for use are available on the open access academic repository Jorum (Edwards and Hill, 2013a). We update this resource as new games and activities are developed.

For this work we were nominated and shortlisted for a *Times Higher Education Leadership and Management Award* (THELMAs, 2014), in the outstanding library team category.

Our latest developing public work, which considers the librarian of the future's role in the development of IL, ran concurrently with and has been informed by the critiques of the works we have listed above as well as by the views of academic colleagues shared in interviews (See section 15). A number of themes have emerged from our public works, which have continued to develop and inform subsequent practice. These are discussed more fully in section 11. We see our works and practices, knowledge and experience as one public work, HE librarianship, with the artefacts that have been produced influencing areas of HE and IL practice.

The following diagram illustrates our journey:

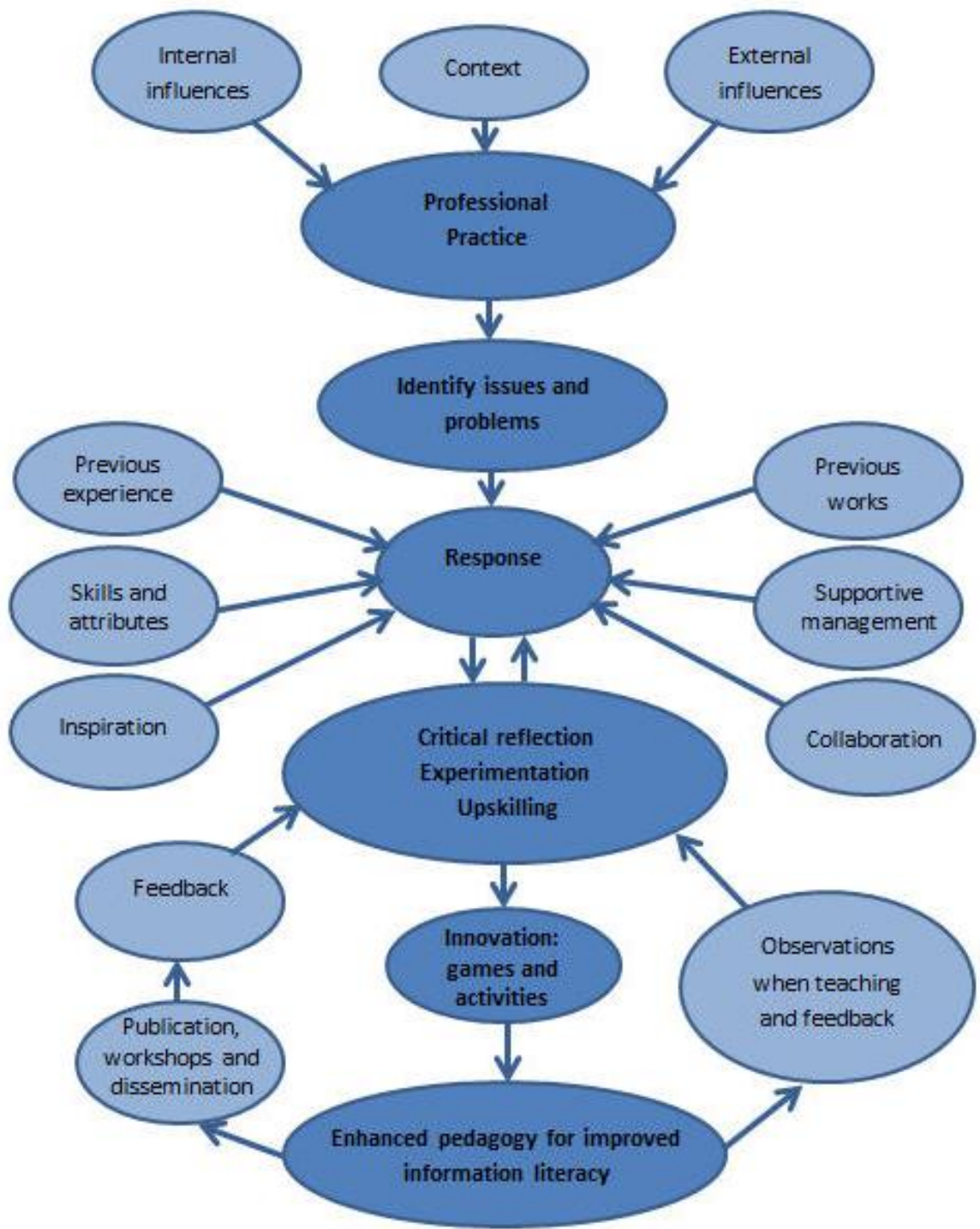


Figure 2: Route to our core public work

4.2 Approach to critical engagement

Our approach to critical engagement is critical thinking and critical reflection, which also defines our collaboration together in our professional roles:

“A critical thinker approaches information, assertions and experience with a healthy scepticism about what is *really* true or accurate or real as well as with a desire to search through all kinds of evidence to find that ‘truth’.”
(Beyer, 1985, p.272)

However, we believe we are going further than this, encompassing reflexivity. According to Anderson this “entails the researcher being aware of his effect on the process and outcomes of research” (2008, p.183) or as Hsiung puts it “examining one's ‘conceptual baggage,’ one's assumptions and preconceptions, and how these affect research decisions” (2010). Thus while reflection “looks back at the past in order to understand and to alter the future, reflexivity is anchored in present practice, in identification of the assumptions and priorities that shape our interpersonal relations” (Gherardi and Poggio, 2007, pp.157). This statement contains our own positioning and diverse influences in which we live and work to make transparent the lenses through which we perceive, work, create and act.

Our core public work is the result of collaboration between the two of us and involving others. In writing this statement we have continuously discussed and critiqued our work, which has resulted in new ideas and fresh insights and ensures our work is more focussed and more easily understood. We have found Brookfield's conceptualisation of critical reflection (1990) captures how we work together to improve the conditions for our learning and for those of our students and colleagues. Brookfield says that critical reflection involves three phases:

- “1. Identifying the assumptions that underlie our thoughts and actions;
2. Scrutinizing the accuracy and validity of these [assumptions] in terms of how they connect to, or are discrepant with, our experience of reality;
3. Transforming these assumptions to make them more inclusive and integrative” (1990, p177).

Central to the process is the “recognition and analysis of assumptions”, those “self- evident rules of thumb that inform our thoughts and actions” (Brookfield, 1990, p.177). This approach defines our practice, the way we have approached our public works and this critique. It has been a process of identifying our assumptions and those of others, challenging them and transforming them into vehicles of change.

We have been supported in this articulation of our practices and artefacts by the work of Schön and his views on reflection-on-action and reflection-in-action as the defining characteristics of professional practice. We believe we have created our public work in what he describes as:

“These indeterminate zones of practice – uncertainty, uniqueness, and value conflict – [which] escape the cannons of technical rationality.” (1990, p.6)

We will reflect on our professional practice and how we are positioned “on the margins” of librarianship in section 16.3.

Our work has been moulded by our experiences and forged in the intense heat of the classroom. Indeed we see our years of practice as enabling us to:

“...see unfamiliar situations as familiar ones, and to do in the former as we have done in the latter, that enables us to bring our past experience to bear on the unique case. It is our capacity to *see-as* and *do-as* that allows us to have a feel for problems that do not fit existing rules.” (Schön 1990 p.68)

We have also found the discourses on transdisciplinarity (TD) a helpful way to conceptualise our practices and our role in the wider practices of others.

Transdisciplinarity can be viewed as an approach to knowledge for the future which, whilst recognising the importance of disciplines, advocates for disciplines to come together to achieve more than the sum of their parts when tackling complex real world problems. Librarians work in and across disciplines and we have therefore come to see the librarian as having a role in translating between differences. We explore librarians and transdisciplinarity in more detail in section 13.2.2.

To achieve these border crossings or inter-weavings of the ‘metissage’ that might reorganise and interconnect knowledge for the future, sophisticated bridges of

existing knowledge exchanges are required to produce new learnings and syntheses (Laplantine and Nouss, 1997). These are sustained by skilled translation between these different realms of knowledge, experience and practice. In such a scenario researchers are the key pollinators and change agents fundamental to the change and solutions being sought (Maguire, 2015, p.168).

This echoes the neo-Marxist critical theory developed by the Frankfurt School. It focused on change to the whole of society through bringing together the spectrum of disciplines. The three criteria for critical theory postulated by Horkheimer are useful here; explanatory, practical, and normative, all at the same time (Bohman, 2015); in other words to explain what is wrong with current social reality, identify the actors to change it, and provide both clear norms for criticism and achievable practical goals for social transformation. This is well beyond our capabilities.

However what strikes us about critical theory is that the criteria are those of critical reflection and are threads through our work:

- What is wrong with the higher education 'society' where our librarianship sits?
- Who are the agents who can change it?
- What are the clear conduct requirements for challenging the current unsustainable status quo and the practical goals for bringing about a transformation in perception of us and our practices?

5 Purpose

This statement is intended to add to the knowledge librarians have about their professional calling and the pivotal role this profession can play in enabling our users to navigate the complexities of the information landscape and ultimately generate new knowledge. It is an opportunity to reflect on the progress that we have made in the provision of IL training for the School of Science and Technology at Middlesex University over the last four years. It also enables us to reflect on the bigger picture, examining the internal and external influences that have affected our professional practice and positioning ourselves within a changing information landscape and working environment.

While we can easily describe the changes that we have made to our general practice and especially our pedagogy, the reasons why change was necessary are less obvious. Through deep critical reflection we have been able to explore how our professional environment has altered over the course of our careers and the things which have precipitated these changes. Appreciating the impact of these changes helps us make sense of our move from a library-centric existence to one more deeply rooted in the academic sphere. Equipping ourselves with this greater understanding of our current position enables further innovation and progress in our role. As the status of librarians is increasingly threatened, the ability to think strategically and reinvent our role becomes essential. Other institutions undergoing similar change, may find our reflective and critical insight into our experience useful.

The success of our changed pedagogy will be demonstrated, showing how our innovative approach has been well received by students and academic staff alike. Colleagues at Middlesex University and at several other university libraries are now using our work. While the principles behind what has become our core public work are not "rocket science", the greatest challenge has been convincing some colleagues that the traditional model of library workshops can indeed change. Being able to defend our viewpoint with theoretical reasoning is an advantage and goes some way to consolidating our ideas and underpinning our pedagogy. We can appreciate the apprehension felt by some who might perceive our ideas as being critical of their own practice, however we hope this statement goes some

way to mitigate these fears. We are not questioning individual practice, rather considering how best to proceed as a professional community as our traditional environment mutates into something less familiar.

We have shared our innovations widely and feedback from external organisations has been very positive (see appendix 1). We have made an impact on our profession that neither of us could have envisaged when we embarked on this journey in 2011. This statement is an opportunity to acknowledge these successes and the positive benefits these have had for the reputation of Middlesex University and may act as a vehicle for further exchanges of best practice. By reflecting on the process of change we can begin to consider the possibilities open to us as more and more colleagues in the wider professional community embrace alternative ways of developing IL skills.

The general enthusiasm for what we are doing suggests that we are offering a solution to the dilemma of how best to teach students about the library. Reaction from our peers in the wider community implies that there is a hunger for change and a desire to reconsider teaching methods. This insight into our own experience will, we hope, benefit others within our profession in the same way that we have been inspired and enthused by external influences. Our own pedagogical practice has been transformed. Teaching is now more successful and more enjoyable for us and we are keen to share this. However there is still work to be done. The reiterative reflective process means that we continue to develop our games and activities, constantly questioning our own practice, and reflecting on our successes and failures. This statement provides an opportunity to share with others our own experience and how we intend to take things forward.

We chose our title, *Demythologising librarianship: Future librarians in a changing literacy landscape*, because our profession and role in HE has changed and is often misunderstood. We have directly addressed a number of myths about librarians, students, academics and the information landscape. We need to see our profession through the eyes of our academic colleagues, find ways to challenge their misconceptions and to communicate our vision of information literate students with life-long learning capabilities. Only by deconstructing this baggage can we build a more accurate picture of our current role and it's potential

for the future. We hope this statement can lead to dialogue between academics and librarians on the role our profession can play in the curriculum and in supporting students and staff in learning and research.

Finally, having our work acknowledged at Doctoral level will validate and add substance to our rhetoric regarding the changes we have made. With a deeper understanding of the complex issues and dilemmas facing our library colleagues, we can offer practical solutions supported by theoretical knowledge through continuous professional dialogue.

6 Clarifying a key term: What is information literacy?

An understanding of the concept of IL and its evolution over the last five decades is an essential foundation of this context statement. The role of librarians in developing information literate students is central to our function within the University and underpins our core and prospective public works. In this section we look at early definitions of IL and how these have developed into a variety of different standards, frameworks and curricula.

6.1 Early definitions

The term information literacy (IL) was first used in a report for the National Commission on Libraries and Information Science by US educator Paul Zurkowski in 1974. In this report Zurkowski discussed the problem of ‘overabundance’ of information, the inability of the population to manage it and the role of libraries in achieving universal IL within 10 years through a national skills programme (Zurkowski, 1974). The report opened with a statement, which sets the scene:

“Information is not knowledge; it is concepts or ideas which enter a person’s field of perception, are evaluated and assimilated reinforcing or changing the individual’s concept of reality and/or ability to act. As beauty is in the eye of the beholder, so information is in the mind of the user.”(Zurkowski, 1974, p.1)

While Zurkowski acknowledged the role of libraries in addressing the need for an information literate population, others had already identified some potential problems. As early as 1965 Ernest Roe, then Professor of Education at the University of Queensland, noted the disconnected priorities of academic and library staff with regard to the appropriate use of information and the process of effectively retrieving it (Roe, in Bundy, 2004). In other words, IL meant different things to different people, with neither party either able or willing to develop an integrated academic IL curriculum. Half a century later, librarians have, we believe, still been unable to reconcile these differences.

The need for an information literate population has gained increasing importance in the ensuing decades as society experiences an overwhelming abundance and availability of information due to the exponential growth of the internet and technology in all areas of our lives (Bruce, 1995; Association of College and Research Libraries, 2000; Norgaard, 2003; Bundy, 2004; Chen and Lin, 2011). This information is often unrefined, disorganised, and uncensored, so is accompanied with issues of authenticity, reliability and authority. As Bundy points out the “sheer abundance of information and technology will not in itself create more informed citizens without a complementary understanding and capacity to use information effectively” (Bundy, 2004, p.3). More recently Web 2.0 technologies have changed the individual’s relationship with information. They now have the ability to create, share, own and interact with it more readily (Markless, 2009). Bawden and Robinson warn us of issues of “quality control” (2009, p.186) resulting from this new relationship and the “impermanence of information” (2009, p.186) that can be edited daily.

Professional bodies around the world have therefore devised a plethora of definitions for IL, as well as initiatives to instil it in society through formation of standards, frameworks and curricula (See section 12 and appendix 11). A notable and influential early attempt to address IL was supplied by the American Library Association (ALA). This work is particularly pertinent to us, as it appeared at a time when we were both starting out on our professional careers. In 1989 the ALA released a report which foresaw the emergence and challenges of the information age, as well as recognising the importance of an information literate population on the future of the country (ALA, 1989). They believed that information gave an advantage to the owner and would lead to enhanced social status and empowerment, describing information literacy as a “survival skill in the Information Age” (ALA, 1989). While the report did not define IL, it did describe what capabilities an information literate person would ideally possess:

“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.” (ALA, 1989)

The ALA also identified a number of key elements, which have formed the basis of our profession's understanding of IL ever since. These are:

- To know when information is needed
- To identify what information is needed
- Locate the information required
- Evaluate the information found
- Organise the information
- Use the information effectively.

Although well received at the time and much used subsequently, the ALA's attempt to define IL and take it forward as a concept, was flawed by its universality, lack of clear definition and failure to provide a framework for achieving the desired outcome (Owusu-Ansah, 2003).

6.2 Developing standards

Subsequent models attempted to be more specific and complete, laying out concise definitions accompanied by attributes and abilities, the attainment of which would result in information literate individuals. However many of these models are now considered to be too inflexible, lacking the development of skills necessary to interact with a proliferation of information in a more intellectual way through evaluation and appropriate synthesis. Such a model is exemplified by the somewhat overwhelming standards created by the Association of College and Research Libraries (ACRL) in 2000 (Association of College and Research Libraries, 2000). Now considered to be unachievable outside the library profession, the ACRL standards have become a victim of their own thoroughness (See section 12 and appendix 11).

The United Kingdom's Chartered Institute of Library and Information Professionals (CILIP) adopted IL as its annual theme in 2002 and later released their own definition accompanied by a list of IL skills (CILIP, 2004), which closely mirror the ALA's key elements. However additional competencies were incorporated including the ethical use of information, the ability to share and communicate

information, and its management, perhaps guided by The Society of College, National and University Libraries' (SCONUL) *Seven Pillars of Information Literacy* (SCONUL, 1999). CILIP's Information Literacy Group now works to support practitioners around the world with an interest in IL through sharing best practice, guidance and events including the Librarians Information Literacy Annual Conference (LILAC). Indeed it was Adam's attendance at LILAC 2011 that inspired our use of games and other activities in our information skills workshops (See section 10.2).

However, as Markless points out "most of the commonly used frameworks are presented as a series of logical steps" which imply that to become information literate is "a linear, rational and systematic process" (2009, p.33). In 1995 Bruce outlined the key characteristics of an information literate individual which significantly included the ability to develop a personal information style suitable to meet their own needs (Bruce, 1995). This suggests a shift away from seeing IL as a list of skills and as a more reflective process. Subsequent phenomenographic research led Bruce to question the value of prescribed lists of IL skills (Lloyd and Williamson, 2008) and culminated in the ground breaking *Seven Faces of Information Literacy* (Bruce, 1997). This relational model of IL acknowledged an "interdependency between groups and individuals in the information literacy experience" and "involves becoming aware of different ways of experiencing information use through engaging in relevant information practices and reflection" (Bruce, 2004, p.10). The later *Six Frames for Information Literacy Education* (Bruce, Edwards and Lupton, 2006) offered different approaches to IL training given that "students experience information literacy in a range of ways" (Bruce, Edwards and Lupton, 2006, p.6).

6.3 Information literacy for lifelong learning

More recent perspectives represent a discernible shift to an overarching, holistic view of IL as a vital life skill for all individuals as autonomous learners, not limited to or confined within the education environment (Bruce, 2004; Lloyd and Williamson, 2008; Webber and Johnston, 2013). Lifelong learning has

increasingly been recognised as an essential skill within society (Fieldhouse and Nicholas, 2008) and IL is viewed as the foundation for this (Association of College and Research Libraries, 2000). This is clearly demonstrated by Limberg's study in 1998, which revealed that learning outcomes were dependent on the various ways that the users (in this case school children) reacted with and experienced information (Bruce, 2004).

UNESCO's *Alexandria Proclamation* put IL at the heart of lifelong learning emphasising its role as an enabler for a democratic and fair society (Jacobs, 2008). It states that IL:

“Empowers people in all walks of life to seek, evaluate, use and create information effectively to achieve their personal, social, occupational and educational goals. It is a basic human right in a digital world and promotes social inclusion of all nations. Lifelong learning enables individuals, communities and nations to attain their goals and to take advantage of emerging opportunities in the evolving global environment for shared benefit. It assists them and their institutions to meet technological, economic and social challenges, to redress disadvantage and to advance the wellbeing of all.” (UNESCO, 2005)

Increasingly the importance of IL in the workplace has gained recognition where value is often placed on “know-how” (Lloyd, 2010, p.252) and where learning may be informal (Lloyd, 2010). Studies outlined by Webber and Johnston suggest a growing interest in IL in a number of professions outside of academia (2013) and research from the USA indicates that employers place considerable emphasis on good information seeking skills in prospective employees (Head, 2012). Bruce considers that “information literacy education is the catalyst required to transform the information society of today into the learning society of tomorrow” (2004, p.8) and Lloyd notes that different skills are required for different situations (Lloyd, 2005), which “interconnect to form the practice” (Lloyd, 2010, p.253).

Indeed Lloyd believes that IL should not be considered as merely an academic skills set. It should be understood in the context of ‘landscapes’ where information is obtained not only from textual sources, but from a range of situated knowledge through social and physical encounters (Lloyd, 2005; Lloyd and Somerville, 2006;

Lloyd and Williamson, 2008) what she describes as a “socially enacted practice” (Lloyd, 2012, p.772). Lloyd offered an alternative definition of IL people who:

“...have a deep awareness, connection and fluency with the information environment. Information literate people are engaged, enabled, enriched and embodied by social, procedural and physical information that constitutes an information universe. Information literacy is a way of knowing that universe.” (Lloyd 2004 in Lloyd and Somerville, 2006, p.195)

The current decade saw development of *A New Curriculum for Information Literacy* (ANCIL), which offers a practical framework to achieve IL. Clearly inspired by the *Alexandria Proclamation*, ANCIL aims to:

“...help undergraduate learners to develop a high-level, reflective understanding of information situations, and to generate strategies for evaluating, analysing and assimilating that information as needed and at a time it is required....”

with an emphasis on

“...the student’s development as a discerning scholar, beyond the academic arena, as an informed citizen and an autonomous lifelong learner.” (Coonan and Secker, 2011b, p.4)

The language used in ANCIL is significant. Gone are the references to accessing and finding information, instead the terminology reflects a more interconnected view of IL whereby participants are encouraged to identify, distinguish, critique and reflect on information (Coonan, 2014). As such, the process is not over once the individual has found information; they then have to use that information in an effective way.

By default there are repercussions for the librarian as advocate of IL. Coonan, one of the creators of ANCIL challenges the status quo:

“We can describe a book or a journal article as an artefact, a published and describable entity: you look for it, you find it, you’re done. Or we can describe information in terms of its contribution to knowledge, as a point of

view expressed and negotiated within the academic discourse: you find it, you read it, you start answering back to it.” (2014)

More recently in its *Framework for Information Literacy for Higher Education* (ACRL, 2015), the ACRL in an attempt to redress its earlier standards continues this developing vision:

“Information literacy is the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning.” (2015)

6.4 Conclusions

Thus the stage is set for librarians to reassess their role and reposition themselves within the new information landscape as advocates of IL. Fifty years have passed since Roe had his misgivings about responsibility for IL in academia (Roe, in Bundy, 2004). To date we have found no examples of academic institutions that have truly integrated IL into their curriculum. The barriers that continue to inhibit the ability of HE institutions to fully embrace and embed IL will be examined in section 13.1.

7 Context

In this section we contextualise our Public Work in the changes that have influenced our profession over the last four decades. In particular we concentrate on the changing library and education environment which incorporates social changes such as widening participation, advances in technology and increased access to information.

We also focus on the evolving role of the librarian within the HE environment and the reasons for this change. Most notable amongst these shifts is the growth of IL teaching by our profession, an area which we will look at in some detail throughout this context statement.

7.1 Witnesses to change

We both started our professional careers in Polytechnics, Adam at Hatfield and Vanessa at Middlesex. Over the course of our careers, we have witnessed major changes in the HE sector, as the former polytechnics became universities. Increased student numbers, advances in technology and the largest review of UK HE in thirty years (NCIHE, 1997) have made a substantial impact on our professional work and role.

At the start of our careers Universities were traditionally elitist, where the chosen few had access to knowledge and learning. The founding of Polytechnics in the 1960s to teach what were then seen as practical and therefore less academic subjects opened up HE to a broader spectrum of society. As the old polytechnics gained university status in the early 1990s, these new institutions often struggled to find their place alongside the traditional 'temples of learning'.

The *National Committee of Inquiry into Higher Education* (NCIHE, 1997), commonly referred to as the Dearing Report after its principal author, had an immediate impact on and considerable repercussions for academic libraries. The report made 93 recommendations on how HE should meet the needs of the United

Kingdom (UK) over the next two decades. Four of the recommendations were of particular relevance to our profession:

- Provision of HE should be expanded to allow for widening participation, particularly among women, ethnic minorities, and students with disabilities;
- There should be a focus on student's learning skills;
- Establishment of an Institute for Learning and Teaching in Higher Education (ILTHE) to recognise innovation and best practice and ensure the maintenance of high levels of teaching, learning and research;
- There should be development and increased use of communications and information technology.

With widening participation the student body was transformed. Today's students come from a wide variety of socio-economic backgrounds. Many of them come from working class homes and can lack the academic etiquette often instinctive to the more traditional student (Austin and Bhandol, 2013, p.18). This is something Vanessa can empathise with, being herself from such a background:

Growing up in a wealthy, middle-class area, many of my contemporaries had the advantage of home environments where classical literature, music and culture were abundant; advanced and higher qualifications were the norm and a career in a profession was assumed. While I had a love of learning and an inherent appreciation of the value of information, the lack of this academic foundation, coupled with class based prejudice from teachers meant that negative assumptions were often made. I remember the irony of being told in secondary school that I was not 'university fodder' and, even earlier, that I had 'a too high opinion of my own capabilities'. Clearly a map was being drawn up for me, which I was not inclined to follow.

Many of the students we now support share this experience. Despite their obvious intelligence, they might not possess the academic and information skills required for their studies, and these need to be developed and nurtured by the University. Librarians cannot assume that students 'know what to do', whether this is in their

ability to carry out research or to analyse and think critically about the information they find.

Increasingly students appear to be more focussed on making the grade, than exploring a subject purely for the love of learning. Maybe this is symptomatic of the huge financial investment that they now make in their education and the need to validate this through eventual employment, or simply a reflection of how secondary schools teach to test. We would have hoped that the growing importance of employability for graduates would have raised the profile of IL and thus provided new opportunities for our profession. However from our experience, we have not witnessed anything to suggest this is happening.

This change in student demographics also resulted in a shift in focus away from the traditional primacy of research to place greater value on learning and teaching (L&T), which came to be seen as work of equal importance in the role of the modern university. Post Dearing (NCIHE, 1997), the spotlight fell on the quality of learning and teaching provided by academic and support staff. Many institutions developed L&T forums for staff to share best practice and knowledge. At Middlesex University a fledgling L&T movement developed with which Vanessa was involved. The Art and Design Learning and Teaching Group hosted mini-conferences and events and is the forerunner of the Learning and Teaching Conference now held annually at the University.

The creation of the ILTHE in 2000, which is now part of the HEA allowed many staff, including Vanessa, to formalise their experience and knowledge and gain recognition for their pedagogical practice. Both the ILTHE and HEA set standards for HE teaching and inevitably some university librarians began to question their own 'teaching'. Middlesex University's own Learning and Teaching Fellowship scheme, further enabled academics, librarians and other support staff to become University Fellows, which Vanessa achieved in 2005. Initially a distinction was made between support for learning (librarians and technicians) and teaching (academics), although this separation of skills has since been disbanded in favour of a more democratic single Teaching Fellowship award.

Increasingly universities have had to demonstrate their merits to students, most recently with the *National Student Survey* (NSS), introduced in 2005. The results of the NSS are scrutinised by institutions for information to help inform strategy and it is widely used by the media to create ranked league tables, which inevitably have an impact on recruitment. This has led some to suggest that universities are increasingly market led (McArthur, J, 2011; Brady and Bates, 2014) and that successive Government policies over the last 25 years have meant that higher education has become “a transaction based on student expectation to be given help during their studies and a job upon completion, in return for their investment” (Brady and Bates, 2014, p.913). This is supported by the opinions of some of the academics we interviewed (section 15.8). However our professional experience is that this is overstated. Tomlinson agrees suggesting that, despite changes in the HE environment, students appreciate “some degree of personal agency and application is needed for meeting wider sets of challenges” (2015, p.586). Tomlinson also states that the “developmental value of university education is not lost on the majority of students who continue to ascribe value to its broader benefits” (2015, p.587).

Librarians have shifted from seeing students and staff as users who have to fit into our systems to ‘customers’ whose needs should be efficiently and effectively met. At Middlesex University this has led to increased budgets for library resources, free printing and innovative projects such as free personal e-textbooks. Our experience is that, as teaching librarians, these perceived concerns had little evidence in terms of changing student behaviour. What was different for us was the implications of the actual growth in number of students such as lack of teaching space in the library, lack of resources and increased number of teaching sessions.

That said, seeing students as ‘customers’ rather than ‘users’, has, rightly in our view, led to an increased emphasis on good teaching skills in higher education libraries and other areas of our profession including NHS and schools. As a result, HE libraries have acknowledged the need for librarians to have a deeper understanding of learning and teaching theories. Adam was involved in the redevelopment of the PGCertHE curriculum at both Roehampton and Middlesex Universities to allow librarians and other non-academic staff to take the course.

This developing parity with academic colleagues means that, in theory, librarians should be better able to discuss L&T issues with module and programme leaders, being equipped with the right language, insight and qualifications to do so. Adam himself gained a PGCertHE in 2013.

7.2 Process before pedagogy

At the start of our careers, the main focus of our roles was to obtain, organise, arrange, 'police', and store the information in our care. Information was shared and promoted through the enquiry process and user education sessions. We worked within a traditional hierarchical structure and were very much involved in the day-to-day running of the library. It was important for us to have a working knowledge of all library roles, functions and activities. With this came a sense of shared ownership of the service.

Libraries in the 1990s were still based around manual processes with the only computer being the library management system used to circulate the stock. Book ordering was done using multipart slips, the catalogue was on microfiche, indexes of useful materials were created manually, librarians classified the books they ordered, and answering enquiries was dependent on the expert use of a large collection of reference material. A significant amount of our time was spent on manual administrative tasks such as shelving and shelf tidying to ensure the library functioned smoothly. Although the concepts of customer service and care were making an impact, the prevailing view was still that the customer fitted round how librarians did things. Indeed a common feature of many libraries was the long list of rules students had to follow, many of which now seem quite unnecessary. In short, our role was to be "mere clerks who guard dead paper" (Godin, 2011) and our customers were privileged to have access to it.

Librarians did have a role in teaching, but this was often seen as an added extra to be fitted around their main duties. Teaching during our early careers was merely about instilling practical process skills such as use of the microfiche catalogue to find where a book was shelved or how to search printed indexes to find journal articles. Teaching technology constituted little more than an overhead projector,

and the heavy use of demonstrations and hand-outs prevailed. As a result many librarians have struggled to accept that what we do is teach, rather than an extension of our traditional role (Austin and Bhandol, 2013, p.25) with the result that often little attention has been given to our pedagogical effectiveness.

Two decades ago it was considered essential for academic librarians to have subject knowledge of the programmes they supported for purposes of collection development and information retrieval. Remember this was in the period before Google or resource discovery tools. The need for subject knowledge is still debated and research suggests that some academic librarians still consider subject knowledge to be necessary in order to accomplish their teaching role (Bewick and Corral, 2010, p.103). However, the reality is that few of our librarians are now subject specialists due to restructuring and relocation, or need to be due to advances in technology, which enable databases to provide quick and easy access to information. We therefore believe a greater focus on IL is more central to our role.

7.3 Change is in the air

As HE expanded, library funding did not always keep up with costs and both of us have witnessed major restructurings with job losses and reductions in library spending power on resources during our careers. However, this search for savings and value for money has enabled old ways of working to be challenged and changed. Thus our librarians now have virtually no involvement with library operations or front line support, and many of our traditional tasks have been redistributed to other staff within the service. Our sphere of influence is no longer centred on the physical library. It has become more closely focussed on working with academic colleagues outside of the service. Our core role is enabling students to help themselves through resource discovery and in the development of IL. A computer literate but information illiterate customer base has become increasingly evident as librarians have become human hyperlinks, often with a greater awareness of developments across the Schools and their internal structures than the staff who work in them (Stephens, 2014). The transdisciplinary

nature of our role means not only working with several disciplines and across disciplines, but doing so with a view to a collaborative creative resolution of the challenges HE faces. This is explored in detail in section 13.2.

That this transition has sometimes been difficult is common across our profession. Some librarians have felt de-professionalised. For example the front line enquiry desk service has been relegated to general helpdesk staff, many of whom have no library experience or professional training. In some libraries, specialist support is now offered only by appointment or online. Moreover, working in a library, but having little physical contact with printed material, is an anathema for many librarians who traditionally knew their stock inside out. On the other hand, this has been an opportunity to explore our role and stretch the boundaries of what a librarian does now and could do in the future.

7.4 Old dogs, new tricks

At the start of our careers, libraries were on the cusp of the electronic age. Although our service had some automation, the day-to-day work of librarians was carried out without computers. Access to academic research resources such as journal articles was via cumbersome card indexes or commercially printed abstracts and indexes, usable by only one person at a time. Even with the emergence of journal indexes on CDROM, the process of searching and obtaining information was still laborious, requiring guidance from librarians.

The proliferation of electronic resources, not least the shift to e-books and e-journals, has fundamentally changed the way information is accessed. Information is now ubiquitous and there are multiple ways of accessing it. The library is no longer the physical home of much of the information that our users require and librarians are no longer the guardians of that information and the access to it. The digitisation of libraries has increased in recent years, aided by the proliferation of the Internet and easy-to-use open-access resources such as Google Scholar.

As a result, the Librarian's role within the information gathering process is potentially under threat. It is no surprise that academic library resources are often

side-lined by students in favour of the intuitive Google search, Wikipedia and Pinterest. Students expect to have instant gratification of their information needs and social media and the Internet delivers this. Thus they expect all our library e-resources to connect with one click, as is the case with the Internet. They do not understand the idea that some things might not be subscribed to and therefore are inaccessible, as they think everything on the Internet is obtainable and free. This then colours their view of the library where the expectation is the book shelves will be like Amazon, with copies always available. Their perception is therefore that libraries and librarians are not as good as their favoured resources.

7.5 New horizons

However, we would argue, that the long term prospects for librarians are positive. Our students still lack the skills to distinguish what information is relevant, authentic, evidenced and reliable (Boukacem-Zeghmouri, 2014) and this provides an opportunity for our profession (Austin and Bhandol, 2013). The changing environment continues to require librarians to act as guides and pilots, but instead of doing so within a physical library and the limits of its collections, they now navigate a vast and limitless information landscape. Librarians need to develop the life-long information and knowledge literacy skills of our users, so that they can locate relevant information and utilise it effectively whatever the context. Rather than showing students the detail of how to use resources in some vain attempt to create “pseudo librarians” (Markless, 2009, p.30), it is now incumbent on us to show them the value of these resources in an academic environment. The changing name of library teaching does in fact reflect a slow change in perception i.e. bibliographic instruction, through to user education, information skills and, more latterly, information literacy (Stubblings and Franklin, 2006).

It has taken the profession a long time to acknowledge these changes, and even longer to meet the new challenges. Many librarians continue to resist this need for cultural and organisational change and still crave the security of the role for which they were initially trained. Yet we believe, with others, that change is vital. In the

report *Flexible pedagogies: New pedagogical ideas*, the authors summarise this as follows:

“The need to be future facing in developing HE teaching and learning is even more important in this era of flexibility to embrace new pedagogical movements that will best serve HE in promoting learning across societies and equipping graduates for life beyond university.”

(Ryan and Tilbury, 2013, p.7)

The report envisages graduates able to operate in a global environment, working widely across systems and structures, who value diversity and plurality and who are capable of leading change in unpredictable and complex scenarios. To achieve this, librarians must enable and empower our learners, replacing top down teaching with collaborative learning. This must involve reshaping the way universities work and the way librarians teach. The students need to be able to think critically and flexibly about the future and acquire and develop transformative capabilities, in other words are able to deploy their abilities in both familiar and unfamiliar circumstances. This implies an ability to learn, innovate and bring about appropriate change. Universities will therefore have to develop cultures where interdisciplinary working and social learning are the norm (Ryan and Tilbury, 2013). Some of these ideas are considered in more detail in section 13.2.

We have been able to embrace the challenges, made easier by changes in our professional circumstances; Vanessa’s move from supporting art and design subjects at the Cat Hill campus to supporting Computing at Hendon and Adam’s change of role from senior management at Roehampton to more practical middle management at Middlesex University. These dislocating experiences meant that little of our previous practice was relevant, and out of necessity we have had to adapt and evolve as professionals. We now face further challenges as Middlesex University shifts its focus to establish a reputation as a research focussed institution.

7.6 The latest chapter

Like many post 1992 Universities, research at Middlesex University has, until recently, been a marginal activity. The University was focussed primarily on teaching, making a virtue of its support for less traditional students, coupled with expansion internationally to tap the global market. However, over the past three years there has been a move to increase research activity within the university in order to boost our reputation and, it is hoped, attract students with higher A-level grades.

In order to release resources to fund this, the University embarked on a programme of outsourcing and rationalization of support services. Many services are now provided by staff at overseas call centres. A programme of voluntary redundancy, redeployment and recruitment of research active academics has changed the staff profile from a typical ratio of 50:50 academic: non-academic to 60:40. Alongside these changes, the reorganisation of Schools and Departments has resulted in an improved correlation between management and the subject areas in the Research Excellence Framework (REF).

This shift in University strategy towards greater research activity presents challenges and opportunities for the library. Many longstanding professional relationships between the Library and the Schools have ended with changes to the academic and administrative staff teams, resulting in the need to foster new connections and renegotiate library support. It has also directed attention onto the skills and knowledge of the liaison librarians, most of whom are not familiar with supporting researchers to any great extent. For example when Vanessa presented a workshop for researchers in December 2012 on journal impact factors, it was clear to her that her knowledge at the time was insufficient given the questions posed by the academic staff present. The structure and processes of the wider Library and Learner Development (LLD) team (a Directorate of Library and Student Support) which we are part of are currently under review as we need more research information management expertise within the team. (The current LLD team structure is shown in appendix 10.)

A bid for the additional post of Research Liaison Manager was unsuccessful. However LSS was able to recruit a Research Data Manager for the library, located within LLD, whose knowledge is already making an impact on the wider team. Her role is to ensure the data that researchers generate is made openly available to all, a condition for REF submissions in 2020 and for public funding of research by UK Research Councils (RCUK, 2013). In addition support is being provided to help academic staff publish in open access journals, make their work freely available via the University repository and understand the range of performance metrics. She will train the Liaison Librarians to provide this support to academic staff and works closely with the Liaison Managers in deciding service strategy. This post therefore goes some way to fill the gap in library research support, but it is clear that Liaison Librarians will need to develop further skills and knowledge to fulfil an ever changing role.

Research activity has also led to increased demand for new resources, particularly journals and databases. With requests for additional funds unfulfilled, Adam and the other Liaison Managers (structure in appendix 10) have been working with School managers to redirect journal spending to areas of greatest need. However it has been quite challenging as some new researchers who have come from institutions or companies with high levels of information resource funding are frustrated at the limited resources LSS can afford.

Finally a university wide issue, caused in part by the consolidation of provision onto one campus, is a lack of space, particularly in The Sheppard Library, a building designed for a smaller campus and now expected to meet the needs of the entire institution. There is an increased need for individual and group study space for students, but researchers also require space to work, meet and collaborate. With such considerable pressure on teaching space it will be some time before this can be addressed, but again Middlesex University compares unfavourably with Russell Group universities, from where some of our researchers have come.

7.7 Conclusions

The context to our public works has been evolution, driven by political, organisational and technological change. These changes have freed us to focus on supporting learning and teaching and have enabled us to keep pace with the emergence and growth of the Internet and social media.

Libraries and librarians have changed significantly to meet the demands of new environments, yet our profession remains misunderstood and, we believe, undervalued. We therefore need to explore some of the myths surrounding our work, their currency and how they still constrain the way our professional librarian is able to function.

8 Myths

Our core public work emerged from our accumulated experience of working in higher education and our daily interactions with staff and students, trying to cope with their frustrations as well as our own. The source of these frustrations was difficult to adequately identify and address, but by exploring our own frustrations, we realised that our pedagogical practices were significant. These practices were increasingly failing to have an impact on the students we were teaching. This was due to a number of factors including out-dated teaching styles, our changed professional circumstances (see Section 7.5) and changing student needs, as discussed in the previous section.

We began to identify a number of commonly held assumptions regarding student behaviours, libraries and the role of the librarian in the academic community which are so embedded in our professional culture as to have become myths or orthodoxies which are rarely challenged. They anticipate many of the prejudices and misconceptions we encountered in the interviews with academic participants, described in section 15. By challenging these myths, we have been able to rationalise the thinking that led us to transform our pedagogy and professional practice. We therefore present them as an important part of the context for the creation of our core public work. The myths are:

1. Digital literacy equals information literacy.
2. 'Digital Natives' are different to previous generations.
3. Students do not know how to evaluate information.
4. The library is just a collection of books.
5. Students want a well-rounded education.
6. New students are information literate.
7. Librarians must clone their own expertise.

These myths are outlined and addressed in the following sections.

8.1 Myth 1: Digital literacy equals information literacy

It is a commonly held belief that our current students are techno savvy experts and therefore able to navigate effectively through the vast array of information to which they are exposed through the library, Internet, social media and open-access resources (Badke, 2010; Weetman DaCosta, 2010; Bell, Moon and Secker, 2012). However, Chen and Lin show that society confuses computer literacy with IL, leading to a “dangerous myth” around student competency and their ability to operate within the academic environment (2011, p.404). This confusion continues as recently exemplified by the Select Committee on Digital Skills report (Parliament. House of Lords, 2015), which “falls prey to the tendency to view digital skills in largely technical, ICT terms, without paying sufficient heed to the necessarily close relationship between digital and information literacies” (Goldstein, 2015).

Students comfortable in a digital world are liable to think that they know it all, and already have the necessary skills (Chen and Lin, 2011). However Norgaard believes that IL should not be seen as “a neutral, technological skill that is, at heart, merely functional or performative” (Norgaard, 2003, p.125). There is increasing concern within our profession, around the ability of students to be judicious users of information (Fieldhouse and Nicholas, 2008) and it should not be assumed that today’s young people are sufficiently skilled in using and evaluating the information accessed (Livingstone in Helsper and Eynon, 2010) by virtue of their supposed technical skills. Research in fact indicates that in reality students’ basic information technology skills are actually less advanced than those of the librarian (Grant, Malloy and Murphy in Badke, 2010).

The Centre for Information Behaviour and the Evaluation of Research (CIBER) based at the University of London carried out extensive research on behalf of the Joint Information Systems Committee and the British Library into the ‘Google Generation’ culminating in an influential paper outlining the information behaviour of young people (CIBER, 2008). The young people to whom they refer in their

paper are the students that librarians are now meeting in the library who have matured in a “world dominated by the Internet” (CIBER, 2008) and are considered “technology veterans” (Fieldhouse and Nicholas, 2008, p.57). Other titles associated with this peer group are ‘Net Generation’, ‘Digital Natives’, ‘Generation Y’ and ‘Millennials’.

In their report, CIBER quoted some stark statistics from previous surveys (OCLC, 2006) backed up by their own findings, that 89% of college students use search engines to begin their research, 93% are satisfied with this experience, as it better suits their lifestyle, and that the majority are unfamiliar with the array of electronic resources provided by libraries. In addition the ‘Google Generation’ fails to recognise the provenance of information found, and the reality that the library is providing much of the information they are discovering through collections of networked resources.

CIBER’s report stated that users of virtual libraries spent as much time “finding their bearings”, as they did viewing actual search results (2008), which suggests less proficiency than previously assumed. It is also evident that students do not use resources as librarians would (see description of use of Summon in section 8.3) and lack the skills to devise effective search language or evaluate the information found. For example, Vanessa recently assisted a student who was researching the topic ‘Does prison work?’ and had failed to find relevant information by using natural language i.e. prison and work. By considering effective terminology and what was actually needed i.e. prison or custodial sentences, re-offending rates etc, the necessary information was found. This illustrates how students need to undergo a cognitive learning experience in order to think “creatively and analytically about information and information problems” (Markless, 2004).

Our professional practice experience leads us to concur with this research that the ‘Google Generation’ does not naturally possess the critical skills to allow them to use the Internet or other information sources discernibly (Bennett, Maton and Kervin, 2008). Being “information savvy” (Fieldhouse and Nicholas, 2008, p.50) is becoming increasingly important to student academic achievement in an environment dominated by digital information sources (Chen and Lin, 2011) where

technical skills alone are insufficient. Indeed Wood, Miller and Knapp believe that “...the burgeoning universe of information now at everyone’s fingertips requires a high degree of sophistication at every step of the research process” (2007, p.8). Therefore these skills need to be developed in order for students to become not only “information wise”, but also “street-wise” in order to protect their personal privacy and ensure their online safety (Fieldhouse and Nicholas, 2008, p.64). As Johnston and Webber state “The scale and connectedness of the global information society demands an educational response that focuses on information use as distinct from use of information of information *technology*” (2003, p.335).

8.2 Myth 2: ‘Digital Natives’ are different

The next myth suggests that the ‘Google Generation’ are significantly different to previous generations due to their extensive use of information technology. These so called “Digital Natives” are multi-taskers, who have access to an array of technologies, are proficient in their utilisation, use the Internet as their primary information source and employ it for learning and pleasure (Helsper and Eynon, 2010; Palfrey and Gasser, 2008; Fieldhouse and Nicholas, 2008). They also expect quick access and instant gratification in their quest for information and knowledge and are more likely to turn to Google than a library for this (Palfrey and Gasser, 2008; Silipigni Connaway and Dickey, 2010; Boukacem-Zeghmouri, 2014). Some observers propose the existence of a second generation of ‘Digital Natives’, those born after 1990, who have been exposed to Web 2.0 technologies such as social media (Helsper and Eynon, 2010; White and Le Cornu, 2011). This represents a significant shift from the pre-‘Google generation’, often referred to as ‘Digital Immigrants’ (Prensky 2001a) who are less reliant on the Internet and are more likely to seek out resources held within physical libraries. They prefer to read from paper rather than from a screen and prefer written instructions as opposed to working things out online (Prensky, 2001a).

Prensky even goes as far as to make a distinction between the technical and cognitive skills of ‘Digital Immigrants’ and ‘Digital Natives’ (2001b) believing that the structure of their brains has been fundamentally changed. Prensky states that

“it is now clear that as a result of this ubiquitous environment and the sheer volume of their interaction with it, today’s students think and process information fundamentally differently from their predecessors” (2001a, p1). Fieldhouse and Nicholas claim that because digital technology is intrinsic in the lives of ‘Digital Natives’ their language is different to that of the older generation whose terminology is informed by a pre-digital existence (2008). As a consequence there are implications for the educational process (Fieldhouse and Nicholas, 2008) where ‘Digital Natives’ are being taught by ‘Digital Immigrants’ who do not speak the same language. Academia therefore should introduce alternative methods of teaching to meet the needs of the ‘Google Generation’ and Prensky suggests that teaching should be faster, less didactic and be shared and experimental (2001a).

These assumptions do not go unchallenged. Bennett, Maton and Kervin (2008) question the idea that multi-tasking is a new phenomenon and point out that earlier generations studied while watching television, so had comparable distractions. They also quote research that suggests that students tend to use the most suitable method of learning depending on the situation, rather than using methods supposedly specific to their generation (Bennett, Maton and Kervin, 2008). Indeed Margaryan, Littlejohn and Vojt (2011) believe that students expect a traditional approach to education and are generally satisfied with the partial use of technology by academics.

Further research by Ipsos MORI suggests that students do not fully utilise the knowledge-sharing and knowledge creation potential of new technologies and use learning technologies as a means of accessing information rather than for communication and collaboration with their peers (Ipsos MORI in Kennedy *et al*, 2010). Indeed several authors suggest that while the ‘Google Generation’ own technology and use it for basic functions and personal communication, only a minority used it to the extent to which Prensky suggests and have lower skills levels than he would have us believe (Bennett, Maton and Kervin, 2008; Kennedy *et al*, 2010; Margaryan, Littlejohn and Vojt, 2011).

Data from a survey carried out by the Oxford Internet Institute illustrates the differences in use of the Internet by generation, most significantly its use by the

younger generation to verify facts (Dutton and Helsper, 2007). Further research suggests that other factors might be more significant than age in determining the extent to which young people are immersed in technology. These include socio-economic status, ethnicity, gender, home environment, previous usage and experience, educational level and the discipline being studied (Jones *et al*, 2010; Helsper and Eynon, 2010). Several studies come to the same conclusion as outlined by Margaryan, Littlejohn and Vojt (2011) and they propose that the term 'Digital Native' may be too "simplistic". Several observers (Fieldhouse and Nicholas, 2008; Helsper and Eynon, 2010) go as far to suggest that technical competency is not the preserve of the 'Google Generation' and that it is perfectly possible for 'Digital Immigrants' to become 'natives' through contact and practice, and argue that "if being tech savvy is determined by exposure and experience, then collaboration and learning is possible in environments where younger and older generations interact" (Helsper and Eynon, 2010, p.505).

It is therefore misleading to treat the 'Google Generation' as a homogenous group with similar technical abilities, levels and interests (Bennett, Malton and Kervin, 2008; Kennedy *et al*, 2010; Silipigni Connaway and Dickey, 2010). It is worth remembering that the so called 'Generation X' (those born between 1961 and 1981) were also considered as being different, causing similar 'panic' amongst educators and librarians of an earlier generation (Jackson, 1999). Inevitably the cycle continues as technology develops and the older generation become removed from it. There is a risk that the "current debate about digital natives represents an academic form of moral panic" (Bennett, Maton and Kervin, 2008, p.782) and that, while it might be worthwhile reviewing learning and teaching practice, this should not be based on the assumption that the needs of students have significantly changed (Jones *et al*, 2010; Margaryan, Littlejohn and Vojt, 2011).

The concept of 'Digital Natives' and 'Digital Immigrants' is increasingly questioned by some observers who believe (White and Le Cornu, 2011; Holton, 2010) and have provided evidence (Wright *et al*, 2014) that age alone cannot be used to explain use of technology. White and Le Cornu advocate an alternative to Prensky with their notion of 'Visitors and Residents' who use the Internet

respectively as a 'tool' to find information when deemed appropriate or a 'place/space' where they can develop a digital identity and network within a community (2011). Prensky himself has reconsidered his earlier viewpoint suggesting that we should now talk of "digital wisdom" to distinguish between those who accept the judicious and timely use of technology to access information for decision-making and those who do not (Prensky, 2009).

8.3 Myth 3: Students do not know how to evaluate information

Closely linked to student ability to search effectively for information, is the idea that students do not know how to evaluate the quality of the information that they find, which becomes increasingly important when the Internet is factored in (Beeson, 2006). Fieldhouse and Nicholas liken the Internet to a "giant sweetshop, in which we behave like children, grabbing all we can get with less regards for quality than quantity" (2008, p.49). This may be especially true if the competency levels librarians expect of students are equal to the sanctimonious standards defined by our profession (see section 12 and appendix 11).

Palfrey and Gasser (2008), based on conversations with 'Digital Natives', suggest that accuracy of information is not a priority for students except for when it affects their grades, something which more experienced information users like librarians find difficult to understand. However observation and research suggests that students do evaluate information in a manner appropriate to the technology they are using (Palfrey and Gasser, 2008) or for their particular need (White and Le Cornu, 2011). For example feedback from one of our students, who uses the Internet to find information for his projects, suggests that he does understand the value of good, quality information in academic work (see appendix 2). Having searched the Internet, he then carries out a secondary search on our resource discovery tool Summon to weed out the reliable from the unreliable information, and thus uses our resources to validate what he finds on Google. If he finds the same thing on Summon, then he knows "the information is OK", because librarians have vetted it. This is a slightly baffling use of Summon for a Librarian to comprehend. Why not search Summon in the first instance? However, the end result is the same, and maybe this is a salutary reminder that despite the official

'librarianly' way of doing things, there is always an equally effective alternative. Indeed Markless ponders whether librarians should be less critical of the way that 'Digital Natives' interact with information (2009).

According to CIBER's research, the Internet, while enabling rapid research and vast search results, does not allow for careful evaluation of information (2008). Research shows however, that students engage in a process of cross-checking information online (CIBER, 2008; Palfrey and Gasser, 2008) while studies from the USA discovered that many students adopt a collaborative evaluation strategy utilising the opinions of friends, family or academics (Head and Eisenberg, 2010), a tactic that continues into the workplace (Head, 2012). Anthropological studies of student library behaviour by Boukacem-Zeghmouri (2014) and Foster (2014) demonstrate that students use social media research tools such as Research Gate and Mendeley to assess the quality of information that they have found on Google and discover further connections. This suggests that social media supports student IL and is used to enable them to cope with their lack of understanding and awareness of knowledge within their discipline. Ability to evaluate information can also be affected by how much experience users' have in navigating the online environment (Palfrey and Gasser, 2008).

However what students are apparently unaware of is that library resources have also developed along similar lines to social media and other resources, such as Amazon and Flickr, which commonly use recommender systems and tagging to alleviate the information overload. Many journal databases now offer alerting services, as do journal 'tables-of-contents' services such as Zetoc, and bibliographic management software such as Proquest Flow enable users to share references. Thus the need for students to evaluate information in isolation is reduced, while perhaps the emphasis has shifted to the need to make connections.

There is little evidence to suggest that online information is of lower quality than more traditional printed information sources. In fact there is debate around the enrichment of online information through crowd-sourcing, which is perhaps lacking in some for-profit publications. Palfrey and Gasser (2008) use Wikipedia and the Encyclopaedia Britannica as a case in point. White and Le Cornu also acknowledge that the Internet is increasingly the only available up-to-date source

of information in some instances (2011). As such, an awareness of how information is produced, its context and value may be as important as the traditional evaluation skills espoused by librarians.

It would therefore seem apparent that reliance on the Internet has changed the relationship of younger people with information in a way that might be disconcerting to a Librarian (Markless, 2009). However it is worth remembering that the problem of discerning good information from bad is an age-old problem (Asher, 2003) and that:

“At no time in world history has there been any lie-detection system to help sort fact from fiction.” (Palfrey and Gasser, 2008, p.157)

The selection, interpretation and ethical use of information by students and society as a whole remains a major issue which our profession needs to address. As we will discuss in later sections, one of our responses to this was the development of activities as part of our ‘public work’. These variously encourage students to assess a range of items on the same subject from different sources, to consider evaluation criteria and its appropriate use and to develop an awareness of how information is produced and the impact of this on currency and authority (Edwards and Hill, 2013a, see appendix 3).

8.4 Myth 4: The library is just a collection of books

Despite all the developments in information media, (print) books are still the predominant “library brand association” for the ‘Google Generation’ (CIBER, 2008, p.7), irrespective of the fact that academic libraries in particular spend a significant percentage of their budgets on electronic resources. While students are still using the library, usage is lower since the development of Internet research tools. Younger information searchers are less likely to use library resources directly to find information and they have a higher regard for personal recommendation, Google Scholar or other dissemination tools, such as electronic tables of contents (CIBER, 2008; Chen and Lin, 2011).

This is an obvious threat to the traditional role of the librarian. The fault is not with the students, who have grown up with this proliferation of information sources, but with libraries and publishers who have failed to provide seamless access to the vast array of quality resources that Libraries finance and make available. From a student perspective the Internet provides “ultra-rapid access to the richest sources, wherever they are located in the world’s collection” (Ershova and Hohlov, 2002, p.2). It is therefore no wonder that students prefer internet search engines with guaranteed search results over the often unintuitive virtual libraries they are encouraged to use (McCluskey, 2011).

The emergence in recent years of resource discovery tools for meta searching, has gone some way to address issues of access, navigation and recognition of who provides the costly information. Using Summon at Middlesex University has simplified the information searching process for students and enables us to concentrate more readily on other information skills in library workshops (Edwards and Hill, 2014e). However, it is apparent from the filmed interviews carried out with students in order to create an induction week video in 2014 (section 9.6), that most still do not recognise the resources they use and information they find as being provided by the library. Whether this should matter is debatable.

Although traditionally library workshops concentrate on resources that libraries provide, librarians should no longer assume that students will only use these resources to find the information that they need. Neither can our profession presume that the answer to their information needs can be found within the confines of the library (Coonan, 2011). It is also worth bearing in mind that once students graduate they will no longer have access to our library resources, so perhaps librarians should also promote those quality resources available freely on the Internet (Abson and Lahlafi, 2013).

As librarians we know that the library is not just a collection of books (McMenemy, 2007). The library encompasses a vast array of resources, skills and knowledge. However, this viewpoint is not necessarily shared by all of the community that librarians support. As a profession, we must therefore move on from the process driven libraries of our past, where information was discovered through strict formal methodologies, and encourage students to make more informed and competent

use of a wider range of resources. We must also endeavour to change the image of the library as a static, inert entity and transform perceptions in the way that public libraries have been forced to (Davey, 2013; Doherty, 2014).

8.5 Myth 5: Students want a well-rounded education

Some academic colleagues continue to believe that students desire a well-rounded educational experience and that University will open their minds to a wider academic understanding. Yet with secondary schools now judged by exam results, there is a tendency to teach students to play the A-level game in order to maximise their grades. This inevitably feeds through into student attitudes at university. For example research suggests that students rely on reading lists as a guide to what knowledge they need to acquire (Bell, Moon and Secker, 2012). From our own experience, a panel discussion between students and academics during a local L&T event (Middlesex University, 2012) suggested that students are more inclined to do what is necessary to achieve their degree, rather than immersing themselves in academic culture. It seems that the need to validate the expense of an education and to obtain eventual employment has focussed the attention of many students entirely on getting sufficient grades, at the expense of a more scholarly experience. Indeed Bruce states that “where students see education as a commodity, they expect to be told what they need to know to graduate, rather than be assisted to become independent lifelong learners” (1995, p.165).

From a library perspective, this results in a very strategic approach to information seeking. While research in the USA found that Google was not necessarily the first port of call for academic work, there was however heavy reliance on course readings and other familiar sources and little interaction with librarians (Head and Eigenberg, 2009). Norgaard suggests that students are looking for the ‘answer’, wanting the right facts and the right number of references, so that they can report their findings back to their lecturer (Norgaard, 2004). Kleine refers to the cut and paste culture whereby students see “their purpose as one of lifting and

transporting textual substance from one location, the library, to another, their teachers' briefcases" (1987, p.151).

Equally CIBER refer to a new way of online reading, whereby students "scan, pick and 'power browse' their way through digital content" (CIBER, 2008, p.8). This is backed up by statistics that indicate that the time spent using e-books and e-journals is short and that the larger proportion of e-journal users only view the first few pages of a publication and an even larger percentage never return (CIBER, 2008). CIBER suggests that young searchers "tend to move rapidly from page to page, spending little time reading or digesting information and they have difficulty making relevance judgements about the pages they retrieve" (CIBER, 2008, p.14). However, the Internet cannot be blamed entirely for this behaviour as there is little evidence to suggest that earlier generations had superior search skills or spent longer reading material sourced (CIBER, 2008).

It is true that the financial investment that students now make in their education in order to get a job, has changed the culture of Universities. Institutions have responded to the employability agenda by promoting graduate and employability skills, and this is backed up by the emphasis placed on the career prospects and earning potential of a higher education by the UK Government (Webber and Johnston, 2013). Perhaps the tick-box approach to graduate skills, provision of extensive reading lists or indeed some of the practices favoured by librarians such as "tool-based library demonstration" and "linear, step-by-step procedures for proper information retrieval" (Bowles-Terry, Davis and Holliday, 2008, p.228) reinforce the behaviour of these students.

However, the UK economic decline since 2008, and other factors such as the disregard shown by some employers for university qualifications (Beetham, McGill and Littlejohn, 2009) is threatening the "human capital for economic growth" claims made by HE (Webber and Johnston, 2013, p.18). Therefore universities need to reassess the benefits of a university education to individuals and society and reconsider how IL sits within this. Lloyd's broader view of IL (section 6.3) is particularly pertinent in this context. As part of this process librarians also need to bridge the gulf between IL theory and practice within institutions and particularly

within libraries, rather than assuming the over-use of technology is to blame (Bowles-Terry, Davis and Holliday, 2008).

8.6 Myth 6: New students are information literate

Recent research by the University of Sheffield found a discrepancy between the expectations of academic staff and the ability of undergraduates to effectively find information for their academic work. The academic assumption being that secondary schools have already instilled the necessary skills. In reality 45% of Sheffield's undergraduates felt unprepared for this aspect of University and over half of them wanted support and guidance in finding information (Webber *et al*, 2013). Research arising from *Project Information Literacy* in the United States mirrors Sheffield's findings with most students feeling that skills developed in school did not adequately prepare them for college work (Head, 2013). Yet in the effort to meet UK Government targets, many schools and further education colleges fail to develop key information skills, as students are "spoon-fed towards exams" (Webber *et al*, 2013, slide 34).

It would seem that many academics forget the haphazard process by which they developed their own, often poor, IL skills and frequently sidestep library resources to use easier options such as Google Scholar. Indeed a direct challenge by an academic that Google Scholar is better than Summon, led us to rename our first year workshop *Better than Google*. It is apparent that, just like students, many academics have been seduced by the increasing availability of information through easy to use web-based search engines. By operating within a narrow discipline, they as academics are able to use their experience and established knowledge to develop a strong affinity with key publications and other experts and aggregate knowledge more readily (Lloyd, 2012). This allows them to work in "flexible, networked and non-linear ways" (Coonan, 2011). However, for the student, this network is unavailable and they need to be able to obtain knowledge more widely through genuine structured research or through seemingly laborious processes to verify the quality of what they have found. Academics sometimes assume that less successful students have simply lacked the motivation to develop their skills,

that practice makes perfect and that ultimately students will have attained sufficient levels of IL by the time they graduate (Badke, 2010).

Badke (2010) describes a vicious circle in which students who have developed successful 'coping strategies' will themselves become academics and then perpetuate the belief that IL skills can be easily acquired. This is confirmed by research carried out by De Montfort University which found that, despite academics' support of the importance of IL skills and its value in the academic work of students, there was little effort on their part to develop the integration of information skills into the curriculum assuming that these skills would be "picked up" by students during their time at University through a process of 'osmosis' or 'trial and error' (Orr, Appleton and Wallin, 2001; Weetman, 2005; McGuinness, 2006; Weetman DaCosta, 2010). Yet other lecturers have unrealistically high expectations of what their students need to know at any given level. For example, we have been asked to teach citation searching and bibliographic management tools to first year undergraduate students, something that we would reserve for postgraduates.

As a consequence, students fail to understand the benefit of IL skills to their academic work, similarly assuming that such skills will be attained by default during the academic process (Badke, 2010). It has been suggested that only when IL skills become an assessed and credit-bearing element of the curriculum will students take them more seriously and value their significance in the academic process (Stubbings and Franklin, 2006; Weetman DaCosta, 2010).

Chen and Lin (2011) believe that the idea of IL remains an unfamiliar concept to non-librarians who appear to equate these skills with simply knowing how to search for a book on the library catalogue, or, at most, how to search for journal articles. Consequently the assumption is that a one-shot session will suffice or that our brief ten minute presentation during Induction Week has covered the necessary skills for students to be 'up and running'. Badke states that "any notion of sophisticated education is precluded, much as it would be if one were assuming that a teenager was competent to drive a car after 40 minutes of explanation and 15 minutes of practice" (2010, p.130).

In reality the attainment of true IL skills requires time and practice based experience (Badke, 2010). We, like Macklin (2001), believe information skills to be an integral part of such academic teaching. However we often struggle to have IL learning outcomes included in programmes and even when they are, we find academic staff ignore them. Time constraints or the inability to see relevance often appear to be the reasons given by academic staff for not addressing these learning outcomes. This experience is mirrored in other institutions where IL skills sessions are brief and disassociated from the academic programme (Primary Research Group, in Badke, 2010).

The failure to run IL sessions in some programmes is despite our own survey findings which demonstrated that attendance at a library workshop improved student marks (Edwards and Hill, 2012). This is validated by research carried out by the University of Huddersfield (Stone, Ramsden and Pattern, 2011) which indicates a correlation between library usage and students' final degree results. Asher describes the benefits of our IL teaching thus:

“If students can learn the basic skills a librarian can teach them, superficial or not, they will find themselves swimming forever in a river of ideas and that is what lifelong learning is all about.” (2003, p54)

Information literacy thus continues to be perceived as ancillary to the main business of the institution rather than a set of skills which underpin the academic process. Consequently it is imperative that academics gain a better understanding of what IL entails, if it is to become a priority in HE. Only when institutions fully integrate IL into the curriculum through collaboration amongst all stakeholders will students understand its importance and value to their academic study (Callison, Budny and Thomas, 2005).

8.7 Myth 7: Librarians must clone their own expertise

Many librarians still believe that they need to mould students to become effective library users in the way that they are, through the systematic use of books, journals, databases and other resources. The belief is that library workshops

should be based around learning the process of how to access and use library resources in a step-by-step way, making full use of all advanced search features with little regard to learning principles (Fister, 1993; Sotto, 1994; Markless, 2004; Badke, 2010). Badke again uses the analogy of driving a car to illustrate the limited ambition of this type of instruction:

“To equate this with teaching students how to use a library is a short-sighted as assuming that driving a car simply requires that a person know how to step on the gas pedal.” (Badke, 2010, p.131)

However, as we have seen, CIBER, suggests that “students usually approach their research without regards to the library’s structure or the way that library segments different resources into different areas of its web site” (2008 p.15). Markless (2004) supports this view with her dismissal of the transmission model of teaching. Indeed increased access to the Internet and the proliferation of search engines renders such controlled and contrived methods of searching immaterial (Coonan, 2011). Research suggests that students prefer to go for “quick wins” (Fieldhouse and Nicholas, 2008, p.63) by switching between a range of resources in order to find what they need regardless of format, a behaviour that CIBER describes as “promiscuous, diverse and volatile” (CIBER, 2008, p.9). Others refer to this as ‘grazing’, a process which might result in deeper investigation and further action such as feedback and sharing (Palfrey and Gasser, 2008), while CIBER notes that young searchers are no longer “passive consumers of information” (CIBER, 2008, p.18).

While this method of information seeking might seem alien to our profession, it also suggests that librarians should approach library teaching in a different way. The profession should remember that “nobody except librarians want to search, everyone else just wants to find” (Tennant in Coonan, 2011, p.13). By continuing to concentrate on process, rather than IL skills, our profession does little to alter the perception that our role is limited to the physical library and its operation. However, librarians are no longer the guardians of information and are now in competition with Google, social media and open access resources which offer instant gratification and provide what is needed without barriers such as complicated log-in procedures. Kope (2006) believes that librarians should stop

emphasising the structure of information through reference to books and journals, as well as its facilities and procedures and Chen and Lin add that “e-literacy should be seen as a means of stimulating students to learn more widely and more efficiently” (Rader paraphrased by Chen and Lin, 2011, p.402).

8.8 Conclusions

Having explored some of the myths surrounding young people, students, libraries, librarians and academics we can identify a number of key issues, which continue to affect our role as academic librarians:

- Despite the prevalence of technology and ubiquitous information in the lives of today’s students, their IL skills are no more advanced than those of the pre-internet generations.
- Information literacy skills continue to be important for students and their ability to achieve in all areas of their lives.
- The role of the professional librarian remains poorly understood by the wider academic community and therefore underutilised.
- Developing an institution wide acceptance of the value of IL in the academic process requires universities to invest time and money in a significant cultural shift to position librarians and academic staff on equal footing with a mutually agreed vision of how to take IL forward as a core skill set.
- There needs to be a complete reappraisal of the role of the librarian in the academic environment. At the time of writing, a review of the Directorate (LLD) in which our librarians work is being undertaken. It remains to be seen how far reaching and apposite any changes will be.

We will return to these issues later in this context statement as we discuss our core public work, developing pedagogy, IL frameworks, and our vision of an enhanced role for the librarian of the future. Before this, we will look at a range of

early public works which demonstrate not only the diverse role of the academic librarian, but a range of competences which have influenced our professional practice and therefore the creation and dissemination of the artefacts that are informed by our technical and experiential knowledge.

9 Previous Public Works

The following public works are included in this statement to demonstrate the breadth of work undertaken during our professional careers. These experiences have contributed to the knowledge, insight and skills we have used to respond to the changing landscape of literacy embodied in our core public work. In all cases these public works reflect our individual and joint professional practices which we have then combined in our approach to both our core public work and the development of this critique. They show early examples of collaboration and demonstrate why, for us, collaboration is both rewarding and edifying.

9.1 UK Libraries Plus (Adam Edwards)

In 1997 I became the convenor of London Plus, a modest access scheme which allowed students at former London Polytechnics to use each other's libraries. The focus was on part time and distance learners, recognising the pressures on their time and need for access to geographically convenient libraries. The scheme had eight member libraries initially.

In 1998 the University Librarian at Leeds Metropolitan University contacted peers in the post 1992 universities suggesting the establishment of a national library access scheme for these types of students. As there was already a successful scheme running in London which I managed, I offered to meet the development group and suggested London Plus could be used as a model of good practice. I was immediately co-opted onto the management committee.

Within five years UK Libraries Plus (UKLP) had been established as a nationwide scheme, linking the majority of UK HE libraries. This came about after much hard work convincing the pre-1992 universities of its value and dealing with their misplaced fear that opening their libraries up to the newer universities would lead to them being "swamped" by hundreds of additional students. I led work on a customer survey and collated statistics to prove that use was much more about quality experiences for the few, than mass provision for the many. Indeed the only library which suffered any degree of extra demand was the London School of

Economics. They had not only been prepared to join early on in the scheme but also, as they are the British Library of Political and Economic Science, saw this as a way to expand their engagement with the wider academic community and therefore justify their existence. The scheme was important in breaking down barriers between the old universities and the former polytechnics. I spent considerable time negotiating with and convincing sceptical colleagues about the value of the scheme to persuade them to join (Edwards, 2007). That I succeeded shows an ability to act as a catalyst for change, something which is also reflected in our core public work.

By then the scheme was a success, with over 8000 students using it every year and with most UK HE institutions in membership. However the management group realised that the scheme needed a means to secure its long term future. This led to it being incorporated into the services managed for HE libraries by the Society of College, National and University Libraries (SCONUL) and it continues today as SCONUL Access (SCONUL, 2014).

UK Libraries Plus continues to give me a significant sense of achievement. The experience encouraged me to value forward thinking, challenging the status quo and working with others to achieve change. Not one of us alone could have created this pan-institutional cooperative scheme. It required vision, openness, commitment and significant effort to make it happen.

One thing I remember from the meetings with the UKLP management group was that any new procedure had to pass the 'Sunday library assistant test': Would this make it harder or easier for a front line weekend staff member? If it would make things worse, then we did not do it. This reflective practice was a good discipline to learn and apply. I would consider this to be one of my good attributes as a manager in that I am alert to the needs of all the people who work in the library, not just the professional staff. Any changes need to be good for all stakeholders and it is essential that, as professionals, we should be prepared to reject changes which do not work. This proved significant in the development of our games which are at the heart of our core public work.

UK Libraries Plus changed the way libraries collaborate to provide access to all students in UK HE (Edwards, 2007). The fact that it has been sustained to this

day shows the foresight of our shared vision, the sound foundations upon which we built it through networking, collaboration and perseverance and that it meets a continuing need for access to libraries by all students.

9.2 Ask the Right Question (Adam Edwards)

At (London) South Bank University (1992-1997), I managed the front of house library services, such as the issuing and return of books, shelving and coordinated services across the library building. Reporting to me was a team of front line library assistants. As a response to growing demands for better student support, their role was expanded from only carrying out operational processes to answering basic enquiries, up until then the exclusive domain of professional librarians. The Deputy University Librarian and I responded to this need by devising and delivering a training course for Library Assistants called *Ask the Right Question*, to give them the skills and therefore confidence to answer basic subject enquiries and to recognise the point at which they should refer the problem to a librarian for more detailed help and support.

The questions we taught them to ask are those which librarians regularly use to elicit information from customers, analyse their enquiries and get to the heart of the information need that they have. As has already been explored in Myth 4 (section 8.4), many customers come to a librarian with a view of what libraries can offer, which is often limited or misinformed, such as that a library is only about borrowing books. Librarians have to provide and persuade them to a more expanded view that is to the wider range of resources that libraries have, particularly those resources which are only accessible digitally. Asking the right question is key in ensuring that Library staff do not make assumptions about what a customer is asking for and do not patronise them, because at the time of that encounter they would be unaware of the basis for the customer having such a view.

The training took the participants through three stages: The basic questions regarding subject, purpose and deadlines; analysis of the topic to break it down into keywords and then devise search terms; and finally, a role play exercise

where one group member acted as student with a deliberately obscure question, with the rest of the group acting as librarians to work out the real information need. This activity was designed in a non-threatening way so that participants felt comfortable doing role play and learnt through the immersive experience.

Reflecting on this course I see some familiar themes now evident in my pedagogy:

- Clear slides telling the participants about what they are going to learn and why, linking it to their day to day roles.
- Participants working in groups on a range of exercises, giving them the chance to talk about and report back on their previous experience and learning.
- An entertaining final activity to reinforce that this was not simply an exercise in learning practical skills but was also fun.

However on reflection, I also realise that during the training the emphasis was often on 'telling' rather than 'encouraging understanding' which indicates how far my pedagogy has since developed.

Collaborating to produce the training course and materials, checking and reviewing each other's ideas and feeling able to challenge each other was a rewarding experience and made the resulting training much better. We also co-presented the sessions, a practice which I was unfamiliar with at the time. Having been used to teaching on my own, I can remember being concerned as to how this would work. However just as happens now, one of the joys of teaching *à deux* is the banter between the presenters and the opportunity to observe other teaching styles.

Following success training our own staff, we ran *Ask the Right Question* for Chichester College of Higher Education and City University. There is a clear parallel here with the way Vanessa and I have taken our public work out to peer professionals so they can learn from our experiences and we can learn from their feedback.

9.3 Interior Design Fieldtrips (Vanessa Hill)

In an earlier role as librarian for the then School of Interior Design at Middlesex University, I became increasingly involved in the planning of first year overseas fieldtrips. These fieldtrips were intended both as an educational experience and an opportunity for bonding within the student cohort. Overseas destinations were chosen for their cultural interest and architectural merit, displaying a good range of contemporary and traditional styles.

As librarian for the School, I was routinely asked to join the trip, initially as a responsible adult with a pastoral role. For many students this was their first trip abroad without parental guidance and support, so the role of *loco parentis* was essential to deal with a range of behaviour from nervousness to exuberance. As the years progressed my contribution developed and I took on a greater role in the organisation and leadership of the trips, selecting destinations, researching and creating the itineraries, as well as arranging visits to prominent buildings and other activities (see appendices 4 & 5). One notable challenge prior to a trip to Istanbul, involved me chartering a boat and English speaking guide for a trip up the Bosphorus to the Black Sea. This suggests that my professionalism was appreciated by the academic staff who were able to benefit from and rely on my organisational and information retrieval skills.

On a professional level I acted as a mobile enquiry desk during the visits, answering a range of questions, anything from “Why was the Berlin Wall built?” to “Where can I change my money?” The students made little distinction between my role on the trips and that of the academic staff present, having as high an expectation of my knowledge of architecture than of an Interior Design lecturer. Consequently I was always well prepared with knowledge of local transportation, customs and etiquette, as well as background knowledge to the buildings visited. The way that the students perceived me as one of the academic staff, suggests that if library skills are embedded in the curriculum and librarians are presented as one of the team that teaches them, then there will be a greater acceptance of IL skills as integral to their programme of study. It is also apparent that students requiring help do not necessarily approach the ‘appropriate’ person, perceiving staff available as a homogenous support network. For the student, where support

comes from is irrelevant, as long as it is available. This could be seen to make a case for virtual teams that support all aspects of academic study rather than the way that our service and the equivalents in other institutions compartmentalise support, for example 'academic reading and writing' and 'library skills'.

I accompanied the following fieldtrips for which I researched and compiled itineraries: New York 1993, Chicago 1999, New York 2000, Barcelona 2001, Berlin 2002, East Anglia 2004, Athens 2004, Paris 2006 and Istanbul 2007.

As well as being a wonderful opportunity for me, the fieldtrips showed the varied ways that librarians can support staff and students, and perhaps challenged some of the commonly held views of our professional role, foreseeing the future ontological shift of librarians in to the academic arena. In essence a librarian does not need to be physically in a library in order to be professional. My integration with the academic team also raised my profile in the eyes of the students and helped consolidate my position within the team of staff that supported them. I was able to bond with the students, becoming more approachable, as well as gaining a better insight into the course and student needs. Ultimately, involvement with the fieldtrips was a positive experience on both a personal and professional level.

9.4 Exhibitions (Vanessa Hill)

In 1995 the library manager at the former art and design campus of Middlesex University, agreed to provide a home in the library for a number of exhibition cabinets belonging to the Jewellery Department. Following the purchase of additional cabinets, I took over the management of their use and coordinated a continuous programme of exhibitions functioning effectively as the curator, until I moved campus to Hendon in 2008.

In a memo sent out to all Faculty staff in October 1995, the library manager stated that "It would seem sensible to take every opportunity to raise the profile of the Faculty by displaying the high quality and innovative work produced here to the many staff, students and members of the public who visit the library." As well as displaying student work, I also instigated a wide ranging programme of exhibitions

curated by library staff, students, technicians, academics, module groups and external individuals. In particular library staff made use of this exhibition facility to promote library resources, including the Special Collections housed in the Library. Details of some of the exhibitions and feedback can be seen in an exhibition report in Appendix 6.

Managing the calendar of exhibitions required considerable outreach, liaison, organisation, coordination and promotion across the campus with academic staff and students, as well as with external bodies such as Herefordshire College of Art and Design who curated an annual exhibition of artists' books. In addition I worked to enhance the facility through the acquisition of display stands, mannequins and further cabinets, plus installation of security fixtures and lighting.

I also curated a number of exhibitions myself or in collaboration with colleagues. These included exhibitions to support student projects, themed exhibitions to promote the Special Collections in my care or exhibitions based on individual collections such as one to celebrate the history of art and design education by Hornsey College of Art, Middlesex Polytechnic and Middlesex University since the 1890s.

From a library perspective, these exhibitions made a considerable contribution to promoting the resources available in the library in innovative and creative ways and suggested how these resources might be utilised to support student learning and development. Similarly, the facility also became a focal point for creativity on campus enabling staff and students to showcase their own work, as well as leading to some reciprocal exhibitions with other institutions. From my perspective, managing the exhibition facility enabled me to engage my own creativity and innovation in ways that have continued in the joint creation of games and activities for use in library workshops.

The exhibition facility continues to be used in a similar spirit, although I no longer manage it. However, I still use exhibitions as a way of raising awareness of resources, collaborating more recently on an Olympics inspired display to coincide with London 2012, a colour themed exhibition of items from the Samples Library and this year an exhibition of all things 'London' to welcome pre-sessional students to the capital (See Figure 3).



Figure 3: London exhibition for Pre-sessional students, April 2015

9.5 Subject Librarians Forum (Vanessa Hill)

The team of librarians at Middlesex University support staff and students within the institution. Despite being in close proximity in a shared workroom, there are generally few opportunities for us to meet together as a whole team and share best practice and discuss relevant issues.

During the 1990s opportunities to meet were even more limited as the team was spread over several campuses, so the chances for us to meet *en masse* were limited to *ad hoc* training days. In the early-2000s I was part of a small cross-campus group of librarians who believed there was a need for regular opportunities to discuss common concerns and address training needs. On reflection this shows us taking responsibility for our own professional development.

The result was a twice yearly Subject Librarian's Forum, organised and hosted by each campus in turn, run by the librarians for the librarians. The format involved presentations or training, a shared lunch, followed by a formal meeting. Minutes and recommendations were subsequently shared with the library managers. Within a couple of years the Forum had become quite sophisticated covering

cutting edge themes and often with external speakers. It was at these Forums that I was first introduced to Web 2.0, social networking and resource discovery platforms. Unfortunately with a change of structure in 2008, the Forum died out and with it the opportunity for the team of librarians to meet, discuss, share and explore issues and knowledge pertinent to our practice. Despite the obvious success of the Forum, some librarians were uncomfortable with the idea that librarians could be innovative and work independently of their managers in a constructive way. With hindsight such a response is disappointing as, we believe that unless professionals are encouraged to critically reflect and develop creatively, they will be limited in their ability to transform their practice.

Understanding the value of the Forum I raised the possibility of reviving it post-restructure and in 2011 was tasked by our Assistant Director to convene a small working group to draw up a document outlining the purpose, focus, format, organisation and membership for a new Forum. The first Librarian's Forum was held in May 2012 organised and hosted by our team, based on our use of games in IL skills workshops. The annual Forums are organised in turn by each School team, allowing for different perspectives, interests, ideas and concerns to be raised. The new Forum is undoubtedly a success and I am proud to have played a significant role in keeping the momentum going during the last 2 decades.

The Librarian's Forum illustrates my continuing desire to communicate, learn from and share best practice with my peers, be that locally or at wider level. Over my career, dialogue and discussion with other librarians and information professionals have made a positive impact on my own professional practice, most notably evidenced by my contribution to our core public work. With another restructure underway, the next challenge will be to ensure that the current Librarians Forum does not once more disappear into the abyss.

9.6 Induction video (Vanessa Hill)

At the beginning of each academic year Library staff contribute to Induction Week for new students. The Librarians' role had been to present a short introductory

PowerPoint presentation to all new students, which outlines the services, resources and facilities available.

Over several years I have been involved in improving the quality of this presentation. The original presentation prepared for us was word and information heavy, with each directorate in the library service keen to highlight information specific to them such as the cost of photocopying or details of their role. Not surprisingly, students were left overwhelmed with too much information, much of it unnecessary, and presented in a week of similar information overload from other parts of the University.

Inspired by an IL skills workshop attended in 2010 (Appendix 7) a colleague and I volunteered to revamp the presentation, considering the service from a student needs perspective rather than from an internal structure point of view. I was able to take this further in 2013, when I took on sole responsibility for updating the presentation, using only images and a simple structure which covered resources, facilities and support, plus five top tips for using the library. Using only images created a less formal and more visual presentation, with the flexibility to *ad lib* and relate content to the specific audience.

Working with another colleague in 2013, we suggested the use of a video to promote the library as a friendly and helpful place, integral to student life, instead of the usual PowerPoint presentation. We had been inspired by a video circulated on a professional mailing list by Arts University Bournemouth which was both fun and informative. Inspiration also came from conversations with my colleague around the idea that libraries can no longer assume that users will automatically come to them for information when it is ubiquitous and easily accessible. By capturing the opinions of current students on film, would enable us to present the library in a more meaningful way, rather than seeing the library from a librarian's perspective. Having submitted our ideas to the Assistant Director and gained his approval, we produced a short film to introduce new students to our service, working with staff from around the University including the Centre for Academic Practice Enhancement.

As part of the process, we interviewed a number of volunteer Student Learning Assistants (SLAs), second and third year students who support newer students in

class. We asked them a series of simple questions: What do you like about the library, what do you use in the library, what do you do in the library, and what is your top tip? All interviews were filmed and as a result we have two and a half hours of interesting and often illuminating insight into student comment, opinion and perception. Most notable were the things that library staff think are important to tell students are not necessarily the things they want to know. For example students value the silent areas of the library and the bookable group study spaces, they see the library as a social space as well as a place to study, and they refer to all resources as being on UniHub (our student online portal) rather than being on the library website. This is contrary to the commonly held perception that knowledge of the cost of printing, structure of the library and book request procedure is essential in the first week at University.

What has been produced is an introductory short film, which presents the library to new students, from a student perspective. Rather than librarians telling students what we think is important, existing students talk about what they think is important. Our Induction Week presentation is now more relevant, meaningful and memorable, presenting the library as central to student life and an exciting place to be.

The film (Hill, Patel and Rizvi, 2014) was used during Induction Weeks in September - October 2014 and Jan 2015 and proved very popular. However some librarians still felt the need to supplement it with additional PowerPoint presentations covering basic procedures, thus moving away from the original idea. For any professional to develop and let go of habitual practice that has become redundant, there needs to be the motivation to change, coupled with the opportunity to explore the possibilities through both theory and praxis to discover ways of moving forward. Lessons can be learnt from the making of our video: the concept, rationale and intention of the film needed to be made more explicit to colleagues. Also, by being reflexive, colleagues might be inspired and encouraged to reconsider their pedagogical practice in its broadest sense and move on from didactic library instruction as an approach to learning.

9.7 Queen Mary University of London training (Joint)

Following a workshop for CPD25 at Senate House (Edwards and Hill, 2013d) we were asked by the organiser to provide a day of training day for Queen Mary University of London's (QMUL) subject librarians.

This ran in January 2014 at Middlesex University (Edwards and Hill, 2014b) and was an extended version of our Senate House workshop. As part of the workshop, we ran the games and activities that we use for 1st year computing workshops, so that the attendees could get an idea of how they work, how students respond and the level of our intervention. Feedback from the attendees was positive and there were numerous questions and considerable discussion. The QMUL librarians are now using our games and activities and have reconsidered how they approach their IL teaching.

Vanessa and a colleague also presented some of the ways that they teach IL skills to art and design students through the use of objects and images (Hill and Syrratt-Barnes, 2014). While not immediately relevant to the visiting librarians, none of whom support these subject areas, it was felt that this was an opportunity to build on the morning session and stretch the boundaries of what is possible. As hoped, the attendees recognised the possibilities of some of the techniques that we use and were able to identify potential ways that they could integrate our ideas into their own practice.

We have since run three similar workshops for NHS librarians (Edwards and Hill, 2014c&f, 2015a). A librarian at the 2015 training day tweeted:



Figure 4: Tweet after NHS training, May 2015 (Case, 2015)

We have also been invited to run a one day workshop for CILIP's School's Library Group in November 2015.

We are beginning to develop a staff training formula that works, and as we scaffold our ideas with greater theoretical knowledge, we hope to take this further.

9.8 Conclusions

In this section we have outlined seven previous public works that we have created either individually or jointly. A number of themes become apparent which have proved pivotal to the success of our public works:

- The value of collaboration to enhance the quality of our work through the sharing of ideas and reflection. Our public work is a direct result of our willingness and ability to work together.
- Our capacity to be inspired, adopt ideas, think creatively and innovate to construct something new.
- Thinking strategically about our role and that of the library with a view to challenging perceptions and exploring possibilities.
- The importance of library management that support and trust their staff, encourage innovation and provide the freedom to experiment and take risks.
- A developing pedagogy which has enabled us to reflect on previous practice and create our core public work.
- A range of individual and shared skills and attributes which combined have resulted in a productive and successful collaborative partnership.

These themes are developed further in section 11.

The next section looks at how all these themes and ideas have come together in the core public work which is the centrepiece of this reflective study.

10 Our core public work: Enhanced pedagogy for improved information literacy

Our core public work is the result of joint enterprise and collaboration, stemming from a shared concern about the effectiveness of our library workshops. Our different experiences as library professionals (see section 7), awareness of issues pertaining to IL within a changing landscape and a desire to explore new teaching styles has resulted in an innovative and radical pedagogical approach. Like everything else in a rapidly changing world, it is in a continuous process of formation. What we have captured here are a few important stages in this evolution.

10.1 Inspired to change

From the start of our working relationship, it was apparent that we were both unhappy with our respective pedagogical practices. Having identified several issues which affected our ability to develop library skills within the School of Engineering and Information Sciences (now Science and Technology), it was obvious that we needed to make substantial changes. These issues included inconsistent provision between programmes, overlap and duplication between modules, lack of progression and intrusive student behaviour. Both of us were also critical of the behaviourist teaching methods we were using and were convinced that there was a better way to teach. Bowles-Terry, Davis and Holliday argue that, in information literacy, behaviourism concentrates exclusively on resources and linear procedures:

“Librarians teach the “correct” sources and the “correct” order in which to search those sources while discouraging “wrong” approaches, much like the avoidance of “text errors” in writing instruction.” (2008, p.226)

From the outset we have worked collaboratively through a process of mutual respect and appreciation of each other’s prior experience, knowledge and abilities. We constantly critique each other’s work, learn from each other and reflect on our practice, enabling continued development and experimentation.

Reflecting on our earlier practice, we agreed that the use of worksheets and demonstrations were superficial activities promoting surface learning. This provided little concrete understanding of what was being taught and we believed that students would learn better if left to investigate resources themselves. The creation of bespoke demonstrations and worksheets was also time consuming in the absence of subject knowledge and unnecessary given the technical ability of students to access online resources themselves. Indeed “what is important in the 21st century is the ability to use information for problem-solving not the technology of finding” (Kuhlthau paraphrased in Markless, 2009, p.29). Easy access to information online also provided a number of challenges, so we needed to develop students’ understanding of the value and relevance of academic resources to their study and encourage them to search resources effectively.

Sharing ideas from the professional development events that we had attended, we embarked on a process which has transformed the nature and content of our information skills teaching. It is interesting that we both found inspiration from outside our own institution. It seems that external influences can often be more powerful as they are unencumbered by the baggage of existing methods or protocols. Out of our individual frustrations came a release of creativity. What followed has made a major impact on the learning experience of the students we teach, in that we are teaching more creatively and effectively and student learning has improved.

10.2 Rethinking our teaching

This shift was achieved by going back to basics and completely rethinking the content and delivery of our training. Two workshops we individually attended were highly influential. In 2010 Vanessa and a colleague attended a workshop on teaching IL in HE led by Sharon Markless (2010), an academic at King’s College London (notes from this workshop are included as appendix 7). Following this workshop, they constructed a number of key principles, which they saw as fundamental to effective IL teaching:

- **Librarians teach 3-5 times too much:** When planning sessions they need to consider what will make the most relevant impact on the students.
- **Librarians should not try to clone their own expertise:** It is not possible to distil their own experience as librarians into a two hour workshop. They do not need to show students how to search a database, but do need to show them the value of academic resources, how to search effectively, evaluate the information found and how to use it ethically.
- **Discussion is powerful:** Librarians should find out how the students currently find information, what they already know and what they want. They should learn and discover together, without pre-designed demonstrations. Librarians can learn a lot about students' understanding from the questions they ask.
- **Learning by doing is empowering:** Encourage active participation through a variety of activities e.g. trying things out, getting feedback, solving problems, peer discussion and reflecting on mistakes. Uninvolved students are less likely to learn.
- **Students should be learners and not the taught:** The librarians' role is to support and facilitate (Hill and King, 2011).

Reflecting on these principles, we considered what we really needed to include in an IL workshop, and what could be consigned to hand-outs and online guides. With increasing pressure on the student timetable, it was essential that we make the best use of the time allocated to us. The key topics identified were:

- Understanding what the library is, what it does and what support is available.
- Appreciation of the range and value of academic resources in an academic context.
- Understanding references that make up reading lists and the use of the library catalogue to locate these items.

- Devising a successful search strategy and the use of keywords and search terms to find information required.
- Exploration of library resources to find information for a current project.
- Evaluation of the quality and relevance of information found.
- Avoiding plagiarism through the use of referencing and citation.

We also needed a way of encouraging learning without monotonous demonstrations and didactic teaching. Adam's timely attendance at the Librarians' Information Literacy Annual Conference (LILAC) in 2011 provided the inspiration that we needed. He attended a workshop on the use of games in teaching led by Susan Boyle from University College Dublin (UCD) (Boyle, 2011). By using games UCD promote discussion, reflection and peer learning, enabling the students to scaffold new learning onto their prior knowledge. This proved to be the second highly influential workshop which contributed to the development of our core public work, providing the means to practically apply the key principles in our teaching. The use of games is therefore considered in more detail in section 10.4.

10.3 Putting theory into practice

Initially we concentrated on 1st year workshops. Working with a colleague we created a mini session for each of the essential skills including a game or activity to enhance student learning. Each game was developed with a specific goal (learning outcome), simple rules, and an element of feedback to test understanding. We also took advantage of our then new resource discovery system Summon which enables meta-searching across many different resources. By only using this one search tool, the time previously spent on different yet essentially similar databases could be freed up for other activities which we would normally have had insufficient time to cover (Edwards and Hill, 2014e). Our games and activities are described in full in appendix 3.

At that time the activities included:

- Use of images to stimulate thinking of how library resources, services and facilities can be useful.
- A card sorting game to encourage students to consider the value of academic resources (See Figure 5).



Figure 5: Thinking about resources game

- A reading list exercise necessitating use of the library catalogue to locate items.
- Use of a non-subject specific image to get students thinking about keywords (See Figure 6).



Figure 6: Constructing keywords image (Parker, 2006)

- Hands-on exploration of resources, such as Summon.
- An evaluation exercise using a range of reliable and unreliable information sources.
- An exercise using photocopies of books and journal articles to help students formulate correct references.

Finally we put together an IL menu (Appendix 8) to promote the range of options available to academic staff. This model allowed flexibility to plan workshops around specific needs, time restraints and student projects. Other factors that we considered essential were that workshops should coincide with student projects and should be held in rooms with computers to allow for practical application of new skills. Seeing students at a time of need would ensure that the relevance of our workshops would be appreciated, and hands-on exploration of our resources would yield relevant and useful information that had immediate use. Orr, Appleton and Wallin agree:

“...one-off demonstration-style information skills classes delivered out of the curriculum context do not necessarily coincide with students’ need for

information, are sometimes not valued by the students, and do not necessarily prepare them for the challenges of research, problem solving and continuous learning.” (2001, p.457)

Our new workshops were rolled out during the academic year 2011/12 with some apprehension. Programmed by years of didactic teaching, it was difficult to let go of the need to tell the students everything we could about the library and the resources available. Colleagues questioned our wisdom. Could we really run library workshops without showing students how to request books or use advanced search features on databases? Some also felt that we were dumbing down workshops, although we believed that there was a need to address the skills deficit of students rather than comply with a time honoured formula. We were also unsure how our students would respond to the use of games. Would they like them? Would they find them juvenile or patronising? Would they be willing to take part in group activities and interact as we hoped? Or would they expect to have answers given to them? It seems incredible to us now that we really were not even sure if the games would work. It was totally experimental. What we were introducing was far removed from traditional library workshops and very much a step into the unknown. We are now aware that this shows us undertaking professional practice based on knowledge and experience. Having experimented with these games and activities we can now theorise on why it worked.

10.4 Games without frontiers

Games are defined as an “activity engaged in for diversion and amusement” and “a procedure or strategy for gaining an end” (Merriam-Webster Dictionary, 2015). Burgun believes that any definition of games should also make reference to ‘competition’ and ‘rules’ (Burgun, 2013). Burgun further suggests that ‘decision-making’ is an essential feature, believing that “the idea of *playing a game* feels like it should involve something more than merely measuring the strength of your arm against that of an opponent” (2013, p.2). Burgun therefore offers his own definition of games as being “a system of rules in which agents compete by making ambiguous decisions” (2013, p.3).

In addition, Zagal, Rick and His consider that ‘collaboration’ is a significant factor in games whereby “all the participants work together as a team, sharing the pay-offs and outcomes; if the team wins or lose, everyone wins or loses” (2006, p.25). Thus playing games can be a social and communal activity (Frazer *et al*, 2013). If used in a learning environment games can therefore increase engagement (Kim, 2012; Glover, 2013; Walsh, 2014; Miltenoff, 2015;) as well as “interest, motivation, retention, and the use of higher order thinking skills” (Febey and Coyne, 2007, p.93). Games also encourage development of linguistic and interpersonal skills, recognised by Gardner as ‘multiple intelligences’, which allow people to demonstrate their intellectual abilities (2006).



Figure 7: Thinking about resources game in action

Games have long been used for entertainment and education across cultures (Dempsey *et al*, 2002; Frazer *et al*, 2013; Kapp, 2016). The ancient Egyptian game *Senet* was more than just a popular form of entertainment, becoming

increasingly a means to experience the journey to the afterlife and thus became integral to religious beliefs (Maitland, 2010). The ancient Greeks similarly recognised games as being “symbolic systems par excellence” (Kurke, 1999, p.251) having the ability to help players understand military tactics, laws and citizenship. Indeed Burgun believes that “the primary and direct value that games have for us is that they teach us how to learn”, enabling us to build on existing skills, “formulate tactics, to second-guess our thinking, and to commit to a strategy” (2013, p.13). Maitland (2010) states that;

“...games can reflect important cultural concepts and the impact they can have on a wider cultural sphere, enriching creativity and even influencing our view of the world, shouldn't be underestimated, diminished, or disparaged.....gaming is a universal aspect of humanity: a reflection of who we are, a means of expressing our desires and fears and enacting basic human impulses...”.

However, Walsh (2014, p.48) cautions that “once an activity becomes compulsory, it ceases to be a game and instead becomes “work””. Research from the USA also indicates that some students dislike the competitive element of educational games (Cruz and Penley, 2014) and this might create a negative experience for them, suggesting the need to use games judiciously and as one of several instructional tools (Glover, 2013; Sailer, 2013; Hamari, Koivisto and Sarsa, 2014). What we have done is to use the positive aspects of games to create engaging learning experiences, whilst avoiding some of the risks of games such as complex rules, ‘aggressive’ competitiveness and demotivated losers. This is gamification.

Gamification has its origins in the technology industry and was quickly adopted by the business world as a marketing tool to engage customers (Cruz and Penley, 2014; Hamari, Koivisto and Sarsa, 2014). Buendía-García et al (2013, p.48) suggest that games;

“...offer an excellent opportunity to promote active learning among people who have to cope with changes in their job assignments and social responsibilities. They also provide a way to teach alternative skills outside their usual routines, such as inquiry, collaboration or reasoning abilities...”.

Sailer *et al* suggest that the “basic idea of gamification is to use the motivational power of games for other purposes not solely related to entertaining purposes of the game itself” (2013, p.28), which has great potential for educators. According to Miltentoff (2015, p.2) “gamification takes game elements (such as points, badges, leaderboards, competition, achievements) and applies them to a non-game setting” enabling participants to utilise “game mechanics and game thinking to the real world to solve problems and engage users” (Miltentoff, 2015, p.2). Gamification is described as having three main elements: “the implemented motivational affordances”, “the resulting psychological outcomes” and “the further behavioral outcomes” (Hamari, Koivisto and Sarsa, 2014), enabling a teacher to “engage people, motivate action, promote learning and solve problems” (Kapp in Walsh, 2014, p.42). Walsh suggests that the gamification of library skills activities involve neither “play” nor “formal game”, but use the “language of games” (2014, p.42). For example the use of “engaging imagery” (Walsh, 2014, p.42) is something we have utilised in our various keyword exercises, using images as interactive metaphors to act as translation tools (see appendix 3).

Games are increasingly being used in academic libraries to encourage attainment of information skills (Boyle, 2011; Walsh, 2014) because they “make not-so-fun work into something less painful and even enjoyable” (Kim, 2012, p.468). Using “games” and “play” can alleviate some of the fear that new students in particular experience when using libraries, what Walsh describes as “library anxiety” (2014, p.41). It is also suggested by Kim that people often “achieve more in games than in the real world” (2012, p.465). The social aspect of games enables students to experiment with new concepts in what is perceived as a “safe environment” (Walsh, 2014, p.41). Critics of gamification, while acknowledging its potential for engagement and motivation, question its ability to affect learning outcomes (Cruz and Penley, 2014). However surveys carried out in the USA suggest that students had a positive perception of the ability of games to help them learn (Cruz and Penley, 2014) with one student stating that gamification of learning had enabled them to think about what they had learned in class and use that knowledge in different situations (Cruz and Penley, 2014).

In using games we have found that they are not an end in themselves but have several positive advantages in a learning environment, in particular the

encouragement of discussion, reflection and understanding. We see great value in the social properties of games, using them to encourage collective and peer learning in the classroom, whilst avoiding problems of loss of face if such activities are undertaken individually. We also use social learning when asking students to explore online resources in groups, rather than working alone.

Thus the use of games in our workshops empowers students to make decisions based on their prior knowledge, plan a course of action, consider the outcomes, solve problems, absorb and consolidate new information, and learn from that (Isbister, Flanagan and Hash, 2010; Danforth, 2011; Egenfeldt-Nielsen, 2011; Kim, 2012; Frazer *et al*, 2013; Barzilai and Blau, 2014; Walsh, 2014). This is consistent with our understanding of being information literate and of constructivist learning whereby;

“...everything the learner perceives is tested against their prior knowledge: if the perceived content is consistent within the learner’s mental model of the world, it becomes new knowledge and is assimilated with what the learner already knows”. (Frazer *et al*, 2013, p.14)

Games also “allow people to viscerally experience abstracted principles.....without lecturing” (Isbister, Flanagan and Hash, 2010, p.2044) and through this provide “learning experiences that are motivating, engaging and enjoyable” (Barzilai and Blau, 2014, p. 67). Games can therefore help students transfer from the structured learning culture of school to the autonomous working culture of university, by encouraging behavioural change in the way they study (Filippou, Cheong and Cheong, 2014).

Games used in teaching require a number of elements; a goal which needs to be accomplished, rules for reaching the goal and a feedback mechanism to determine progress (Sailer *et al*, 2013). Other elements might include fun (Isbister, Flanagan and Hash, 2010; Kim, 2012), conflict, competition, cooperation, rewards (Kim, 2012; Kapp in Sailer *et al*, 2013) and motivation (Egenfeldt-Nielsen, 2011; Sailer *et al*, 2013). When using games in IL workshops, the motivation and reward are likely to be the acquisition of new skills and competencies that are relevant to the students’ academic work. Games should be quick and simple to play; easy and

cheap to create and reproduce; and have a focus and an objective (Dempsey *et al*, 2002; Boyle, 2011; Burgun, 2013).

By embracing the concept of “edutainment” (Egenfeldt-Nielsen, 2011; Howard-Jones, 2011, p.33) we are able to integrate scholarship and play (Egenfeldt-Nielsen, 2011), make learning and teaching more fun (Isbister, Flanagan and Hash, 2010) and help students learn by linking “cognition, emotion, and motivation” (Howard-Jones, 2011, p.33).

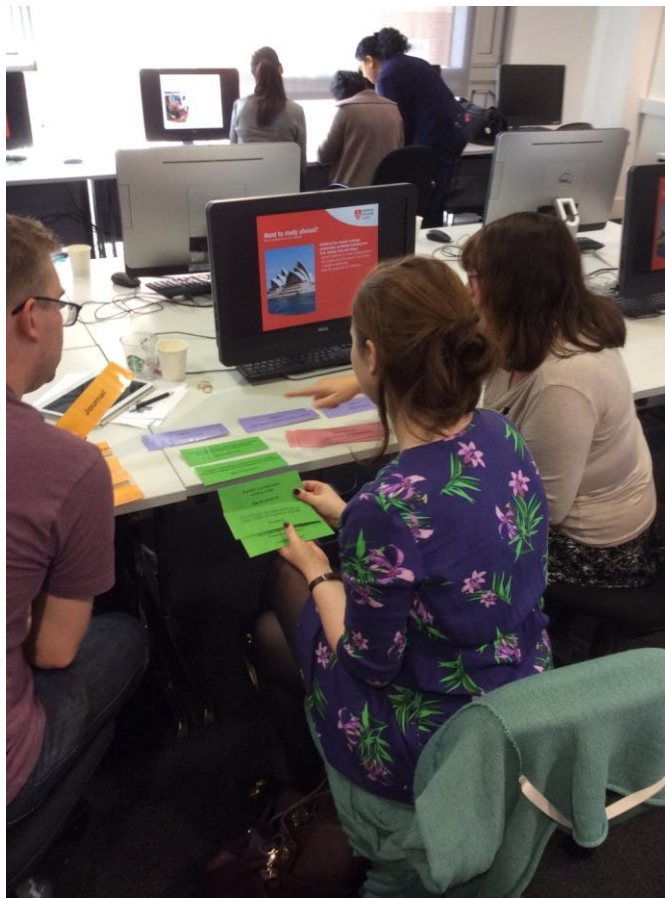


Figure 8: NHS Librarians playing *Thinking about resources game*

10.5 The proof of the pudding is in the eating

From the start, our formula has worked. By naming our first year workshops *Better than Google*, we actively challenge student perceptions of the library by letting them discover how library resources can better support their studies, rather than relying on Google as their default research tool. Students are engaged and

participate in activities. Informal feedback from students and staff has been encouraging and positively affirmed at Boards of Studies where academic staff said they had noticed a difference in students' work. Statistics gathered early on from a survey of 2nd year Computing students (March 2012), demonstrated that those students who had attended our IL sessions had significantly improved project grades and a better understanding of the use of library resources (Edwards and Hill, 2012).

From our point of view, teaching is no longer monotonous and workshop preparation had been minimised. Workshops are broadly geared towards the subject area i.e. computing or product design, so the same template can be used irrespective of the module. The only variant is the addition of current project details which the individual cohorts of students are working on. Freeing up preparation time has enabled us to spend time developing resources such as Library Subject Guides, online reading lists and online help guides covering practical library procedures such as how to request books. Ironically we now realise that the methods we use today could easily have been used much earlier on in our careers, although it is hard to imagine how these ideas would have been received by some of our previous managers or library colleagues.

During this period, Adam was studying for his PGCertHE and was peer observed as part of his assessment by the head of the certificate programme. Although this was intended as a formative observation of Adam's teaching, the fact that we generally team teach, meant that this was also a unique opportunity for our joint pedagogical practice to be evaluated by an expert in the field. The observer applauded our teaching methods and affirmed this in an email to our Head of Service and Dean of School (appendix: 9). She also made a number of suggestions of how we could build on our formula. We have successfully taken these on board, such as the inclusion of genuine marking criteria to show students how use of the library can contribute to better marks. This invariably captures the attention of students in the class who are keen to improve their grades but may not, until that point, have realised the library is relevant. We revisit the marking criteria at the end of the workshop to highlight how we have co-constructed with them the IL skills and knowledge they need to maximise their potential marks.

10.6 What do we think of it so far?

Throughout the development of our workshops, we have constantly referred back to the principles outlined by Markless and Boyle (see section 10.2), which so inspired us to make changes. How have we measured up?

- We focus on teaching a few things well and not overloading students with too much information. Each mini-session takes approximately 20-25 minutes, with first year workshops lasting no more than 90 minutes. Where a different approach is needed, as with product design, we have worked with the tutors to split the session up into three, each delivered when it best fits their curriculum.
- We use the games and activities to promote discussion, enabling them to scaffold their new knowledge on to their prior learning. Students then report back their findings and we reflect on what they have learnt. This hopefully leads to a deeper peer learning experience.
- We do not try to clone our own expertise. We allow students to explore resources in their own way. This empowers them to make choices, learn from experience and mistakes, and discover what is relevant to them in order to find useful information for their current projects.
- We encourage students to reflect on the value of library resources, rather than imposing our own views. We are conscious of the number of times in the past that we have said to students “This is useful to you because.....” without actually knowing what information they really require. We learn a lot about their needs and understanding from the questions they ask as the session progresses.
- Our games and activities are not an end in themselves, a mistake other librarians have made producing generic or complex activities. Our games are a simple and quick way to facilitate understanding. The games do not sit alone, but are used in a context of feedback, reflection and discussion.
- We make learning and teaching fun through engagement and interaction. This is partly due to the rapport between us when we teach, as well as

through our dialogue with the students. Our ability and willingness to respond to their questions and issues means that the students are learning rather than being taught.

Working and teaching together has allowed us to refresh our pedagogy. The simplicity of our lesson plans and games makes them transferable and preparation for workshops has been streamlined. The way we now teach suits our personalities. It is informal, yet effective and we enjoy the interaction with students far more than we used to do. As our teaching role has increased, the potential monotony of multiple library workshops has been avoided. Student behaviour has also been transformed as they are more engaged. Sessions are linked to current projects, so are relevant and meaningful. The use of games seems to work at all levels and across all subject areas, engaging students, while enabling them to learn in many different ways.

This also illustrates a very important issue. Traditional library teaching involves the bespoke creation of specific exercises for each module. Librarians are always trying to fit IL workshops to the subject, but IL is by its very nature multidisciplinary. As part of a wider team, we are at times asked to cover workshops for colleagues. This is a daunting prospect as inevitably sessions are for an unknown subject area, using resources that we are not familiar with. In addition, it is difficult to use someone else's lesson plan and demonstrations. However with our new approach, we have been able to transfer these workshops into our own template and have been able to successfully run sessions for a number of programmes outside of our normal subject area. Colleagues in different subject areas are also using some of the same basic tools to great effect, for example, with the pre-sessional, business, health and criminology programmes.

10.7 Developing our practice

We continued to develop and fine tune our IL menu (see appendix 8) as we rolled it out to all years, ensuring that there was no duplication. For example, workshop content has been coordinated with the Learner Development Unit (LDU), who provides support for academic reading and writing, communication and numeracy

through Academic Writing and Language (AWL) Lecturers aligned with each School. As a result we no longer cover plagiarism in our workshops, leaving that to the AWL Lecturers, who have expertise and time to deal with this major issue in the more relevant context of academic reading and writing.

As a consequence of other developments, such as the induction week video and online reading lists, we have been able to reduce the number of key information skills we include in our workshops, as we no longer need to address 'What the library does' and how to find reading list materials. We now concentrate on:

- Thinking about resources
- Keywords
- Exploring resources
- Evaluation

These four elements now form the basic framework for all our workshops at all levels.

As we rolled out our workshops across all years, we needed to develop additional games and activities, always keeping in mind those principles which initially inspired us. A number of new games have been devised and trialled on our colleagues before being used with students. Some have worked and continue to be used, while others have not been so effective, for example, a game developed for third year students where they matched resources against different scenarios of information need. Had we been more reflexive, we should not have assumed that our students had the knowledge to participate and the activity merely acted to highlight their lack of understanding rather than activating prior knowledge and scaffolding new learning upon it. We therefore developed other activities to bring out the knowledge they already had. This reflective process has enabled us to develop a progressive programme of workshops for all years, which goes some way to successfully developing student IL skills. Outlines of our workshops for all years are available on JORUM (Edwards and Hill, 2013a and appendix 3).

Throughout the process we have been open to new ideas and, again, external sources have inspired us to experiment further. For example, we were very enthusiastic about the work of a fellow presenter at an Art Librarians Society

(ARLIS) workshop in 2013, on ways to further develop how we instil IL for visually stimulated product design students. Alan Turner (Arts University Bournemouth) described in his presentation how he uses images to encourage his students to be curious and thus enhance their work through research and discovery (Turner, 2013b). Alan's ideas consolidated and made sense of techniques that we were already using with product design students, and enabled us to further develop a more logical programme of workshops which built on each previous session.

The enthusiasm and support of 1st year product design tutors has enabled us to experiment with radical ways of encouraging students to use information to feed their creativity based on Alan's ideas. What we now offer to product design students is based on the key information skills that we have identified, but is presented in such a way that sessions are fully integrated with their coursework and needs, and barely resemble traditional library workshops. In one of these sessions, we use images to prompt deeper thinking about terminology that can be used and the questions they must ask in order to find information about that image (See Figure 9). By being curious about the image, the more inspiration they will have and the more their creativity will be stimulated. These skills are then immediately applied to a real project, thus consolidating their learning. This activity is described in more detail in JORUM (Edwards and Hill, 2013a and appendix 3).

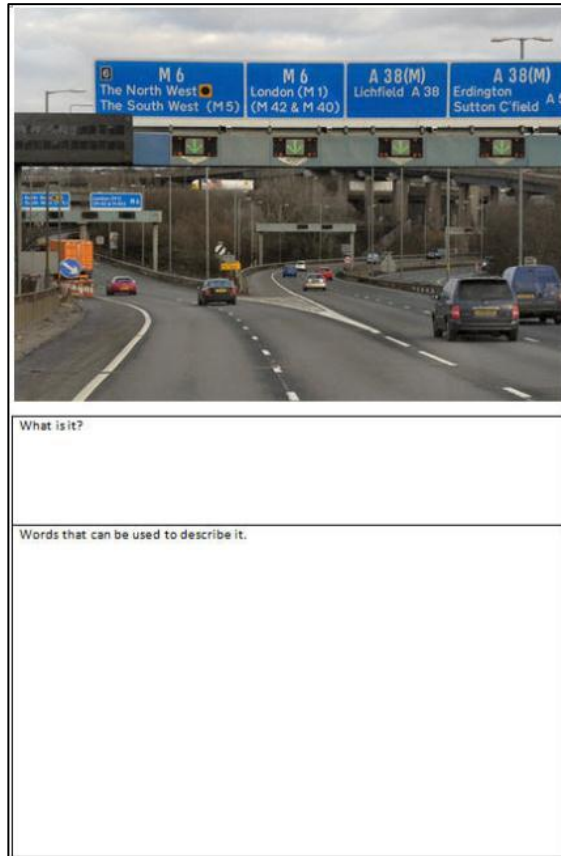


Figure 9: Second year *Keyword* activity

This work then fed into further developments for computing programmes. For some time, we had misgivings about the workshops run for second year computing students and decided that these needed to be completely reworked. Having covered basic IL skills in the first year and with the prospect of more focussed research skills for third years, we needed to consider what is of greatest benefit for second year students in a library workshop.

We hoped to encourage the students to be more inquisitive about their research topics and to build on the searching skills introduced in the first year, in particular choosing keywords and using the right language to search. We also wanted to introduce a broader range of resources above and beyond what is provided by the library. Given that when students leave education, they will not have access to many of the resources that we offer, but will still need to retrieve good quality information when in the workplace, the ability to be critical and selective of open-access resources is essential (Abson and Lahlafi, 2013).

We had already developed and were using an enhanced version of our first year *Thinking about resources* game, which introduces a wider range of reliable and unreliable information sources such as company and charity websites, social media, market research reports, standards and multiple-authored websites such as Wikipedia (*Sources* game, Figure 10). However, we wondered if we could incorporate some of the methods that we had used with product design students into these second year workshops, in particular the use of images to stimulate students' curiosity and enhance their work through research and discovery. Just as with our original use of games, we worried about how successful this approach would be with students from a non-creative discipline.

We were further inspired by a workshop that Vanessa attended in March 2014. Material was presented in a way that encouraged delegates to select what was most relevant to them and to explore in their own individual way. Taking on board this idea, we now ask second year computing students to investigate a range of relevant information resources (library and open-access) select their favourite and present to the rest of the class how it might be useful in their studies (*The Envelope Game* is described in more detail in Appendix 3). Again this echoes Sharon Markless' idea that students should be allowed to discover the library for themselves and find out what is best for them, rather attempting to clone ourselves (Markless, 2010).

The second year computing workshops are now significantly different to the first and third year workshops, and aim at encouraging students to actively ask questions about their research topic through the use of images and explore a variety of resources to retrieve answers in a more imaginative way. We believe our reflection, ability to be inspired and willingness to take a risk has improved them significantly.



Figure 10: Sources game

10.8 Spreading the word

Our ideas, games and lesson plans have been shared widely with academic and library colleagues at both our Hendon and international campuses (see section 4.1). They have been well received by librarians from other institutions and several are using our games including the London School of Economics (where it was used in workshop 2 of the SADL project (SADL, 2015; Secker, 2015)) and Universities of Surrey, Derby, Cardiff Metropolitan, Bath, Hertfordshire and Huddersfield. In response to continued requests for further information, we have made our lesson plans, games templates, details of activities, presentations and suggested instructions on how to use them available on Jorum, which is an established JISC funded repository of free open access educational resources within further and HE community (Edwards and Hill, 2013a). Statistics from JORUM show 4,599 downloads between June 2013 and May 2015, which includes users in Russia, China, South Africa, Puerto Rico and Singapore.

We have encouraged feedback from institutions that are using our games and activities. For example, colleagues from the University of Huddersfield noted that students were much more engaged than when traditional methods are used. Other libraries have reported successful use of our keyword and resources games,

in particular the discussion and interaction engendered by them, despite having unfounded concerns that the activities would be too easy for their students (Appendix 1).

Articulating our principles and ideas in these ways, has helped consolidate our pedagogy and enabled us to reflect on the success and impact of what we have achieved. This is evidenced by the profile we are developing within the profession which goes beyond the sector in which we work.

10.9 Conclusions

Our core public work developed out of the need for better quality teaching in University libraries within a dynamic and changing environment. By sharing our work we are enabling other librarians to consider their own practice, as well as enabling us to build on ours through continual reflection and reappraisal.

The themes apparent in our previous works which have been crucial to the success of our core public work are outlined in the next section.

11 Conditions for innovation

The previous sections have looked at the context in which we work, the cross section people we support, some of the myths surrounding our profession, our earlier achievements as we have evolved as professional librarians and the core public work which is the culmination of this development so far.

Having described our public works in detail we now go on to examine the key themes which emerge from them. An overarching theme is that of innovation through:

- Our changed practice,
- Inspiration from and collaboration with other professional experts,
- Iterative development using our own and others experiences,
- Support from our enthusiastic managers,
- Our professional skills and expertise,
- Transformative teaching, enabling students to create new knowledge from information,
- Sharing our work with our peer professionals so they will innovate further from what we have learned.

All of these created the right environment for our core public work to be created and continue to aid the development of what we do. Our public work has been innovation through the synthesis of what we have learned from others with our own and our peers experiences and expertise, not least thanks to their generosity in sharing them with us. This fusion of sound pedagogical ideas from Markless and the use of games from Boyle as the means of implementation has created an approach to teaching specifically designed to promote learning through discussion and doing, radically different from anything we have seen elsewhere. Moreover, the games and activities we have created have, in many cases, provided educational activities which have not existed before. The original *Thinking about resources* game appears so far to be unique, hence its adoption by other libraries.

We have continued to innovate to further develop our practice and our approach to pedagogy and in our turn are sharing our work with our peers to encourage them

to further innovation and development in different contexts, as shown by our work with NHS and School librarians. The image below illustrates the creative output of one of these training sessions:

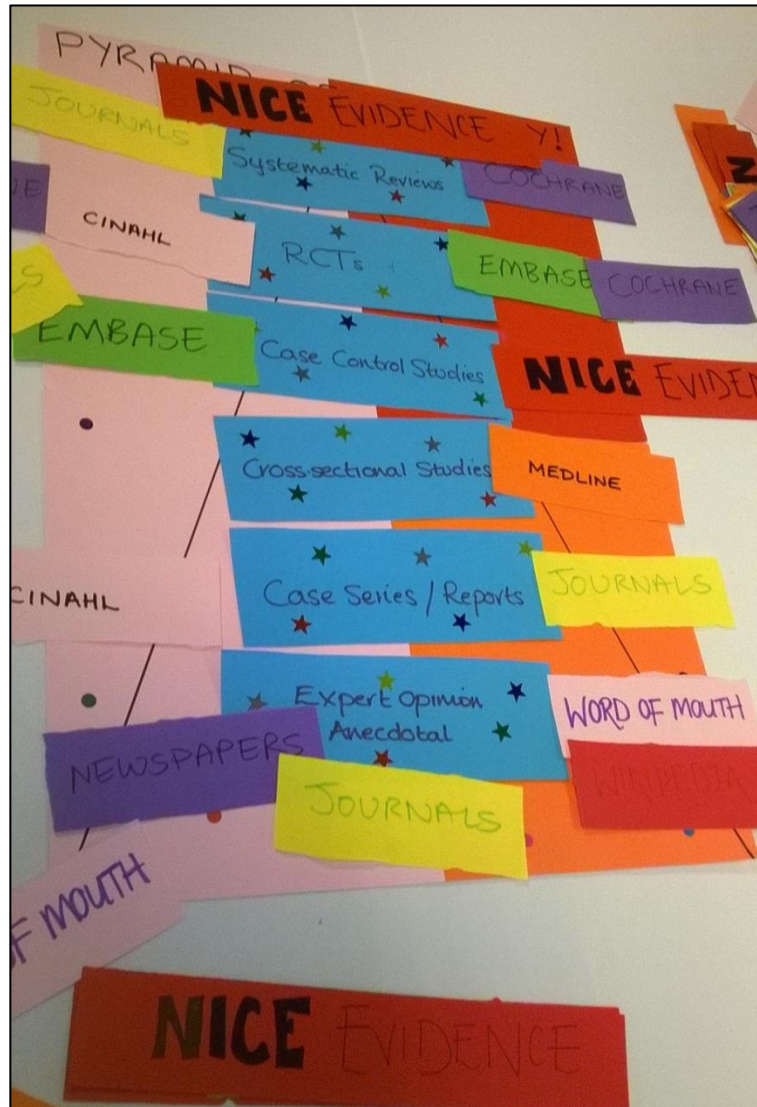


Figure 11: Game produced during NHS workshop, May 2015

This section illustrates the application of our approach in the further developments of our public work. As we shall see later, we will use this new knowledge gained from reflecting on our innovative changes to propose wider developments for both Middlesex and the librarian of the future.

11.1 Inspiration

Throughout our professional careers, we have both been inspired by a variety of external influences, which has enabled us to think differently, embracing new and often radical ideas and concepts and applying them innovatively to our professional practice. As we have seen, our core public work, the ideas of Sharon Markless (Senior Lecturer in Higher Education, King's College London), Susan Boyle (Liaison Librarian, University College Dublin) and Alan Turner (Librarian, Arts University Bournemouth) have made a major impact on our understanding of learning and teaching and the practical aspects of IL provision (Markless, 2010; Boyle, 2011; Turner, 2013b).

This ability to be open to new ideas, concepts and opinions has enabled us to utilise a wide array of stimuli, which has ultimately led to a markedly different outcome from what we first envisaged in 2011. For example a presentation by Coonan and Secker at the British Library (Coonan and Secker, 2014) encouraged us to see beyond our insular role as merely being the providers of workshops that enable students to use library resources. As a result we have been motivated to pursue their idea of the IL curriculum as a means for the librarian of the future to engage more productively with the wider academic community and potentially a role in reshaping the University's approach to the delivery of wider academic literacies. This is described in more detail in section 12.

While professional development opportunities have provided important stimulus for change in our professional practice, so has a process of informal crowdsourcing. Conversations and discussions with colleagues have enabled us to collect a variety of ideas which has led to the development of several of the games we use in teaching.

11.2 Collaboration

Collaboration has been a major contributor to the development, implementation and promotion of our core public work. According to Gray, collaboration is a process:

“Through which parties who see different aspects of a problem can constructively explore their differences and search for solutions that go beyond their own limited vision of what is possible.” (Gray, in Thomson and Perry, 2006, p.20)

Our concerns with our teaching practice have already been described in section 10.1. With a common aim of redesigning our library workshops to address our concerns, the initial solutions came as a result of individual inspiration stimulated by Markless (2010) and Boyle (2011), which we have been able to synthesise with existing knowledge to create something new. Pisano and Verganti comment on the growing importance of utilising the ‘wisdom of crowds’ as a form of open collaboration (2008, pp.78-80), and throughout our journey we have collaborated formally and informally with a range of people to make things happen and affect change. Most notably the development of the image as a metaphor when teaching about keywords (Figure 6) and a workroom discussion around the television game show *Snog, Marry, Avoid*. This collaboration resulted in the reference list activity that we now use with third year students to encourage reflection on the suitability of information sources used in their academic work.

Collaboration enables individual ideas to be merged and developed to create a shared outcome, which far exceeds the initial aim (Schrage, in Montiel-Overall, 2005; Gray, in Thomson and Perry, 2006). For us our core and prospective public works and indeed this statement surpass what we initially set out to achieve. Our ability to work in partnership with each other to achieve a common goal shows the power of such collaboration. What is significant in our collaboration has been a willingness to find mutually acceptable solutions to our initial problem, without the spectre of individual interests taking precedence in the process. A comment by a public agency director quoted by Thomson and Perry perfectly describes our own experience, in that collaboration is:

“..transforming in the sense that you don’t leave the same way you came in. There’s some sort of change. You give up part of yourself. Something new has been created. Something happens differently because of the process.” (2006, p.20)

Our collaboration has had a major impact on both of us. From an initial starting point of frustration and unease with our situation regards teaching, we find ourselves being listened to and acclaimed by our peers, with a string of publications, workshops and presentations to our names. As another of Thomson and Perry's public agency directors stated:

“Collaboration is the act or process of ‘shared creation’ or discovery. [It] involves the creation of new value by doing something new or different” (2006, p.20).

The continued interest in and downloads from Jorum of our material suggests that we have indeed created something ‘new’ and ‘different’ out of existing ideas. Jorum enables us to share forward the innovations we have made from the expertise of others. We realise that in order to develop our vision further requires more extensive collaboration at an institutional level. This is described in more detail in section 16.5.

As the role of librarians has changed over recent years, observers have acknowledged the increasing importance of collaboration for librarians (Bell and Shank, 2004). Partridge believes that “collaboration is no longer just an optional extra” (Partridge, 2011, p.259) because librarians need to develop new networks outside of the physical library. While our early joint collaboration enabled us to change the way we teach, the issues of repetitive and inconsistent provision required collaboration outside of the library. We took the opportunity to work with the School's Learning and Teaching Strategy Leader (LTSL) to bolster the importance of IL in the School's employability strategy in the hope that this would lead to increased take-up by programme and modules leaders. Sun *et al* believe that “such collaboration tends to feed on itself, promoting a sense of community and providing opportunities for further collaboration” (2011, p.327). Indeed this was our experience, as our initial partnership with the LTSL resulted in a further partnership which included the School's AWL Lecturer to address and promote employability issues within the curriculum. Ultimately this led to changes in how we ran our workshops to avoid duplication of effort and as a result, a number of publications and conference presentations (including Smith and Edwards, 2012a&b; Smith *et al* 2013).

At a local level, collaboration has enabled us to work together and with others to challenge and rethink what we do. Roschelle believes that the “crux of collaboration is the problem of convergence: how can two (or more) people construct shared meanings for conversations, concepts, and experiences?” (1992, p.235). On occasion we have experienced conflict and disagreement, but trust and appreciation of each other’s professionalism enables such conflict to be constructive, as well as a democratic approach to decision making. Indeed, far from being dysfunctional, managing conflict within collaborative partnerships should be “used as a tool for providing insight into different aspects of ‘the other’ parties relational attitudes” (Vaaland, 2004, p. 447) leading to insight and innovation. Conflict with library colleagues who have doubted and, in some cases, still doubt the efficacy of what we have done has caused us to reflect and add context and justification to our work.

In the rapidly changing environment that librarians find themselves in, the need to respond to it and evolve accordingly is necessary. Thomson and Perry (2006) believe that a number of factors have contributed to the increased need for collaboration including advances in technology, reduced resources and mutual reliance of different parties within organisations. Librarians no longer have a monopoly on information, nor should the profession consider themselves as purveyors of knowledge in isolation from the academics and other stakeholders. As Secker points out students do not “compartmentalize their learning into neat units” (2011, p.23), so why does academia insist on separating the provision of knowledge, skills and support? It should therefore be incumbent on the librarian of the future to extend local collaboration into the academic arena and actively seek opportunities to work on an equal footing with our academic colleagues in the epistemological process. As such librarians should move from a “passive liaison model” to a “proactive consulting model” (Donham and Green, 2004, p.315). As Weetman DaCosta points out:

“Osmosis does not work for the development of information literacy, but neither does it work for effective collaboration between librarians and faculty” (2010, p.218).

11.3 Supportive management

No librarian can innovate without the support and backing of their manager. There is a close correlation between job satisfaction and performance, both in executing the basic functions of a role and in the willingness to carry out additional initiatives and innovate, which can be described as task and contextual performance (Borman and Motowidlo, in Peng, 2014). When management creates the right conditions, then this enables a team to collectively add value to an organisation (Peng, 2014). We have been fortunate in having the continued support of the University Librarian and, in particular, our Assistant Director (Library and Learner Development) for the development of our professional practice over the last few years. A copy of the management structure within our Library and Learner Development (LLD) directorate is included in appendix 10.

A significant influence on Adam's career development was a strategic management course attended during which he met our current University Librarian. Adam reflects:

One of my motivations for applying for my current role at Middlesex University was my expectation that a library led by this manager would be an innovative and creative place to work. The skills learnt on that course have also enabled me to gauge organisational politics and think imaginatively as a manager, helping me to empower my team to enhance their task and contextual performance.

Both of us have experienced line managers who believe in giving orders, imposing their own view, who take ideas from their team and present them as their own and who consequently stifle creative discussion and innovation. This is doubtless a product of their experience of being managed or an indication of their unsuitability for the management role. As a graduate trainee librarian, Adam was once advised by a manager "Do not get ideas above your station in life, young man" and Vanessa was told that she could do what she wanted in library workshops as long as she followed the style and format that her manager preferred. Such management is clearly short-sighted and guaranteed not to get the best results.

Peng suggests job satisfaction is derived from both 'intrinsic' factors, namely a "sense of independence, responsibility [and] achievement", and 'extrinsic' factors, such as recognition received through pay and the working environment (Peng, 2014, p.75), both of which contribute to an employee's motivation to enhance performance. As librarianship is considered to be a "helping profession in a non-profit service industry" (Peng, 2014, p.80), the suggestion is that intrinsic job satisfaction is more significant as the "attraction of a career in librarianship does not stem from remuneration or prestige, but from a sense of fulfilment that can be obtained by assisting others" (Drake, in Peng, 2014, p.80). This would certainly be our experience having been given the freedom to experiment and innovate and the recognition and support from management and colleagues.

As we have seen in the context of our public works, a hierarchical management style is very much a product of the way libraries used to be run along process driven formal structures with rules for everything. For managers, allowing team members to be creative means trusting people to 'run with' their ideas and find their own way, giving them space to do this and accepting that sometimes there will be failures which have to be learnt from. For example the willingness of our Assistant Director to allow Vanessa and her colleague to create a video for Induction Week (as described in section 9.6) and to revive the Subject Librarians Forum (section 9.5) clearly demonstrates this and has been vital in enabling us to develop our public works at Middlesex. Given that staff are the biggest cost in any library, it is essential that library managers nurture talent and develop their staff to their fullest potential. While staff development opportunities have been critical in inspiring and influencing our core public work, our management have also recognised the value of 'non-salary- based driver[s]' (Peng, 2014, p.80), i.e. intrinsic factors, in stimulating performance.

Critical to the success of our core public work has been the respectful and appreciative relationship that has developed between us during a pivotal period in both our careers. Under the umbrella of a supportive manager, and through our complementary skills, we have been able to make worthwhile innovations. So what skills did we jointly bring to our enterprise and how have these had an impact on our public work? One of the key skills we have is a sound approach to pedagogy.

11.4 Pedagogy

Pedagogy as a concept has gained increasing importance in the vocabulary of librarians in the last few years, with much space in professional literature dedicated to its exploration. It is defined in various ways, but can be simply understood as the style of teaching and strategies used by an individual to impart knowledge (Bewick and Corral, 2010) or as Simon puts it “the science of teaching” (Simon in Bewick and Corral, 2010, p.99). More recent explanations of pedagogy also acknowledge the growing IL agenda by referring to a process that influences and manipulates the student learning experience through development of skills not traditionally associated with library workshops, namely critical thinking and reflection (Bewick and Corral, 2010).

A theme running through our public works is the evolution of a shared pedagogy through an iterative process of trial, review and reflection which mirrors Kolb’s learning cycle (1984). While the development of our IL workshops has been primarily instinctive, we have nevertheless implicitly and explicitly integrated a number of key pedagogical ideas into our teaching practice. Through a growing appreciation of the theories of learning and teaching, especially following Adam’s completion of a PGCertHE in 2013, we now have a sound theoretical footing for what we do. This section looks at those ideas in more detail.

One thing that has become less convincing to us is the way many librarians teach. There is a still tendency by some to adopt a behaviourist approach, where a teacher imparts their own skills to the students in a structured, linear way (Wang, 2006; Bowles-Terry, Davis and Holliday, 2008), what Markless describes as a “transmission model of teaching” (2004). Typically teaching is in the form of either a lecture with limited discussion or in workshops where students are required to work through a quiz or follow a list of instructions in order to learn how to find information. The belief being that learning occurs:

“...through demonstration, imitation, practice and drill...” (Montiel-Overall, 2007, p.45).

The challenge here is that librarians may reflect negatively on the teaching experience if they see that the students are bored, but rather than reflexively

taking responsibility for this and changing their practice, they assume that this disengagement is simply inevitable. Jacobs points out that as learning and research are an “inherently messy process” (2008, p.258), prescribed methods of teaching lack the required flexibility, amounting to little more than the “pedagogy of the oppressed” (Freire, in Jacobs, 2008, p.259). This risks being a style of learning that closes the mind, that holds the human being in a place of powerlessness to the point of no longer being able to recognise how or why the world around them is structured in the way it is and thus inhibiting the recognition and realisation of their own agency in the world. Students simply follow the instructions without thinking and as a consequence only engage in surface learning; anything taught is almost immediately forgotten. This is frequently evidenced by third year undergraduates asking for help with things we know they were taught in their first year, the point being that they were taught, they did not learn. These issues are echoed in the comments of our academic experts, explored in section 15.

We concur with the notion that the role of the academic librarian is to provide students with “the tools to allow them to learn how to learn, rather than providing them with specific learning” (Chen and Lin, 2011, p.407). Students need to be able to apply the most appropriate search strategy to any situation, so therefore require an awareness of different search techniques as outlined by Bruce, Edwards and Lupton (2006). An abiding principle of our joint pedagogy has therefore been the avoidance of didactic methods of teaching such as demonstrations which, like several observers, we consider tedious for students and ineffectual (Bell, 2007; Hsieh and Knight, 2008). By engaging a constructivist approach, whereby students explore resources themselves and learn by trial and error, they will develop a deeper understanding of the process (Biggs, 2003; Markless, 2004 and 2010; Farrell, 2013) and have a more “powerful learning experience” (Bell, 2007, p.107).

We believe that our role is to create enhanced links between what we know as librarians and the knowledge that students develop as a result of their interaction with us (Boyer, in Peacock, 2001). We see our role as that of facilitators, offering guidance when required (Ferrer Kenney, 2008) to enhance learning development above and beyond what the individual can achieve on their own i.e. the zone of

proximal development as explained by Wang (2008). Ultimately we aim to “stimulate active, not passive, learning and encourage students to be critical, creative thinkers with the capacity to go on learning” (Boyer, in Peacock, 2001, p.28).

By enabling exploration and critical reflection, for example when evaluating the information found, our teaching is “a process by which the learning stage is set” (Peacock, 2001, p.28). This method reflects Kolb’s experiential learning theory, where group learning is reinforced through a process of experience and reflection (Kolb, 1984). As Chickering and Gamson point out:

“Learning is not a spectator sport. Students do not learn much by sitting in classes listening to teachers, memorizing pre-packaged assignments, and spitting out answers. They must talk about what they are learning, write about it, relate it to past experiences and apply it to their daily lives. They must make what they learn part of themselves.” (1987, p.4)

This implies the constructive alignment of the students’ prior knowledge with the learning we need to encourage (Chen and Lin, 2011). Key to this is the need to activate students’ prior knowledge through reflection in a responsible and flexible environment, so that new knowledge can be scaffolded on old (Ausubel, 1968; Markless, 2004; Wang, 2006; Montiel-Overall, 2007; Bent, 2008; Bowles-Terry, Davis and Holliday, 2008; Hsieh and Knight, 2008; Chen and Lin, 2011). By being able to build on their current practice, students are more likely to internalize and reuse their new skills. Indeed the literature suggests a high correlation between prior knowledge and performance (Dochy, Segers and Buehl, 1999).

Bell believes that if students are encouraged to demonstrate their existing skills, this can also alleviate a syndrome he describes as IAKT (“I already know that”) and he states that “Involving students in the instruction session is a dynamic way to activate student learning” (Bell, 2007, p.100). Yet many librarians might consider this too risky. There is inevitably a lack of control, as workshops become more fluid. However, our experience shows that letting go and responding as issues arise as a “co-learners” (Wang, 2006, p.156) is pedagogically much more effective. By letting students have a go themselves, realise what they do not know learn from their mistakes and accomplish what they need to do, the learning

process is much enhanced (Markless, 2010). Bell also suggests other advantages whereby “moving beyond rote instructor-prepared search demonstrations will serve to keep librarians engaged in their own instruction sessions” (2007, p.100), which again is our experience.

In order therefore to enhance student performance, activities need to be constructed to activate student’s prior knowledge. Fortuitously the innovative new games and activities we have developed do just this. For example the card game we use with first year students, *Thinking about resources*, encourages them discuss and reflect on the resources they already know such as books and web pages. We then build on their existing knowledge by introducing less familiar resources such as newspapers, trade journals and academic journals. Through discussion and feedback, students can clarify what they already know and improve on what Leckie describes as a “coping strategy” often employed by students in the absence of real skills (Leckie, in Weetman DaCosta, 2010, p.210). This counters the academic assumption that IL skills can be easily learnt (Badke, 2010).

A number of our other games and activities follow this same format, i.e. exploration of what is currently understood, followed by introduction of new ideas and concepts and the opportunity to reflect and discuss within a peer group thus developing new understanding e.g. post-graduate *Sources* game and third year *Criteria evaluation* game (see appendix 3 for more detail).



Figure 12: Third year *Criteria evaluation* game

The techniques we employ acknowledge that students “come to the learning setting with a rich cultural background of experiences capable of supporting their development as information-literate individuals” (Montiel-Overall, 2007, pp.52-53). Knowledge is provided by an expert and appropriated by the students for their own purpose. Gadamer, the eminent philosopher and major contributor to our understanding of understanding (hermeneutics), suggests that the way people understand is dependent on their own context and the pre-judgements that they have are crucial to this process (Ramberg and Gjesdal, 2014). Through the use of our games we endeavour to change the conditions in which understanding can take place, rather than imposing a procedure for understanding. Discussion also enables us to correct misinformation and misconceptions about the library e.g. students assuming the library is simply the print collection and being unaware of all the electronic resources we have. Challenging misconceptions is essential in case they conflict with the new knowledge we give them (Dochy, 1999).

There is also a danger of repetition in library workshops, when the same instructional format is rolled out every year throughout a student’s programme. This can often result in behavioural issues in class and a general unwillingness to learn. Thus the “burden is on the librarian instructor to employ pedagogical methods that will enable students to distinguish between multiple sessions to recognise their distinctive and differential features” (Bell, 2007, p.99). For students, there must be the motivation that what they are learning is both useful and relevant (Jacobs, 2008). Through the use of games and activities as part of a progressive programme of workshops, we have been able to stimulate engagement and learning even with those most likely to disrupt the session.

Tobias suggests that emotional involvement stimulated by interest also leads to enhanced performance (Tobias, 1994). He suggests that the use of visual imagery helps the recall of personal experiences and images used in teaching material helps the recollection of the information. Thus our PowerPoint slides are image rich, as shown by the example below (Figure 13), inspired by Alan Turner (2013b):

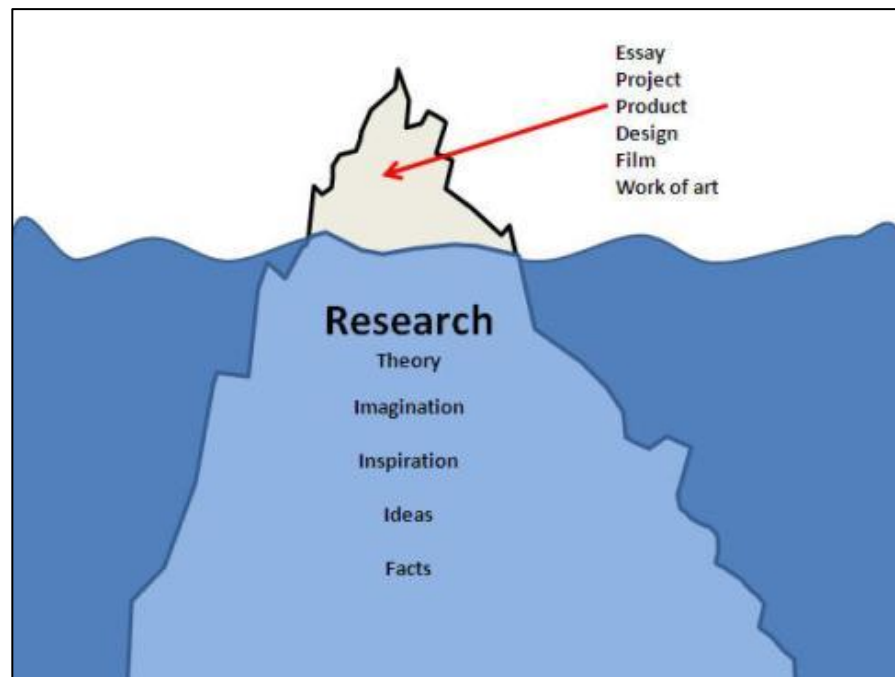


Figure 13: Iceberg image used in presentations to explain need for research

Our first year keyword activity uses the metaphorical trick of an image, seen in Figure 6, to prompt thinking about different words that can be used to describe it. The same process is then applied to the actual project the students are working on to generate useable search terminology.

We aim to make our sessions fun for the students and as Danforth suggests “how you learn makes all the difference” (2011, p.67). If people are laughing at our jokes and amused by the activities, then they are really emotionally engaged and participating in the workshop in an active way. Engagement is also fostered through “collaborative learning” (Wang, 2006, p.150-151), encouraging students to make decisions, voice opinions and learn from each other in a community of practice (Bowles-Terry, Davis and Holliday, 2008; Ferrer Kenney, 2008). Thus when students work in groups to explore *Summon*, they make a collective choice of what search term to use, and what filters to utilise. Inevitably they will make mistakes, but they can learn from this and develop a deeper understanding of the process. This enables students to gradually build a shared understanding through the modification and fine-tuning of their collective prior knowledge, what Roschelle describes as “convergent conceptual change” (Roschelle, 1992). Chickering and

Gamson agree believing that “learning is enhanced when it is more like a team effort than a solo race. Good learning, like good work, is collaborative and social, not competitive and isolated” (Chickering and Gamson, 1987, p.3).

As our pedagogy shifts, we have become increasingly aware that people learn in different ways. The range of activities we use in our workshops address this principle that teachers should allow for different learning styles and use a range of approaches and activities to develop the IL skills of students (Peacock, 2001; Markless, 2004; Stubbings and Franklin, 2006; Jacobs, 2008; Web and Powis in Bewick and Corral, 2010). Bell suggests that librarians need to be more creative in how they present IL (2007) and Bruce, Edwards and Lupton challenge the profession to try something different in order to develop our professional practice (2006). This has been acknowledged by Turner in his *Ideas Factory* (2013b) and has inspired our own workshops. Through the use of alternative methods of teaching, librarians can go some way to helping students realise that they may know how to use a computer but not how to use a library, thus ensuring that IL skills gain greater significance and importance.

For the future, we also need to consider different learning mechanisms for remote students. As the number of distance education students increases, can our games and activities migrate into a digital environment? As the games and activities do not stand-alone and are supplemented by peer learning, feedback, discussion and reflection, a major question for us is can we replicate the group experience online? This has not been a big issue for us thus far as the programme areas we support have not yet successfully developed distance education programmes. However, this is something we need to explore and is next on our research agenda.

One of the fundamental building blocks of our public work is that we have proved ourselves to be pedagogically sound. We have developed a jointly agreed and understood method and practice of teaching based on an understanding of key theoretical concepts and ideals. Through widespread outreach, we have been able to sow the seed of our pedagogical practice in a range of sectors offering other librarians a different way of providing IL teaching.

11.5 Other skills and attributes

We have shown how our ability to collaborate and build on our inspiration has been essential to the successful development of our public work. We have also looked at the pedagogical skills that we have developed as a result of these abilities. There are many things we do and think which are implicit and we take them and others take them as givens. These, we would say, are to do with the profession of being a librarian, or rather to do with our professionalism as librarians. This critical engagement with our accumulated knowledge and experience has given us the opportunity to make this implicit knowledge explicit. This has been helpful, not only in supporting our confidence to research, but to explain better to others what it is we do, how we do it and most importantly why. It has helped us to unpack notions of profession and professionalism. Librarians need to be professional, honest to the expectations of our profession. However many do not see librarians as professionals like lawyers or doctors, they see us as some form of civil servant or teaching assistant. We see this as a key issue for the librarian of the future and which is explored more fully in section 16.3.

First and foremost, like all librarians, we are used to working within a well organised environment and with efficient systems and have contributed to the development of these during our careers. Schemes like UK Libraries Plus (9.1), and the programme of exhibitions (section 9.4), could not have worked without effective management and well thought out processes and procedures. Neither could the fieldtrip itineraries (section 9.3), or training days (see sections 9.5 and 9.7) have been successful without the instinctive organisational skills that we bring to the process.

Librarians are also traditionally good at finding the information that customers require. Even the most basic enquiry work necessitates drawing out the information need from them and constructing an appropriate way forward in a meaningful way. Librarians take an often poorly defined need or problem and, using solid searching techniques acquired from years of experience, weave together the necessary connections to resources, ideas and people, into a constructive “metissage”. Laplantine and Nouss (1997) argue that each

'metissage', each connection, is a unique and specific moment which creates its own path, something true of many encounters between librarians and their clients.

To be able to function as Liaison Librarians, the ability to present and translate information to customers eloquently is essential, a theme we return to in 13.2.2. When teaching, presentation becomes a performance. While we would never claim to be actors, the development of a successful formula for the delivery of IL skills training (section 10.3) has enabled us to engage our audience, encourage participation and, in complete contrast to our 'professional' image, make teaching fun and entertaining for all involved. These skills have also enabled us to present our ideas to wider audiences, win 'arguments' and successfully demonstrate alternative ways of doing things (see section 4.1).

Our public works also demonstrate the maverick nature of our professionalism, as we have innovated through non-traditional methods. Adam took the initiative to connect a local library access scheme and link it to a national development which culminated in the creation of UK Libraries Plus (section 9.1), despite being told it would never work. Similarly Vanessa and her colleague took the initiative to propose the creation of an induction video believing that the existing presentation was ineffective (section 9.6). However, such initiatives can also involve risk and many in our profession see the development of library services as being about conservative evolution of the use of technology and of library processes, rather than embracing radical change and innovating. Indeed the introduction of our new way of running our workshops was in itself a significant risk to our professional reputations, as narrowly defined by some in our profession.

We have both taken risks in our careers but, as we have seen in the reflection on our core public work, these have been built on an evolving pedagogy, sound organisational skills, creativity, and a strong belief that what we are doing is right. Indeed creativity is often on the edge of uncertainty, but "teachers need to feel on ground safe enough to take risks that may be creative and lead to genuine excellence, rather than settling for the false security that all ticks have been marked against a list of their competencies" (Andrews and Edwards, 2008, p.5).

We now realise that a central theme in the way we work is that we are reflective professionals in the way Lester (2010) defines this, actively using our knowledge

and experience and changing it as we work. We are driven by our own values and it means we live and breathe our professionalism instinctively. To us:

“Librarianship is a social process inextricably bound up with the life of a community; a librarian is not some uninterested functionary standing guard over a collection of objects that might as well be bricks, or red and blue rags.” (Foskett, in McMenemy, 2007, p.178)

For the HE librarian of the future to fully engage with their academic community they will therefore need to re-evaluate their approach to professionalism quite radically. We address this vital issue in detail towards the end of this statement

11.6 Conclusions

Our public work is fundamentally about innovation as a result of collaboration with colleagues from around the University, being inspired and informed by other practitioners, the support we have received from our managers and continued critical reflection on our skills, attributes and pedagogical practice. Our intention is to take this innovatory experience and build on it as will be seen.

At this point in this statement our initial intention had been to address a number of issues surrounding the provision of library workshops to the School we support. As this work has progressed however, other overarching issues have become apparent and the need for further work has become evident. Although we have made significant progress over the last four years, the changes we have made are not as far reaching as we would like. What and how we teach is different and effective, but in the majority of cases our sessions are still add-ons to the curriculum and championed by individual module leaders rather than by the whole programme. Inevitably as programmes and academic staff change, best practice is repeatedly lost and we have to start all over again liaising with staff to request time to teach their students.

There also remains a segregation of role; librarians are seen as distinct from academics. For example, when many librarians talk of research and IL skills, they are generally referring to the process by which information is found. What

happens to the information next is not seen as their responsibility, but that of academics. However, academics, who in our experience very rarely refer to IL, have a completely different concept of what research means. As Coonan (2014) puts it, “the whole purpose of HE is to develop in students a critical mind set: the weighing, sifting, questioning approach that isn’t cowed by expertise or silenced by authority”. Yet for students to develop the necessary broad spectrum of academic skills, a more holistic approach is required that transcends the whole curriculum and utilises the skills of academics, librarians and others collaboratively. The need to provide an embedded programme of IL skills seems increasingly evident to us.

In order to devise ways forward for the future, we need to look at alternative approaches for the structured delivery of IL and changes to the role of the librarian to deliver this. We will therefore continue by evaluating and reflecting on some of the IL standards, frameworks and curricula available, and explore possible future means to maximise the integration of IL into the curriculum and the potential role of librarians as IL researcher-practitioners in the wider academic environment.

12 Models of information literacy and how we measure up

In this section we review IL standards, frameworks and curricula and reflect on their usefulness and relevance in HE, as well as using them as a lens through which to evaluate our own practice. We then raise a number of questions to be addressed in the rest of this statement.

12.1 Food for thought

At the Information Literacy Satellite Meeting 2014 (IFLA, 2014), Dr Nancy Foster, Senior Anthropologist at Ithaka S+R, commented that available IL models have become outdated and are increasingly irrelevant to the 21st century information landscape (Foster, 2014). In particular she noted that the Association of College and Research Libraries (ACRL) *Information Literacy Competency Standards for Higher Education* (Association of College and Research Libraries, 2000) were so rigorous that no one outside of the library profession could possibly achieve them, a sentiment shared after their publication by other information professionals (Owusu-Ansah, 2003). The ACRL have since reviewed their standards and have replaced them with a series of demonstrable behaviours. This change of approach is explored more fully in appendix 11.

Foster's anthropological work looking at researcher's IL has shown that even the most practised professors, who are by virtue of their academic experience clearly information literate, do not approach IL in the way that librarians expect or have prescribed. Students are inevitably even less capable of attaining the standards set by ACRL. Our profession therefore has expectations of IL excellence which are unobtainable by those very people who most require them. Foster concludes that the library profession needs to acknowledge the changing information landscape and the way that people actually operate within it, to develop new more realistic models for IL.

Inspired by Foster's keynote (Foster, 2014), we consulted and assessed a number of leading IL standards, frameworks and curricula. These are:

- *Information Literacy Competency Standards for Higher Education*, Association of College and Research Libraries (2000)
- *Information Literacy Standards*, 1st Edition, Council of Australian University Librarians (2001)
- *Australian and New Zealand Information Literacy (ANZIL) Framework*, 2nd Edition (2004)
- *A New Curriculum for Information Literacy* (2011)
- *SCONUL Seven Pillars of Information Literacy: Core Model for Higher Education* (2011)
- *Framework for Information Literacy in Higher Education*, ACRL (2015)

These works show a shift from prescriptive standards through frameworks to a more applicable “meta literacy” approach (Foster 2014). The new ACRL Framework goes further, introducing the idea of “threshold concepts”, those ideas in any discipline that enable students to progress to an enlarged understanding or ways of thinking (Meyer and Lane, 2003). In teaching, threshold concepts help to define and prioritise learning outcomes and can thus be used to prioritise what is delivered to students. A more detailed description of and reflection on each document is to be found in appendix 11.

Having considered the above standards, frameworks and curricula, we feel *A New Curriculum for Information Literacy* (ANCIL) has most in common with our thinking which led to the creation of our public work. The reasons for this choice are explained in section 12.3. Thus we have once again been inspired by the work of other librarians, in this case Dr Emma Coonan and Dr Jane Secker who have advocated and created ANCIL (Coonan and Secker, 2011a). We now explore ANCIL in more detail enabling us to reflect on the curriculum, the issues this raises

for our future practice at Middlesex University and its suitability as a model for our librarian of the future to advocate.

12.2 A New Curriculum for Information Literacy (ANCIL)

A New Curriculum for Information Literacy (Coonan and Secker 2011a) is the result of the University of Cambridge Arcadia Programme (2008-2011) to design an undergraduate curriculum which covers not only the student's time at university but also crucially the transition from school to university, learning to learn and the IL skills needed after graduation in everyday life. ANCIL therefore covers areas not covered by SCONUL, the original ACRL standards in 2000 or ANZIL.

ANCIL has extensive supporting documentation and background research including theoretical foundations and expert consultation. A number of areas were considered as critical to the success of the curriculum, in addition to the actual course content (Secker, 2011). These include format and structure (embedded, flexible and holistic), timing (at point of need and continuous), teaching style (varied), role of audits and assessment (diagnostic and reflective), marketing and promotion (engagement), barriers to implementation (stakeholders, economics and politics), key drivers (improved student performance, retention and employability) and technology (assumptions, skills, and utilisation). ANCIL therefore acknowledges that responsibility for IL lies across an institution.

There are ten thematic stands, which are discussed in more detail later. Each theme is broken down into content, learning outcomes, practical example activities and example assessments. This makes it easy to understand the content and very easy for anyone not familiar with IL to grasp what is required, instead of the dry standards or competencies we have seen in the other models. Ease of comprehension is vital because the creators of ANCIL were concerned to produce a model that can be understood and therefore adopted by the whole academic community. This gives it potential resonance with the academic audiences librarians are trying to reach. It is not surprising therefore that ANCIL has also influenced changes to the ACRL's revised model.

12.3 Why ANCIL?

We first heard about ANCIL at a presentation at the British Library (Coonan and Secker, 2014) and immediately saw a correlation between our own practice and thinking as regards IL. For example in our IL workshops, we have endeavoured to develop student's IL skills, which they can transfer to other situations long after they have left the university environment. ANCIL's definition of IL reflects our own view:

“Information literacy is a continuum of skills, behaviours, approaches and values that is so deeply entwined with the uses of information as to be a fundamental element of learning, scholarship and research. It is the defining characteristic of the discerning scholar, the informed and judicious citizen, and the autonomous learner.” (ANCIL, 2011)

For ANCIL, the context in which IL is taught is as important as the skills learnt. The attributes of ANCIL (Coonan and Secker, 2011b) also mirror our own intentions and principles in the development of IL workshops at Middlesex University. ANCIL states that the curriculum should be:

- Holistic
- Modular
- Embedded
- Active
- Flexible
- Transformative

The curriculum's broader attributes of transition, transfer and transformation resonate strongly (Coonan and Secker, 2011c). The idea that an IL curriculum should support students as they proceed from school and a variety of backgrounds through HE and into the outside world seems more logical in an information rich world where access to education is increasingly more democratic. That such a curriculum can also instil skills enabling students to devise their own ways of meeting new information challenges, and use information to reshape their understanding and view of the world, seems eminently more meaningful and constructive than many earlier less flexible models.

ANCIL is divided into ten strands which we list here to enable later discussion of our benchmarking and are as follows:

- **Strand 1:** Transition from school to HE: Clarifying the differences in expectation and practice between school and university, i.e. moving from a 'teach to test' model of learning to developing autonomous learners.
- **Strand 2:** Becoming an independent learner: Opportunities for students to reflect on, enhance and manage their own learning, including its emotional impact, i.e. metacognition.
- **Strand 3:** Developing academic literacies: All aspects of academic reading and writing, including critical analysis, framing arguments, style and structure.
- **Strand 4:** Mapping and evaluating the information landscape: Evaluating scholarly material, identifying trusted source formats, and recognising expertise in a given discipline.
- **Strand 5:** Resource discovery in your discipline: Recognising the key finding aids, and using specialist information sources appropriate to the discipline e.g. datasets, archives.
- **Strand 6:** Managing information: Developing key skills: note taking, time management, information storage/data management, reference management, alerting services etc.
- **Strand 7:** Ethical dimension of information: Understanding attribution and how to avoid plagiarism, copyright, intellectual property rights, open access resources, and appropriate levels of sharing.
- **Strand 8:** Presenting and communicating knowledge: Finding an appropriate voice, style, level and format to communicate various types of scholarly output; and managing online identity.

- **Strand 9:** Synthesising information and creating new knowledge: Assimilating and re-using information within the context of your discipline, framing problems, and formulating research questions.
- **Strand 10:** Social dimension of information: Translating learned experience into dealing with information needs in new contexts, e.g. workplace, daily life, health emergencies. (Coonan and Secker, 2011b)

Each strand is subdivided into three or four topics. Each topic has one or more learning outcomes, with examples of activities which could be undertaken to achieve the learning outcome and an example of assessment. In this way ANCIL goes far beyond the other standards and curricula we have examined by demonstrating in practice how the curriculum might be implemented at the classroom level. As our core public work evolved directly out of our teaching practice, rather than top down theory, the ANCIL mix of solid theory and adoptable practice has real resonance.

ANCIL includes resources for implementation including audit mapping worksheets to be used to benchmark current provision at an institutional and individual provider level. These worksheets mirror the ten thematic strands of ANCIL outlined above.

At an institutional level the ANCIL auditing worksheets require us to benchmark formal teaching (workshops), informal consultations (e.g. at the library enquiry desk), online support (e.g. Library Subject Guides and online enquiry service) and other provision such as leaflets and hand-outs. We had originally intended that this statement would include a detailed audit of our practice against ANCIL, but time and space precluded any more than a cursory mapping.

Our mapping of Library and Learner Development (LLD) provision (incorporating Liaison Librarians and AWL Lecturers from the LDU) against the ANCIL benchmarks, suggests that Middlesex University does not measure up particularly well against this fully worked out and educationally robust curriculum. Results of the benchmarking show us that:

- Librarians currently deliver formal teaching in four of the strands: 1, 4, 5 and 6. They also support students informally via the Study Hub (Enquiry) desk and 121s in strands 4, 5, 6 and 7. This is backed up by our online Library Subject Guides which provide subject specific information on resources as well as support with topics such as plagiarism and referencing, and basic library functions such as how to request a book.
- Colleagues in the LDU deliver formal teaching in six of the strands: 1, 3, 6, 7, 8, and 9. These strands are also supported via drop-in sessions at Study Hub, their 121s and other workshops. They provide a wide range of supporting material online and at training sessions give out copies of the Palgrave Macmillan study books which integrate with the library's use of *Cite them Right Online* to support referencing.
- Academic staff and other services (e.g. Employability) formally teach strand 2 (becoming an independent learner), and strand 10 (social dimensions of information). However, this work is not integrated with what the LLD provides, so we cannot be sure what is actually covered.

The *Graduate Skills Framework* for Middlesex University currently specifies which skills graduates should have when completing undergraduate (level 4) or postgraduate (level 6) programmes (See appendix 12). This list of skills is, we believe, limited, dated and underdeveloped. For example, at Level 4 a student should be able to use digital bibliographic tools to produce a “critically evaluated ...list of online bibliographic sources”. At Level 6 a student should be able to “Search for, process, integrate and evaluate complex information from a range of electronic and printed sources, using referencing tools appropriately according to the needs of the subject context(s)”.

Reflecting on the inadequacies of current IL provision in our institution begets a number of questions that we wish to explore:

- Why has HE failed to integrate IL into curricula?
- What do librarians have to offer in the development of IL within the curriculum?

- Do academics share our concerns?
- What drivers are required for change to happen within institutions?
- What skills and attributes does the librarian of the future therefore require?
- Could we recommend an ANCIL type curriculum to our institution?

These questions are explored in the following sections.

13 Obstacles and opportunities

At the beginning of this context statement we provided an outline of IL (section 6), how these skills have continually been reassessed within a changing information landscape and the numerous standards, frameworks and curricula available for achieving IL within society. However, after years of deliberation and debate, IL still remains invisible in HE (Badke, 2010). In the following sections we will explore the reasons for this and consider why librarians are perfectly suited to strategic involvement with the development of IL within HE.

13.1 Barriers to information literacy in higher education

13.1.1 What's it all about?

In HE, academics have generally been supportive of the need for IL skills teaching (Weetman, 2005; Singh in Weetman DaCosta, 2010), but are often unwilling to make space in the curriculum for them beyond the one-off library workshop (Weetman, 2005; Stubbings and Franklin, 2006) viewing them as peripheral to the disciplines being taught (Badke, 2010) and an intrusion on the academic domain (Badke, 2010). As such IL is often considered as an appendage to the curriculum, rather than an integral, dynamic element and as a catalyst for change within the information society (Johnston and Webber, 2003; Bruce in Diekema, Holliday and Leary, 2011). Indeed Bruce believes that the whole curriculum should be designed to promote use of information to develop new knowledge and develop IL skills (Bruce, 1995).

Information skills are frequently perceived as being to do with “mastering tools and techniques rather than developing transferable strategies, and on accessing and organising information, rather than using context-relevant criteria to judge its validity and value as part of the academic dialogue and to the individual’s research topic” (Coonan, 2011, p.8), something recognised by Bruce (1995). Indeed research carried out by Boon, Johnston and Webber discovered that academics have a higher regard for training that simply enables students to access

information, rather than teaching them to understand their information need (Boon, Johnston and Webber, in Weetman DaCosta, 2010).

Norgaard believes that this assumption that IL is merely about process, leads to this essential skill set being largely ignored and dismissed by academia (2003). Some academics also make the assumption that technical skills equal information skills, as explored in Myth 1 (section 8.1), and that students will acquire the necessary information skills as they progress through their course (see Myth 6 section 8.6) (Stubbings and Franklin, 2006). This suggests a significant discrepancy between the concept of IL as understood by librarians and academics and results in it being absent from the strategic priorities of our institutions.

Information literacy is probably considered more important by librarians than academics (Bawden and Robinson, 2009). Indeed IL in academia receives little attention in HE journals, despite being frequently discussed in library publications (Badke, 2010; Weetman DaCosta, 2010). However the root of the issue appears to be a failure of the wider academic community to generate a common understanding of IL and work together to integrate it into the mind-set of the institution. Webber and Johnston go so far as to suggest that if IL was considered as a discipline in its own right, then it might be more palatable to academics and would help drive forward the concept of constructivist and autonomous student learning (Webber and Johnston, 2013). Others disagree, seeing information literacy as a tool rather than a “destination” and believe it would better to talk of “learning information literacy” rather than “learning to be information literate” which suggests a journey’s end instead of a continuing process (Diehm and Lupton, 2014).

We will return to these issues in section 15 when we reflect on our interviews with a number of expert academics.

13.1.2 Whose job is it anyway?

There continues to be a lack of clarity regarding responsibility for IL in HE (Beetham, McGill and Littlejohn, 2009; Bewick and Corral, 2010). Librarians have

increasingly found themselves at the centre of confusion (Coonan, 2011), with their role evolving from provider and curator of resources, to one concerned with information and knowledge (Owusu-Ansah, 2003). As far back as 2001, Peacock suggested that:

“Few professions demand such a composite marriage of skills as those embodied by the reference librarian, and information literacy is steadily, but convincingly extending the traditional boundaries of this already complex role.” (p.30)

However the developing academic role of librarians is not always recognised or accepted by academic colleagues, who rightly question our ability to teach within the curriculum (Fieldhouse and Nicholas, 2008; Austin and Bhandol, 2013), rather than simply providing instruction in the information seeking process (Bell, Moon and Secker, 2012).

Studies explored by McGuinness suggest that IL teaching instigated by librarians is less likely to be accepted by academics than that devised by themselves and that collaborative teaching between librarians and academics is not given priority (2006; also Peacock, 2001), even though this would lead to better learning (Johnston and Webber, 2003). It would seem that both librarians and academics doubt each other’s ability to competently teach these skills (Johnston and Webber, 2003). Hardesty believes that academics are “protective of the professional autonomy afforded by their position and as a result, tend to be resistant to change when imposed from outside” (Hardesty, paraphrased by McGuinness, 2006). In addition, studies show that academics consider completion of essays and projects and subsequent academic feedback to be a more valuable way of instilling IL skills in students (McGuinness, 2006). This does not encourage students to value IL teaching, as they may already consider themselves to be information literate (Stubbings and Franklin, 2006; Fieldhouse and Nicholas, 2008).

We have examples of academic staff using out-of-date mash-ups of our information skills presentations, rather than asking us to provide sessions. Another academic, having attended an IL session at an education conference, suggested that we might provide sessions covering such skills for his students and was surprised to learn that this was something we already did. It is clear therefore

that academics have an out-dated and inaccurate view of the role of librarians and the impact that they can have on the academic programme. This suggests that librarians need to be more adept at communicating their expertise to academic peers. This is something we will return to in section 16 when we look at the drivers required for change.

As a consequence of this disconnect between programmes and the library, librarians find themselves spending inordinate amounts of time building relationships with academic staff which then lead to only small pockets of good practice (McGuinness, 2006; Stubbings and Franklin, 2006). In the short term this works well, but as academic staff change or leave, Librarians often find themselves back at square one rebuilding a programme of IL workshops. Librarians also risk creating an IL silo unrelated to their colleagues in other support departments, who are themselves creating parallel silos of their own practice. These are unconnected to and unsupported by the programme silos of the academic community and confusing to students in need of help (Beetham, McGill and Littlejohn, 2009). They are then further hindered by the prevalence of institutional politics, as stakeholders promote their conflicting interests and priorities (Owusu-Ansah, 2003). At a time of tight resources this time wasting duplication of effort is unhelpful.

Some librarians have resisted an enhanced role within the academic arena and often struggle to shift their practice from one of instruction in the use of resources to that of enabling students to interact with information within their own discipline (Bent, 2008; Grafstein in Diekema, Holliday and Leary, 2011; Secker, 2011). Lupton goes as far as to suggest that librarians need to “view themselves as teachers first and librarians second” (Lupton in Asher, 2003, p.52). It is time for Librarians to acknowledge that IL is bigger than the physical library and that they have a role in forming “habits of mind” (Expert opinion in Secker, 2011, p.7) and should not concentrate on “the mastery of isolated skills” (Diekema, Holliday and Leary, 2011, p.262). Coonan concurs describing the change as “frightening” for our profession (Coonan, 2011, p.23) and states that:

“The autonomy and ability to create new strategies for assimilating and using information engendered by information literacy in its broadest sense

is the more necessary as we can no longer teach every possible information context or conduit.” (Coonan, 2011, p.15)

The responsibility for developing agile individuals, who can respond confidently and appropriately to all manner of situations as students, in the workplace and as citizens should not however lie just with the library, but more broadly. Most of the IL frameworks and curricula lack guidelines for implementation. Thus it is only through collaboration, understanding and flexibility between librarians, academics and other potential stakeholders that a workable model for IL can be taken forward and embedded within the curriculum (Peacock, 2001; Bruce, 1995). As Coonan concludes:

“The failure to establish a shared recognition of its value within the scholarly community, and even an agreed working definition of what constitutes IL, has led to a fracturing of perceptions which has been deeply damaging for information literacy in practice.” (Coonan, 2011, p.5)

13.2 Staking our claim

Our careers have seen the advent and growth of personal computing, the internet and Web 2.0 technologies and their increasing use for communication, information sharing and knowledge creation. This has led to the development of several competing literacies, further fuelling misunderstanding of our practice, which we argue should be unified under the banner of IL. We contend that IL can rightly claim its place as a meta-literacy, as a vital component of effective transdisciplinary research and practice and that librarians should be at the heart of this discourse.

13.2.1 Meta-literate librarians

As we have seen, young people are comfortable and confident in accessing and using networked information and are therefore considered digitally literate (see Myth 1 in section 8.1). But to be fully digitally literate is much more than this. For

example, JISC (2014) see digital literacy as composed of a number of other literacies as illustrated in Figure 14:

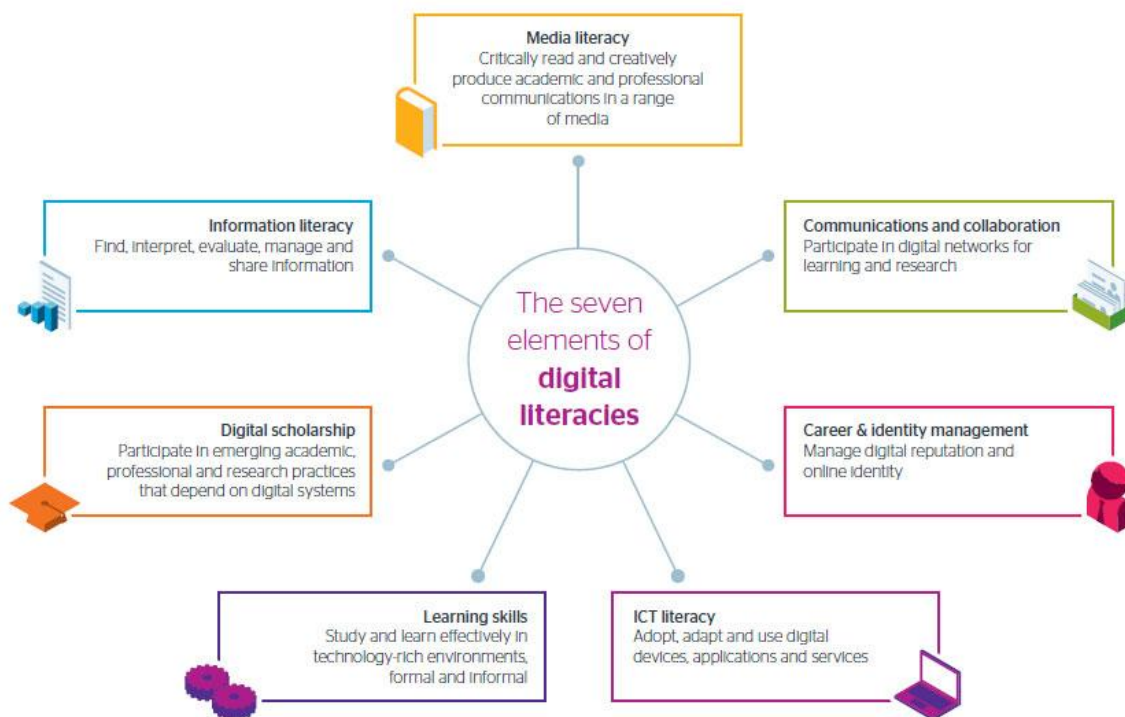


Figure 14: The seven elements of digital literacy (JISC 2014)

Other authors have different views. Jones and Flannigan describe digital literacy as being “the ability to read and interpret media (text, sound, images, *et al*), to reproduce data and images through digital manipulation, and to evaluate and apply new knowledge gained from digital environments” (2006, p.5). Yet despite this definition being clearly situated in the digital environment, we note the inclusion of critical thinking and evaluation, abilities common to IL (Mackey and Jacobson, 2011). We would see this as information literacy, not just digital literacy. The issue we have with these definitions is that different literacies are described, but no-one appears, apart from Librarians, to recognise information literacy as a distinct and overarching meta-literacy. The result is overlapping and duplicating descriptions such as the one above.

Similar duplication has also been observed with visual literacy (Mackey and Jacobson, 2011), which Felton defines as “the ability to understand, produce, and use culturally significant images, objects, and visible actions” (2008, p.60). Others

have suggested that there is also a literacy specific to the internet, which has been dubbed cyberliteracy or e-literacy (Beeson, 2006, p.210) and defined as “critically thinking about information gathered from and placed on the Internet” (Stiller and LeBlanc, 2006, p.6). In their paper they see this as a development of critical literacy, yet the topics they teach their students include themes familiar to librarians such as the creation of information, the use of the internet to communicate political, creative and artistic ideas and doing so in an ethical way. Yet again this is simply redefining IL with a focus on a specific technology (Mackey and Jacobson, 2011). However Beeson disagrees, suggesting that skills utilised in using information discovered through an Internet search are distinct from those used with traditional information sources (2006).

Mackey and Jacobson speculate that this is simply a reinvention of the wheel with each new technology:

“As each new form of literacy is introduced, the shared literacy goals related to critical thinking and information skills are often overlooked, creating an unnecessary divide between information literacy and other literacy types.” (2011, p.69-70)

They therefore argue that IL is a meta-literacy, a framework which unifies all these information related literacies, as they are all fundamentally about the ability to “determine, access, evaluate, incorporate, use, understand, produce, collaborate, and share information...” (Mackey and Jacobson 2011, p.76). Montiel-Overall suggests that there are “multiple literacies for conveying information and creating meaning” and that these collectively “expand the way learners make sense of the world and construct knowledge” (2007, p.56). Similarly Elmborg suggests that in a light of the global economy and technological changes to how information is made available, librarians must “talk instead about multiple literacies, both in terms of diversity in human cultures and diversity in message formats” (2006, p.195). Bawden and Robinson advise the need to take a broad view of IL, which incorporates all the skill-based literacies (Bawden, 2001; Bawden and Robinson, 2002).

These views are shared by Lloyd who describes IL as a “constellation of competencies that engage the synchronous and serial applications of a range of

perceptual, cognitive skills and process skills that together constitute a way of knowing” (2003, p.88). She sees IL as an essential meta-competency for the knowledge economy, with information literate employees adding value to their organizations through “the creation and construction of new knowledge that is gained through the adaptation of information and the transfer of existing knowledge into new domains” (2003, p.89). Lloyd and Williamson go further and position IL as a “core concept” in today’s society where information is required “in order to achieve educational, social, occupational and economic goals” (2008, p.3). Bruce concludes the debate by describing IL as an “overarching literacy” and the “critical literacy for the twenty-first century” (2004, p.8). Coonan and Secker agree and see IL as the central literacy (see Figure 15):

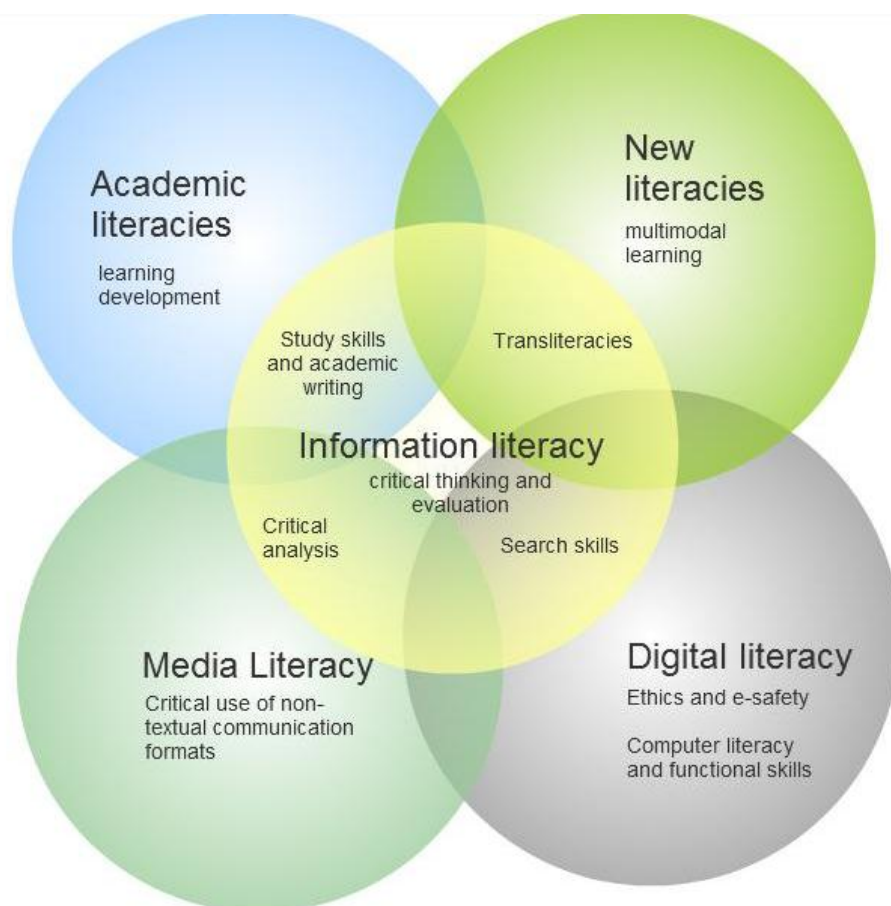


Figure 15: Information literacy landscape (Coonan and Secker, 2011)

The ability of information literate librarians to collaborate with clients to solve their problems by facilitating the transfer of existing knowledge across boundaries, leads us to argue that IL not only has a claim to be a unifying literacy that should be understood and applied by all for life-long learning, but that it is a fundamental foundation stone to enable transdisciplinary research and practice.

13.2.2 Are librarians translators in Transdisciplinarity?

We go into more detail on Transdisciplinarity (TD) at this point because we have been interested in what our own theory of practice is and have found TD to be a useful model for conceptualising it. There are a number of interpretations of TD and we have selected ideas from the current discourse that resonate with our own practice. TD is process "...borrowing models and theories from outside the discipline and using them collaboratively in order to create something that transcends the originating disciplines" (Dold, 2014, p.179). It creates a space of knowledge "beyond the disciplines" (Nicolescu, 2010, p.20) and can be applied equally well to both complex social problems and workplace issues which defy traditional organisational structures (Gibbs, 2014). For it to work in this way means being able to translate knowledge from one area to another, to be able to participate in both academic and non-academic fields, problem focussed, evolutionary in method and collaborative (Maguire, 2012).

Academic staff tend to be located in teams with like-minded subject experts. Indeed the pressures of the UK Research Excellence Framework (REF) reinforce the construction of silos which conform to the subject areas a university will be assessed on. Yet many of society's contemporary problems require our research teams to work across subjects and school boundaries, working with researchers whose knowledge and frames of reference may be very different from their own. For example, imagine a project to look at the impact of art therapy on convicted criminals: In the Middlesex context this could mean a Psychologist from the School of Science and Technology, a Criminologist from the School of Law, an Economist from the Business School, a Health Expert from the School of Health and Education and of course an Art Practitioner from the School of Art and Design.

This is potentially five people from five of our six Schools of study. How might a librarian facilitate this?

As we have seen already, librarians are familiar with the transliteracy or metaliteracy properties of IL:

“The essential idea here is that transliteracy is concerned with mapping meaning across different media and not with developing particular literacies about various media. It is not about learning text literacy and visual literacy and digital literacy in isolation from one another but about the interaction among all these literacies.” (Ipri, 2010, p.532)

Building on this foundation, Dold thinks the librarian can go further as “the key player...who structures the information exchanges so that the research and results of either language group will be comprehensible to all” (2014, p.180). Indeed she sees librarians as also not being bound by the norms of particular subjects and therefore uniquely able to work across the disciplines. Librarians are “situated at the intersection of subject-specific perspectives and the patron” and uniquely placed to “analyse a research question and enrich the researcher’s understanding of the complexity and interconnectedness of the contributing data sources” (Dold, 2014, p.183). Dold sees our skills as vital in making connections, not least because “transdisciplinary research is an essential tool for approaching the big questions that face society” (2014, p.18).

This echoes Stephens (2014) view that librarians are human hyperlinks, something librarians and libraries have always focussed on: A physical library is a place for bringing together knowledge in one place, organised as a single easily navigable entity. Indeed, in the age of virtual resources, the need for the librarian as guide and navigator through the vast and confusing hyperspace environment is even more essential and, while librarians do not claim to be academics, they can work alongside them bringing a range of complementary skills and knowledge to the table (Asher, 2003; Coonan, 2014). Librarians can articulate the connections and vision to make TD work.

Gibbs (2014) uses the example of a medical doctor using his or her judgement to diagnose, from the symptoms presented, the illness and then an appropriate solution. In the same way, the librarian engaging in a reference interview will use

their expertise to tease out a customer's information need from the problem presented and then use their knowledge of the information environment to propose solutions from across any appropriate source irrespective of the discipline. Indeed a classic staple of our work is the customer who comes asking for a specific resource (usually a book) because the limits of their knowledge of information means they simply cannot conceptualise the vast landscape of information solutions open to them. Expert librarians are able to see beyond the obvious problem and look into the layers below, seeing and making hidden connections.

Clearly this process has its limits. Gibbs's (2014) hypothetical doctor is not able to go beyond medicine into the underlying societal issues which might be causing the illness, such as social housing. Librarians too are limited by the system they work in, although we have examples of when a discussion at the enquiry desk to assist a student has led to referral on to another pastoral support service. However, we might also see this another way: If the Librarian has ensured the researcher is using the best available information resources, indeed if they have opened their eyes to ideas from other disciplines they had not previously seen or been aware of, then the quality of the research that is produced through this TD encounter may well then go on to have a much more significant impact on society at large, than research constrained within the boundaries of a subject silo or conventional thinking. Just as Lloyd saw the need for information literate employees to ensure meta-competency, Gibbs sees the need for universities and professions having to change to develop professionals with a "capacity for transdisciplinarity" (2014, p.11). We think librarians are uniquely placed to enable this by fostering a much greater understanding of IL and thus enabling employees to develop these problem solving skills.

We see this working at all levels in a University. Even at undergraduate level the use of Summon means students will be finding valid materials in resources outside the collections normally associated with their subject. Our teaching will then enable them to reflect on the value and quality of what they have found, so they know to apply it in an appropriate and meaningful way. Librarians support researchers in finding things they would not normally think to use, because they engage with all disciplines every day. Gibbs sees TD as "based on a readiness to see the layered reality within a problem, perhaps concealed when viewing it

through a single disciplinary lens” and providing solutions by “harnessing prudent judgements” to facilitate “imaginative and creative reconceptualization of problems” (2014, p.13). Indeed one might argue that, just as our approach to teaching is the constructive alignment of students’ prior knowledge with new information, so our work with researchers is the constructive alignment of potentially disparate academic patrons with new knowledge and new critical thought. Are librarians therefore uniquely placed to act as transdisciplinary scaffolders, engaging with their clients as “catalysts, instigating and building bridges between disciplines, researchers and communities” (Wickson, Carew and Russell, 2006, p.1052)? We believe that they are.

For librarians to be able to make this claim of TD and deliver on it, requires reflection on librarian identity and what professional skills and attributes are needed to be ready for the present and the future as our information landscape expands exponentially. What are the priorities that need to be understood at the interface where we can play a role? Transdisciplinarity helps us conceptualise our role as promoting mutual understanding through knowing the needs of different domains and translating between them so that the different ‘domains’ can benefit from knowledge and practice exchange. Domains which need this exchange include academia and libraries, students and information, students and academic staff, research and teaching and different belief and practice systems within our own profession. Librarians could benefit from conceptualising their professional work using this lens. These questions are explored in the following sections. We will then return to transdisciplinarity in the wider context of enhanced professional practice for the librarian of the future.

14 Where are we and where are we going?

The changing environment in which we function, our own experience as academic librarians during the last four decades and the myths surrounding our profession have been explored at length in this context statement.

It is apparent that librarians in all sectors need to adapt and evolve in order to future-proof our professional role and survive as major players in the information landscape. The future of academic librarians has been much debated by the profession and an overview of this discussion is outlined below, followed by a summary of our vision for the future.

14.1 Current thinking

The academic librarian of the future and the skills and attributes that they will be required to have has been anticipated and discussed in detail in the professional literature (Peacock, 2001; Bell and Shank, 2004; Gerolimos and Konsta, 2008; Nonthacumjane, 2011; Partridge *et al*, 2010; Sun *et al*, 2011; Dey, 2012). Bell and Shank state that in particular “Academic librarianship is at a critical professional juncture” (2004, p.372), noting the increasing uncertainty of our role in an ever evolving information landscape.

14.1.1 New challenges

Developments in technology are readily attributed as being responsible for the radically changing role of librarians and have “created a new librarian landscape in terms of services and activities” (Nonthacumjane, 2011, p.280). Bundy agrees stating that the “fundamental concern of librarians is with learning outcomes, not with information supply and access” (Bundy, in Austin and Bhandol, 2013, p.16). Chen and Lin argue that librarians must evolve and develop their practice in order to meet these new challenges and that libraries must take centre stage in the learning process (2011).

While the development of teaching skills, IL, critical thinking, ethical understanding, social responsibility and problem solving skills are acknowledged, much emphasis is placed on necessary development of technical skills for librarians and the blurring of roles between the traditional librarian and that of the IT specialist (Jackson, 1999; Corral, 2010; Nonthacumjane, 2011; Sun *et al*, 2011; Dey, 2012). Indeed Nonthacumjane states that “technical competencies will continue to underpin professional practice” (Nonthacumjane, 2011, p.286). Sun *et al* take this further by claiming that librarians will not only have to develop their own technical skills, but will be required to train users how to use technology to search for information (2011). Consequently the literature is littered with references to blended librarians (Bell and Shank, 2004), hybrid librarians (Allen, 2005), Librarian 2.0 (Partridge *et al*, 2010), hybrid information specialist (Corral, 2010), para-academic (Corral, 2010), blended professional (Corral, 2010) and Cybrarians (Dey, 2012), as well as emphasising the increasingly “cross-functional” nature of professional library roles (Corral, 2010, p.579). To us this is simply the process driven library reinvented for the internet age. It is worth noting that in the 1990s many library and IT services in HE merged to create Learning Resource Centres as was the case at Middlesex University. More recently this relationship has shifted with our librarians increasingly aligned with research and academia rather than with technical support.

However the view of practitioners is often contrary to that mooted in the professional literature. Research in Australia revealed that practising librarians felt advances in technology to be a significant, but not a dominant factor in their professional role (Partridge, 2011). This is endorsed by Bewick and Corral’s study (2010). Lifelong learning, communication skills, collaboration, people skills and “business” were also seen as being important alongside technical skills, and that the Internet and particularly Web 2.0 necessitated a change in attitude that not everyone welcomes (Partridge, 2011).

Although the growing importance of the librarian to the socio-economic success of society is acknowledged (Dey, 2012), there is an unwillingness to move beyond a more traditional role. If the literature is to be believed, then the librarian of the future will continue to manage resources, while having the ability to operate in a virtual environment (Dey, 2012; Sun *et al*, 2011) creating, providing and managing

online instruction, virtual libraries and useful supporting materials. In a worst case scenario those requiring information will no longer need to visit the physical library, as any information need can be satisfied in the virtual world and without assistance (Dey, 2012) in which the librarian has no control (Sun *et al*, 2011).

While some observers concede that the information landscape is changing, they also state that librarians merely need to adapt to it and refine existing practice using available new tools (Partridge *et al*, 2010). This perhaps suggests an inability to think beyond the existing threshold of librarian as a tool who helps users locate information in a defined collection and occasionally presents user education and bibliographic instruction (Peacock, 2001). Neither does this status quo enable us to take forward the IL agenda, to become integral players in the academic environment, and to actively contribute to the process of knowledge creation as a lifelong ability in our users.

14.1.2 Light on the horizon

However there is a glimmer of hope. Dey suggests a shift from “custodian of information” to “facilitator or navigator” (2012, p.211) and other observers agree believing that the librarian of the future will be required to act as a mentor and facilitator to help information seekers find quality and relevant information (Nonthacumjane, 2011). Indeed the librarian of the future has been described as the “guru of the information age” (Abram in Partridge *et al*, 2010, p.2) and a “data hound, a guide, a Sherpa and a teacher” (Godin, 2011). MacKenzie also states that libraries are no longer just about physical objects, but are about providing the means for people to “participate, interact and create” (MacKenzie in Partridge *et al*, 2010, p.265) and Sun *et al* foresee librarians as playing a critical role in student learning above and beyond process driven instruction (2011).

To meet these new challenges our profession must therefore reassess its role, image, brand and skill set, not always an easy task as outlined in Austin and Bhandol’s small scale study where issues of identity are evident (2013). How others perceive us professionally is important. Are librarians the people who look after books or are they the people who deal in knowledge? (White, in Corral, 2010,

p.571). Librarians must also assess which skills are more important to us as a profession and take these forward within the context of the broader educational environment (Jacobs, 2008).

With the increasing importance of IL to society, academic librarians need to actively solicit a role within the learning process, so as not to be disregarded and downgraded in the information landscape by virtue of advances in technology (Bell and Shank, 2004). Other practitioners suggest that the onus is on academics to utilise the skills of other professionals including librarians in order to meet the new challenges of the HE arena. However a number of factors obstruct the librarian's ability to engage in the academic process, in particular the perceptions of librarians by our academic colleagues who may fail to see us as anything but the inert providers of resources (Peacock, 2001). Our professional image is examined further in section 16.4.

14.1.3 New skills

As HE has refocused on lifelong learning and employability skills, the curriculum increasingly requires the teaching of non-discipline skills. The growing prominence of IL skills within the academic experience now means that the one-off library workshop is no longer fit for purpose (Peacock, 2001). Librarians teaching skills therefore become important, as acknowledged widely in our professional literature (Peacock, 2001; Bewick and Corrall, 2010; Chen and Lin, 2010).

Peacock sums up:

“As a stronger nexus develops between the two traditionally distinct areas, librarians must be strongly positioned as key educators in the teaching and learning environment, and empowered with an educational competence and professional confidence equal to that of their academic peers. Hence they require a new palette of tools, skills and conceptual understandings.”

(Peacock, 2001, p.27)

Yet the education of librarians continues to inadequately prepare academic librarians for a teaching role. We have both experienced the anguish early on in our careers of having to teach with little or no experience or training. Indeed,

looking at Vanessa's *alma mater* Aberystwyth, we see the only IL training currently offered is a module focussed on the personal IL skills of the librarianship student, rather than teaching them how to teach (Foster, 2015). Many continue to rely on in-house, on-the-job, ad-hoc training to develop their pedagogy (Jacobs, 2008) or on the wide range of external courses and workshops designed to meet this need. Our own experience of running IL workshops based on our own practice indicates a continuing demand for this type of training. However, we have recently become aware of plans for a new optional IL module at University College London, designed to train the teaching librarians of the future (Inskip, 2015).

Austin and Bhandol suggest that institutions must address issues of "identity and pedagogy" in order for librarians to fulfil their role (2013, p.17). However a study carried out in 2010 showed that academic librarians in the UK generally felt adequately prepared for their teaching role. Conversely they felt less confident in the design of workshops and teaching and learning theories, while some actually questioned the latter's relevance to library workshops (Bewick and Corrall, 2010). These findings are indicative of some of the central problems around librarians and teaching.

Although Corrall notes a disparity in views of library educators and practitioners (Corrall, 2010), providers of library education are not oblivious to the debate. In a review of its library and information programmes in 2009, The Sheffield Information School identified a number of concerns including the key skills, professional identity and career progression. They have subsequently made several changes to their programmes to provide both general and specialist modules such as IL and data management. Corrall notes that discussion needs to continue between educators and practitioners in order to ensure that provision matches demand (Corrall, 2010).

In common with other institutions, Middlesex University has a growing research agenda and there is increased demand for support connected with use of our research repository and in locating journal impact data (Corrall, 2010). Librarians should have ambitions to be part of this new drive and make a discernible contribution, thus becoming fundamental to the research integrity of academic staff and students. However, a major challenge to this happening is the perception that

librarians have of their future role (Elmborg, 2006) and Elmborg argues that librarians “can better engage the educational climate on campuses by defining academic librarianship through the scholarship of teaching and learning in general, and the scholarship of literacy in particular” (2006, p.193). To this end, academic librarians need to develop professionally. This is explored more fully in section 16.3.

14.2 A vision for the future

This context statement has enabled us to demonstrate an awareness of our changing role as academic librarians within the burgeoning information landscape. Our practice has also been influenced by an increased understanding of IL which is visible in our core public work and the changes made to our shared pedagogy.

Information literacy increasingly features in the discourse of academic librarianship (Lloyd, 2005; Lloyd and Sommerville, 2006; Streatfield and Markless, 2008). However within our profession the concept of IL has been firmly rooted in the academic milieu, with the belief that it is the preserve of librarians (Bent, 2008). The latter could be construed as a defence mechanism to preserve a continued role for librarians in what has become a much changed vocation (Bent, 2008). The inevitable result is a limited vision of IL as just a set of skills (Lloyd, 2005; Lloyd, 2009; Beetham, McGill and Littlejohn, 2009; Markless, 2009), as exemplified by many of IL standards and frameworks that we have explored. Indeed Lloyd considers that this:

“Reductionist view constructs the acquisition of information literacy as an unproblematic, transferable process, and reifies the phenomenon as being directly observed through the presentation of written texts.” (2005, p.572)

By considering IL in a “socio-political context” (Jacobs, 2008, p.258), like Horkheimer (Bohman, 2015), we begin to realise that its application is much broader. Information Literacy is relevant to the whole of society who operates in a variety of landscapes. It is an enabler of lifelong learning and knowledge acquisition from formal and informal sources, be that in a professional role or

simply to form an opinion on a contemporary issue. As Lloyd concludes, “information literacy is a variable construct and is shaped and understood according to context” (2005, p.578).

We therefore have a shared vision of IL as an embedded feature of the whole curricula, a joint collaborative enterprise with stakeholders from across the institution and a vehicle for student achievement. In addition, we see IL as a component in all aspects of an individual's life and essential to their ability to function within a context of ever changing needs and responsibilities as a citizen within an agile information landscape, what has been described as the “situated contextualised nature of IL” (Webber and Johnston, 2013, pp.21-22). Librarians need to continue to advocate IL in their institutions.

Academic librarians have traditionally utilised a number of “hooks” to promote the value of IL, e.g. preventing plagiarism, achieving learning outcomes and acquiring graduate skills (Stubbings and Franklin, 2006, p.2; Webber and Johnston, 2013, p. 17). However in the face of economic decline, IL should be refocused to look beyond these limited objectives and should be seen as crucial for encouraging critical thinking, continued personal and professional development and enabling individuals to contribute responsibly and ethically to society (Webber and Johnston, 2013). Webber and Johnston advocate a “lifecourse curriculum.....aimed at developing learner self-awareness, personal efficacy and civic engagement through formal education and across many other community and organisational settings” (2013, p.24), with both librarians and academics playing a key role (2013).

Therefore we hope the librarian of the future will emerge to be not only an advocate of IL as a key life skill, but one who can also demonstrate a range of capabilities to position their role at the heart of academia.

15 Does academia share our vision?

The previous sections have focused on a critically reflective engagement with our own works and within the context of the community of practice of librarianship. In the context of HE, no matter how much we might want the role to have the freedom to evolve smartly, much depends on shifting perceptions both within our profession and within the minds of our academic colleagues. Until now some academics have regarded librarians ambivalently, neither in the academic camp nor the administrative camp. We agreed that, to ensure a depth of critical engagement with the perception of our role, we should develop a piece of research to explore what academics envisioned as the role of a librarian of the future and by doing so implicitly challenge their view of us as librarians at Middlesex University. This research would also be the preliminary step in the development of a new post-doctoral public work focussed on the future direction of librarianship in higher education, see Figure 16 below:

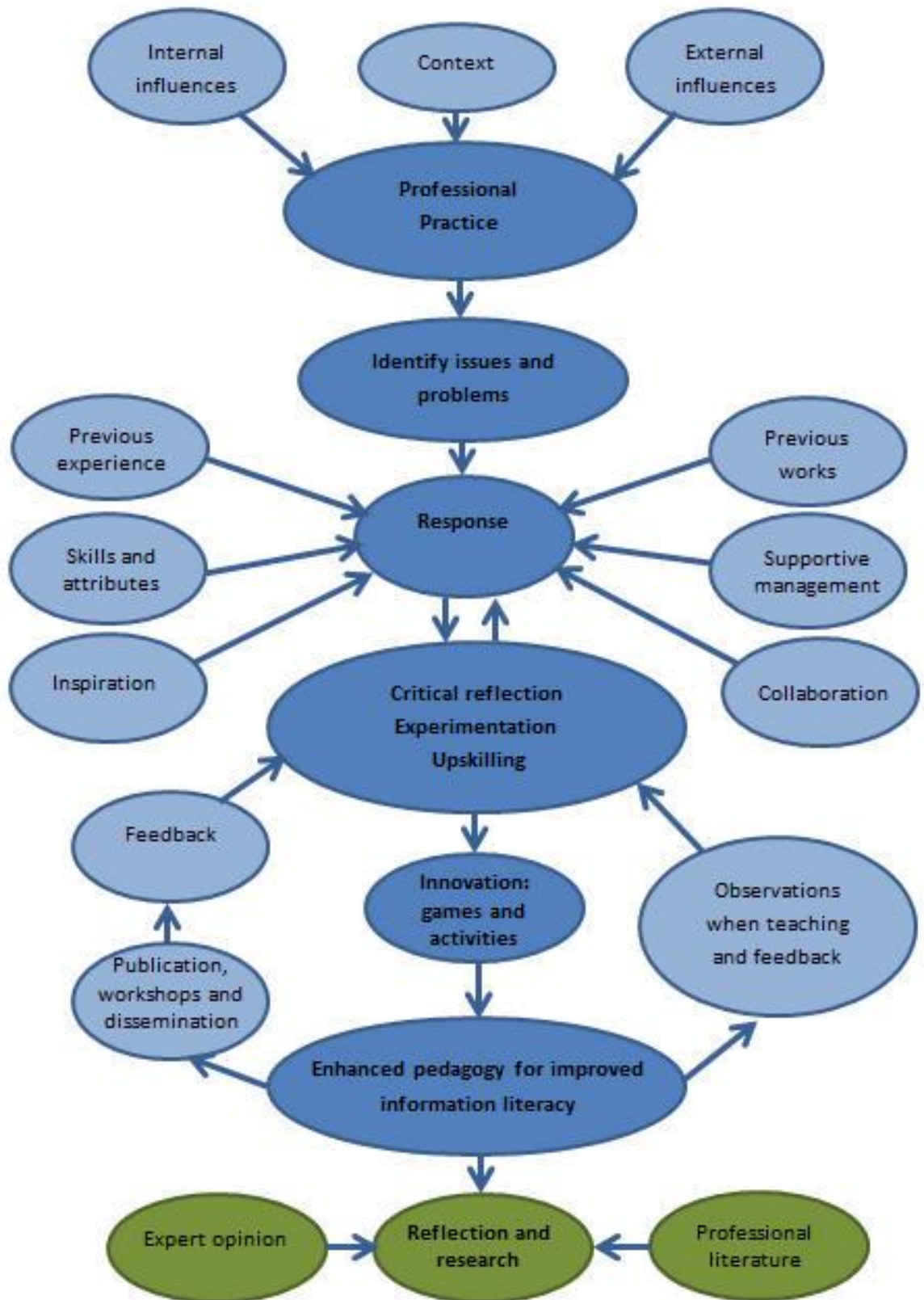


Figure 16: Further research and reflection

15.1 Finding out

To this end we interviewed nine academics from our University representing a broad spectrum of academic programmes. As misperception constantly arises as a barrier to librarians integrating with academia, we formulated questions primarily focused on the perception of our current role and what the academics perceived it might be in the future. These interviews can be positioned in a case study frame as they pertain to the context of our own university and are therefore specific to it. We were insider researchers who had had various degrees of contact as librarians with the participants, but contact very much in the role of the traditional perception of librarians. However each participant was both curious and interested in the purpose of the research questions. Although the findings emerge from a case study using a small sample, we now believe that they have relevance for other higher education institutes and also for our profession.

15.1.1 The interviews

The interviews were conducted during early 2015. We applied and obtained ethical clearance to carry out this research from the Institute for Work Based Learning's Ethics Committee which is a Sub-Committee of the University Ethics Committee.

The nine academic staff were selected to cover a range of subject areas, levels in the hierarchy and stages in their careers. A letter of invitation to participate covering research ethics requirements was sent to each interviewee for their signed consent to participate and for the interview to be recorded. A copy of this letter is in appendix 13. The interviews were then carried out in the university and recorded with prior agreement.

We decided on interviews on campus to give the best chance of eliciting information and perceptions which can arise in a more conversational atmosphere out of the usual context of library business, but still within the university setting. These were semi structured interviews as we needed the boundary of focus whilst at the same time creating an atmosphere for open contributions.

In formulating the questions, we drew on our own professional experience and that of others; on the learning that has emerged for us from this critical engagement, with our own outputs and on existing literature. Our questions arose out of our need to understand the perceptions and perspectives that academic staff have of our current and future role. The questions we asked were:

- What is your perception of librarians?
- What is your perception of the current role of librarians at Middlesex University?
- What could the role of librarians look like in 5 years' time?
- Is there any value of librarians being involved in designing future curricula?
- In order to meet the University's research agenda, what should the librarian of the future look like?
- What should the librarian of the future be called?
- Anything else you would like to say?

On paper these look rigid but there were prompts which functioned as both supporting where the participant wanted to go and bringing them back to the main questions. The exchanges for the most part were conversational in tone and the academics seemed genuinely interested.

15.1.2 Analysis

We listened to each recording and noted all significant issues, comments and observations on post-it notes. We did not transcribe them but chose instead to listen to the vocal accounts so that we could interpret what was said more accurately through the way in which it was said. You can see this work in progress, ably assisted by Tony (Vanessa's cat) in the picture shown below:

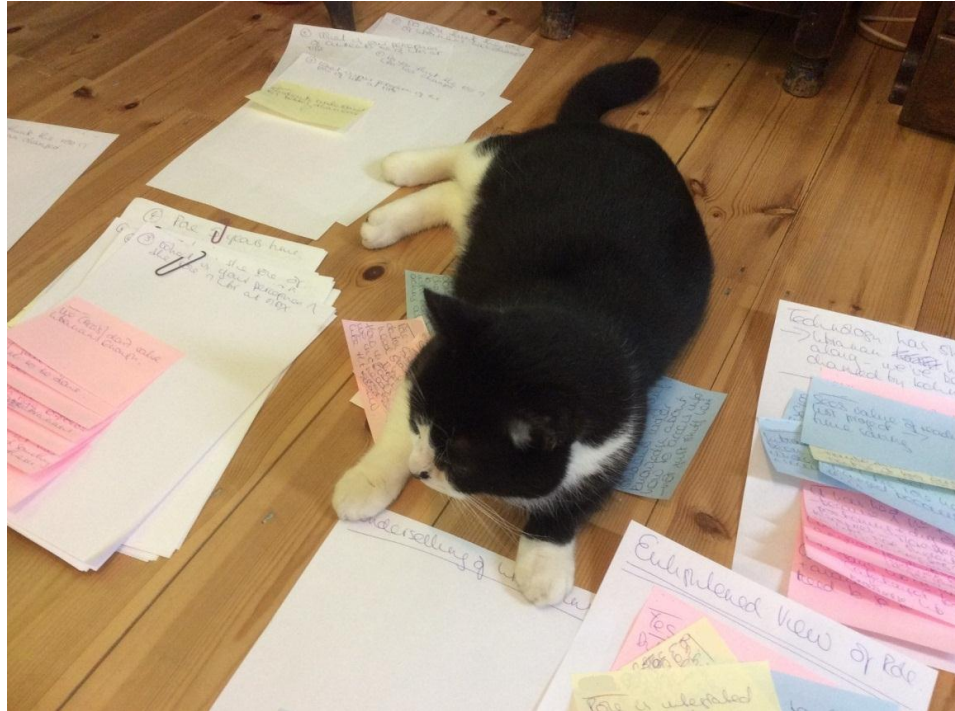


Figure 17: Tony assisting with the interview analysis

We analysed the data thematically coding it into core themes indicated by the section headings below. In each section we then explore how these themes were expressed and the ideas and thinking which they revealed. Given the varying academic backgrounds of our interviewees, they are referred to as 'participants' for the purposes of the analysis. The following are used to distinguish frequency of opinion:

- | | |
|---------------------|---------------------------------------|
| Bold: | Majority of interviewees opinion (5+) |
| <u>Underlined:</u> | Minority view (two to four people) |
| Highlighted: | Single interviewee only |

In addition, the following are also used:

- | | |
|-----------------|--|
| "xxxx" | Direct quote by participant |
| <i>Italics:</i> | Significant themes explored in our conclusions and reflections in section 15.16. |

15.2 Academic perceptions of our role

Our participants generally had a positive perception of libraries and librarians, in most cases as a result of childhood experiences of using libraries, e.g. “story teller” or from professional relationships with their liaison librarian. They recognized that librarians are different in different contexts, e.g. academic or public librarians. However, one expert thought that librarians do not have a qualification structure and that public librarians are not qualified.

Participants generally felt that librarians make their lives and that of their students easier and are a useful contact. However, one admitted to being “terrified” of librarians as an undergraduate but later realised the “enjoyment” of libraries and value of librarians as a Masters student. One acknowledged that the role of the librarian is affected by the relationship that develops between the academic and librarian, but also that academics do not value librarians enough. However, another speculated on how academics get to know what librarians actually do and what they can offer; after all there is not a “manual”

Our participants are aware that libraries have changed due to advances in technology and the advent of the Internet and that the role of the librarian has had to change as a result. One took the stronger view that Librarians and academics had been “forced” into a whole new world and way of learning.

The majority of participants still have a ‘traditional’ view of our role as process experts and resource providers, seeing us as:

- Managing print and electronic resources.
- Enabling access to a range of relevant quality electronic resources.
- Navigating complex resources and platforms.
- Compiling online reading lists.
- Providing skills to explore information and evaluate knowledge through the discriminatory use of resources.

However, a minority of participants recognised that librarians can act as a buffer between students and information being “friendly gatekeepers” and “custodians of knowledge” with an approach and skills that complement that of the academic.

One suggested that librarians have skills in “decoding and deconstructing information”, being able to direct students to quality resources, guide and filter searches, and broaden knowledge through the use of alternative sources.

Some of our participants expressed the view that librarians have become more skilled, expert and “cutting edge”; with more student focus rather than simply being “passive recipient of requests”; and have an increasing role as “co-creators of knowledge” and information. Moreover one stated that librarians are capable of understanding complex, poorly formed and ignorant needs, having the knowledge and problem solving skills “to frame the question I couldn’t even ask and help me answer it”. This made us wonder if this was down to an ability to think outside the box or, more optimistically, an example of librarians being able to work in a transdisciplinary manner.

These participants understood that use of resources cannot be isolated from academic teaching, with the implication that librarians should play an integral role in helping students to learn. Their **increased “educative role”** was recognised by the majority of the participants and it was suggested that their input should be embedded in the curriculum, with librarians considered as part of the research and teaching teams. Indeed one went on to say that librarians need to convince others of their value not least because they add value to students “readiness for the world”, which to us suggests a broader view of what librarians do and is in keeping with our vision of IL as part of lifelong learning.

While one participant noted that it is not a librarian’s job to know everything about a subject, another added that they have academic credibility, being perceived as helpful, collaborative and authoritative. Some participants had a more positive view of ‘gatekeeping’ than that described above in the way that librarians open gates to facilitate research and study, finding new ways to engage people. It was suggested that the role of the librarian needs to be redefined away from the traditional view of librarians located in the library, acting as the guardians of books, but as gatekeepers of knowledge. Another talked of us having become “digital miners” with a role in research, coming in at a level of expertise equal to researchers but different. One participant went so far as to describe us as the

“living embodiment of learning” through connectivism and a having key role in “academic literacy”.

However most of the participants were not aware of the full range of skills that librarians have, one admitting to having a “crude and unreconstructed” understanding of our role. Another commented that academics might therefore miss out on valuable library support, for example one was unaware that Middlesex University has a research support librarian.

15.3 Contribution to curriculum design

Our participants had mixed views on whether librarians should be involved in curriculum design. One could see no reason for any involvement, but could envisage more timely interaction in class. Others suggested that librarians have a lot of expertise to contribute to curriculum design and were probably under-utilised with only a few pockets of good practice existing around the university. It was suggested that librarians might work in an advisory capacity, designing specific areas of the curriculum that relate to their skills.

The remaining four participants believed that librarians do have a role in development of curriculum and assessment as an integral part of the learning and teaching team, but this only works if the librarians input is “integral not tokenistic”. One went so far as to state that anyone who has knowledge and skills and access to information about a discipline has a place in curriculum design and that different knowledge and working practices act as a “check on complacency”. Another quoted an example of librarians being involved in the redevelopment and revalidation of Middlesex University’s PGCertHE programme, which had been extremely valuable and it was noted that librarians have a significant role to play in formal activities such as validations, Boards of Studies and specifically in the forthcoming HE Review.

15.4 Our image matters

Some participants agreed that the cliché image of librarians continues to haunt us e.g. the “mousey” person who is not good with people, wants a quiet life and “isn’t going to trouble any discourse ever”. One noted that personal style makes a big difference citing her liaison librarian who she saw as “knowledgeable”, “accessible” and “upbeat”, while another saw our role as not being standard across the University. Thus our image is very much to do with how the individual sees their role, and the contact and experience that academics have with them.

One suggested that librarians need to consider how they promote themselves and how academics know what they do and how to use them. This underselling of their role leads to them being wrongly viewed simply as people who know where things are, rather than being involved in knowledge transfer. One interesting view was that people in HE define themselves as academics, librarians, or technicians, but all are interested in “inducting the young in possibilities of an interesting life”. Thus one issue is, perhaps, that librarians perceive themselves as being less important than academics.

One participant had advice for the profession: Librarians need to be “assertive, confident, clever, pushing and pushing”, starting off small and building up collaboration and intervention. The librarian of the future needs to act by “stealth”, keep pushing at “closed doors”, promote worth, be “nimble footed”, believe what they are offering is worthwhile and important, articulate the work they are doing, be prepared to sell themselves, hold their nerve and be willing to name and shame those who hinder. This participant also suggested that the library executive team could do more to champion and promote our work. This prompts a reflection that perhaps library senior managers have become, as a result of their role, detached from the IL work which librarians are doing, so perhaps librarians can consider persuading their managers of the value of librarians in an IL role.

15.5 Don't do as I do, do as I say

Despite an obvious love of books, and sustained use of libraries throughout childhood and during their own education, several of our participants admitted that they now rarely visited the library, justified by the fact that everything is available online. This suggests an awareness of the increasing digitisation of information, but a failure on the part of librarians to communicate the extent to which this has happened. We often meet academics who are unaware of the breadth of resources available from the library. Indeed one participant considered Google as the answer to their information needs, which suggests that 'Digital Natives' are not alone in this behaviour.

By not visiting the library, academics can develop misconceptions and potentially misguide students. This was evident in a number of comments made by our participants regarding resources and access to librarians for students and supports the earlier statements made regards low library usage.

Half of our participants believed that they have well developed library skills, and therefore rarely require the help of their librarian even when undertaking significant research. On reflection one participant, recognising the knowledge and expertise of their librarian, considered themselves "crazy" for not utilising the librarian's skills, especially as she frequently refers students to them for help. This is indeed a common theme and suggests that the role of the Librarian is perceived as being more to do with how they can support undergraduates rather than how they can help academics and researchers. Most of our participants stated that they know how to "research and explore knowledge".

The assumption that researchers and academics have the required information literacy skills is redolent of the myth explored in section 8.6 which suggests that these skills are acquired by "osmosis" (Weetman, 2005). One participant admitted that she had lacked some fundamental information skills as a student but this has not influenced her to require IL training for her students. This raises the issue as to whether IL is something best acquired through formal training then reinforced by practice or solely acquired in the process of learning?

The *inadequacy of “academic skills” amongst some of their colleagues* was noted by our participants, specifically the “woeful lack” of understanding of how to reference, how to use resources such as the research repository, ways of sharing knowledge or a general lack of research integrity. The use of the term “academic skills” is perhaps significant, marking them as distinct from those skills that occupy librarians. One questioned **how many academics actually stay in class** when librarians run library workshops, seeing this as potentially beneficial. The reality is that few do, and our experience indicates that those academics that are present in class are far more engaged with the library, learning from our practice and setting a positive example to their students.

While some participants acknowledged that librarians cannot specialise in academic disciplines, librarians do have a “support role” in research around issues of copyright, intellectual property, use of the Research Repository, data archiving, open access publishing, measuring journal impact and helping academics engage with electronic resources. One participant took a wider view and **saw the library as helping to manage the information needs of the whole University**. However we believe many librarians, especially those who work in former Polytechnics, are less knowledgeable about the issues listed above and indicates how our skills set needs to develop in order to meet academic perceptions of our future role.

15.6 Managing information overload

Our participants agreed that access to information is faster and easier but that as a consequence many academics suffer from information overload. One added that academics have not yet taken advantage of the quantity of information available in their disciplines and need to “get to grips with it”. Several stated that academics need **librarians to act as “guides” and “navigators”** and librarians **“provide order on chaos”**. Reference was made to the teamwork and collaboration required to address information overload and that librarians were “integral” to this, not an “add-on”. One suggested that, like them, librarians might also be suffering from information overload, although we would assume that by virtue of our profession we have the necessary skills to deal with this.

Interestingly, this contradicts an earlier statement by participants that academics do not need our help and suggests that they in fact need us more than ever. One participant felt that librarians have a role to play in the creation of knowledge by taking the “great plethora of information and transforming it into useful, enlightening, and emancipatory knowledge”. It would seem then that the advent of the World Wide Web does not appear to have undermined our role.

15.7 Can't do, won't do!

Our participants expressed a range of views around students' skills and expertise. One admitted that she did not know what students can and cannot do, but claimed students understand how to research “better than ever”, while another stated that people are more digitally literate, so do not need librarians in the same way. We would question these views based on our reflections in section 8.1. As a parent of an A-level student, Adam is aware of how much emphasis is placed on delivering the correct answer to maximise points, rather than exploring a subject in depth.

Another participant feels her students do not question enough and that their educational experience before university did not teach them to do so. This is reflected in their ignorance about the provenance of information on the internet and their understanding of how to use it:

“I didn't quite realise how little the students knew about the Internet until we started doing stuff together and it's become more and more terrifying every single year that it's not getting better what they are coming in with”.

This view was echoed by another participant who speculated as to why students use Wikipedia or rely on information that is at too low a level for University, concluding that its familiarity and the acceptance of what is offered in Google search results is the reason. Another saw it this way: The ‘finding’ is important, but making judgements on what is found needs to be continually impressed on students. This participant would like students to be able to “discriminate between resources and come to their own judgement”. This is exactly what Coonan (2014)

sees in her students: "...we need to let them know the information experience doesn't end with 'find': that find is where it starts."

A big issue for our participants was the lack of student engagement with reading as a key academic activity, described by one as "engaging with the great cannons", adding that some students just want to be informed, while others are pleased to be engaged. Indeed some felt the provision of online reading lists made things too easy for students, believing that they should be developing their ideas by using the library to "meet the unexpected" by browsing the shelves. Others did see a value in online reading lists as time saving and we would argue that these help students engage with the literature by removing barriers such as a book being on loan or hard to find.

If, as stated, our participants believe that academic courses are supposed to be about getting students thinking, exploring and excited about a subject, then our time is better spent encouraging students to distinguish truth, mistakes and lies rather than process. This lack of criticality, insight and basic awareness means students do not realise that, as one participant put it, "information is something of which you ask questions and not something you just swallow" and added that students are unable to transfer knowledge learnt in one context to another. Fortunately for the librarian of the future there is an expectation that librarians can help, having a bigger and more critical role in delivering better student skills, for example helping students infer from a specific that is being researched on into the general.

There was recognition from one participant that the Middlesex University Graduate Skills Framework is out of date, describing it as a "creaky old thing". Another questioned responsibility for embedding these skills, noting pockets of good practice and the inevitable problem of what happens when someone leaves. The same participant envisaged a holistic approach to student skills, but felt disempowered as they only have responsibility for certain modules. This suggests that programme development needs to involve the whole academic community and that change needs to occur at a strategic level.

15.8 Is Academia losing its way?

Our participants were all worried that **education has become too corporate**; one participant said that the love of subject areas has been lost with the advent of fees and another worried that academia has become diluted by a “tick box” approach to graduate skills. They hope librarians can become part of the resistance to the “cynicism of the market message”, describing marketing as “invasive” resulting in a dangerous reversal of academic process. If programmes do not achieve their aims, then the problem is with the product, i.e. the programme, so *ipso facto* the product has to change. As such marketing is influencing curriculum design, with the result that the University is run by marketing and therefore education becomes a business. Universities need to reassert what are the important values in the lives of their students, for example, what is more important to the “good life than reading”. This echoes comments made in Myth 5 (section 8.5) about the need to rethink education now that the economic future is less bright and students’ prospects for employment are much less assured.

Some of our participants were concerned about where academia is going, a question that is important regarding a context in which librarians will have to operate, when clearly the main focus of the institution should be education. One observed that students just want to get a qualification and not an education, while others felt disempowered as lecturers are no longer the gatekeepers of knowledge due to the proliferation of easily accessible information on the internet of which they have no control. However we would argue that students still expect their tutors to guide them through suggested readings, unsurprising given the way A-levels are taught.

Behavioural issues are considered a major problem, so sustaining student attention is hard. One participant saw a solution in more collaboration between staff and students, something we have embraced through the use of games and activities to engage those we teach. One noted how their librarian had introduced a new information resource which visualised difficult information in a non-linear way, which caught the attention of the students. This perhaps shows the potential of collaborative teaching, which utilises the skills of both academics and librarians.

One participant felt strongly that students' lack of skills has a significant impact on the way their HE is delivered, describing some students as being "functionally illiterate". Schools are seen as not dealing with a "cut and paste mentality", so the problem continues at University where courses resort to using "surveillance techniques" such as exams and plagiarism software to catch students out. One stressed that her job is to teach a subject and not basic skills for which she has no training, believing that librarians and the Learner Development Unit's (LDU) academic writing and numeracy lecturers have a role to help resolve this. This raises the issue of how curricula are designed so that academics do not need to teach basic skills or at least have the skills to manage the problem.

Several of our participants pondered the problem of student skills and possible solutions. One asked rhetorically how do you develop a 3rd year student who is essentially where they should have been in their first year when they are trying to do third year work? This participant acknowledged that it is a curriculum issue that students are not engaging properly, not the responsibility of the librarian. Suggested solutions included a pre-sessional (academic) literacy course for those who have weak skills, so that "good students" are not alienated by covering these skills in class.

15.9 Academic conservatism

An interesting and common theme to emerge from our interviews was that of **academic conservatism as regards learning and teaching**, in part caused by disengaged academics. One participant stated that "as an academic you can chose to engage, chose to do very little or choose to do a lot". For example one noted that academics are not engaged with information technology such as Moodle and do not consider how students might interact with such resources, which allows more flexibility than is currently utilised.

Another suggested that academics do not innovate for a number of reasons. Firstly they are terrified by the prospect of failure in front of their class and will be "finished" if new innovative practices go wrong. There is also no motivation to change if an individual's practice appears to have worked over many years. Lack

of time, skills, imagination and insight were also cited as reasons for their reluctance to innovate. One participant acknowledged that, as librarians, we have been motivated to change our pedagogy because of our unhappiness with previous practice and the belief that what we were doing was not effective. We have not only reinvented our practice, but we also regularly subject ourselves to 'trial by peer' when we take our work out to the wider library profession.

It was also suggested that there is a "*repetitive snobbery*" between teaching and research, which should be broken down so that attention can be given to learning and teaching skills. Sometimes when librarians suggest doing something different in library workshops this receives a negative reception, leading us to believe that in reality academics do not like having changes imposed on them. Jackson has a similar view:

"Most faculty believe in research, mastery of knowledge/content, and specialization; unlike librarians, they are not interested in the "process" of teaching or discussing pedagogical techniques; and they are fiercely autonomous and devoted to academic freedom and resistant to offers of help from librarians. They often mistakenly interpret these offers as interference." (1999, pp.106-107).

The opportunity to reflect on academic conservatism resulted in some possible solutions. One participant considered that *embedding library skills into the curriculum would prompt academics to up-skill* and another agreed that this change was necessary. Others considered how this change might happen. Should librarians liaise with Programme Leaders who would then cascade new ideas on information skills to the module staff in order to encourage them to behave differently? Is this even possible given the large teams that Programme Leaders manage and the ever increasing responsibilities of Department Heads who manage the academic teams?

15.10 The future is bright

Our participants expressed a range of views regarding the future role of librarians and the context in which they will continue to operate. One obvious driver of change is the growth of online resources and some of our participants envisage a future for us as virtual librarians in a virtual learning space, providing one to one support particularly for distance learners. Taking into consideration the support already provided to distance learners and given our increasingly digital collections we are already part way there. Some of our participants felt that development of the virtual environment may result in students becoming autonomous learners, not necessarily having less contact with us but a different type of contact through targeted, focused support. We already see this happening with some distance learning programmes in which there is one to one online support with students all over the world. However evidence from student surveys suggests that, for many students, in return for their fees they expect to work in classes in the presence of a tutor. One participant saw a different split, with remote work being the norm for individual study, but with the library still used as a meeting place for group work.

Our participants also expressed a need for a “research hub” and a “refuge and haven”. They described a virtual “intellectual space that we all inhabit” for reflection, learning and study; with new types of knowledge distribution and the opportunity to discover other research going on in the university. It was noted that librarians have a broader view of what is going on around the university, and thus could play a valuable role in this network of research knowledge.

To be effective, librarians need to have a range of skills and adapt to what is required, one participant suggesting Bloom’s hierarchy of needs perhaps being a possible guide. Criticality was noted as part of the role, rather than just telling people where “stuff” is and this participant would like to see more collaborative teaching between librarians, academics and the LDU. Indeed this participants sees the separation of the work done by the LDU and librarians as “artificial” as they share similar expertise. Such team teaching could be powerful, breaking down barriers and leading to more “human engagement”. A useful measure of success would be if information skills are persistently embedded to the extent that they become “norms”.

15.11 Librarians and researchers, librarians as researchers

When considering our future role, our participants formulated some far reaching ideas. As librarians move through collaborative collegiate working they will develop integral academic support roles that require less physical presence in the library. As several participants agreed, librarians will ***no longer be in the library but “out there” as fully fledged academics*** and facilitators, researching our practice as librarians and teachers, working within multidisciplinary teams to facilitate multidisciplinary research. As one explained, librarians should be working outside the physically inadequate library, “ontologically” embedded in the research agenda with ability to shape, direct and offer access into existing knowledge.

It was suggested that librarians could act as resource mentors for PhD students, providing an “intellectual roadmap” and teaching “*researchship*” rather than librarianship to ensure richness and depth in research graduates, rather than the formulaic approach to PhDs observed by some participants. Our participants considered that this could be of benefit to our profession, as embedded research work is considered highly skilled specialised work that is not routine and cannot be outsourced. This was neatly summed up as librarians engaging in “practical wisdom” or practicum, a point we will return to in section 16.3.

This would *break down the barriers between ‘support services’ and academics* given, as one participant commented, that we live in a world where some professions are overvalued and where others are considered as just servicing things, i.e. librarians. Ultimately research would be democratised by challenging the idea that only “rarified individuals” engage in research. A number of our participants appear to have similar views although not all of them were able to clearly articulate the concept. For example one commented that there are lots of collections of knowledge that need to be joined up, but was not sure how. Another saw us as opening lecturers minds to possibilities, alerting academics to a more “cohesive approach to knowledge”, with libraries acting as the “physical embodiment of interdisciplinarity.” One was more unequivocal, describing “anticipatory research teams” which would include specialists in managing the capture, archiving and data architecture of information to support on-going

research and acceptable output to auditing and funding bodies. In this future, one participant foresees no schools or disciplines instead there will be transdisciplinary knowledge creation groups which work on big problems through a multidisciplinary approach facilitated by interactively engaged people. Another put the transdisciplinary role of librarians more succinctly: Librarians bring knowledge together, while academics just lecture on their subjects.

One participant believes that this means the whole University making a break with the past, a “disjunct” from simply continuing to improve what it does, into a different type of being, into fully fledged academic transdisciplinarity. This could, in their view, enrich the academic community if the university pursued it, developing a new symbiotic relationship between gatekeepers and curators of knowledge.

As one participant pointed out, this will mean liberating the thinking and awareness that librarians have for this new role in the main line of academic activity. In order to do this there will have to be a division between those who undertake the maintenance of library from the “intellectual capital of library”. This is already how the library is structured to a certain extent with the liaison librarians making purchasing decisions, but not being involved in their acquisition and circulation or access to the resources, work done largely by support staff or technicians. This was summarised by one participant who stated that “Somebody cleans the books, somebody cleans the minds.”

In summary our future role should be as qualified academics that specialise in “seeking and developing and managing....knowledge and wisdom” and “not the giving of information, but the co-creation of information”. This would create huge opportunities for us to facilitate the main core purpose of the institution which is education. This chimes with the idea that IL should be considered as a discipline in its own right (Webber and Johnston, 2013).

15.12 Graduate of the future

Some participants were concerned about the University's narrow focus on skills for work. One commented that the university should not prioritise graduate skills over learning. Another commented that as there will not be enough jobs for everyone, the monetary ambitions of students need to be replaced with opportunities to enjoy good things in life as they will have time to do so. One might take the view that as many of these good things cost money, poverty may be unhelpful in fulfilling this ambition.

University should cultivate students who do not have a narrow view of knowledge and who will not accept views imposed on them by elite "Guardians of Knowledge". This participant went on to say that although University prepares students for work, they also need to create open-minded and critical students who "search for the truth rather than the answer" and whose "minds will be informed by knowledge, not prejudice". They will not reject inhumane ideas because they are told to do so, but because they come to this conclusion themselves. To us this academic has grasped the concept of IL in its widest sense that is above and beyond bibliographic skills and recognises its application throughout life. Another participant saw librarians having role in supporting students' "proximal development" by scaffolding information skills and expertise onto their prior knowledge, something we explored in section 11.4.

For all this to happen, students need to become more like researchers. The future jobs that will be available will involve finding knowledge and knowing where, how and what to look for and importantly how to make meaning out of what they find. This cannot be achieved in isolation but draws on other knowledges. These are also student's future life skills, for example dealing with their personal finances. This participant sees a need for students to be members of the University library for life, so as to "place the library and the resources at the centre of the enterprise for students, rather than [as] a feeder". Adam recently advised the Alumni Office on the acquisition of graduate accessible e-journals collection, which fits with our participant's notion of university for life.

15.13 Making the library relevant

A theme that several of our participants commented on was the need to make the library integral in the lives of students. One saw it thus: Students have a range of abilities and engage with the library in different ways. Her experience is of 'Digital Natives' not interested in reading and learning, but also of literate people who do not know how to use computers and technology, which again counters the myths around 'Digital Natives' discussed in section 8.2. Therefore this participant wants librarians to get students engaged in the library, which we and another participant contest is in fact the academic's role.

How this might be achieved highlighted differing views. One participant argued for a return of the key skills module which we would not support as skills were learnt in isolation from academic work. Another mooted the idea of a pre-sessional style literacy course, which ensures students start university with sufficient *academic skills*. While another suggested the integration of critical reading and writing into the first year curriculum, which is of course what ANCIL would deliver and we believe would be a much better way than a generic skills module.

However there are significant barriers. Just as the image of the librarian inhibits development of our professional role, so do preconceptions about the library. Are Libraries just about books and finding information? One participant concluded that students are reluctant to use the library as they see it as difficult to use preferring to use Google rather than consult a librarian, thus typifying our perceptions of 'Digital Natives'.

Our participants would like students to use the library more, read more fully around a subject and engage with information. How might this be achieved? One suggestion was to demonstrate that the use of the library can contribute to improved grades, by getting students to understand that "knowledge is power and up to date knowledge is currency." As already discussed in section 10.5, we have made use of coursework marking criteria to show students where use of library resources can make an impact.

One participant commented that her students have been drawn into the library by the available IT and through this were exposed to the range of resources available

as well as seeing other students interacting with material in different ways. By getting the library to “seep in to them” she hopes they will see going to the library as being normal. This is interesting as our participant’s comments are about the library as place, not about skills, which tends to be the traditional focus of library workshops. The same participant sees the exhibitions which the library has around campus as helpful outposts enabling people to “stumble” across things and making them part of their lives. She suggests the solution may lie in looking not just at what is taught in the curriculum, but also where and how it is taught. Our experience of teaching product design students chimes with this view, that running workshops in our Materials Room and utilising items from our Special Collections is more meaningful for the students.

15.14 What’s in a name?

Some of our participants considered the title of ‘Librarian’ to be “old-fashioned” and tarnished by the stereotypical image that surrounds our profession. It was also suggested that ‘Librarian’ may no longer be appropriate as our traditional role and curatorial expertise has been affected by changes in technology. In addition the role of a librarian increasingly encompasses multiple skills and activities including those associated with data architecture and access management, so much so that the name ‘Librarian’ feels inadequate.

Similarly the name may not be understood by students whose perception of the value of librarians and indeed libraries may have been influenced by the low priority given to them by local councils during the current economic downturn. Vassilakaki and Moniarou-Papaconstantinou (2014) provide an excellent if rather depressing overview of the continued negative perception of librarians by the public, students and academics alike. As one participant stated ‘Librarian’ is “not a word that inspires excitement and hope...and interest”. There may be little expectation that librarians can help them, especially as many students may never have used a library prior to university. The same participant felt that our current job title ‘Liaison Librarian’ does not mean anything and that perhaps our previous

title 'Subject Librarian' would be more meaningful to students, suggesting a "go to" person with specialist skills and knowledge in a particular discipline.

Only one participant felt that librarians should change their name, advocating 'Cloudarian' as an alternative title, as they foresaw a future without a physical library building. Despite speculation as to the suitability of the title, other participants believed that 'librarian' was still the best option. It represents a link with the past and is more meaningful than alternatives such as 'Knowledge Worker' deemed to be "gimmicky" and incomprehensible to users. Our professional literature is indeed scattered with possible variations including Consulting Librarian (Donham and Green, 2004), Academic Librarian (Diekema, Holliday and Leary, 2011), Knowledge Navigator (Jackson, 1999), Information Literacy Co-ordinator (Corrall, 2010), and Data Librarian (Corrall, 2010). In contemplating possible alternatives our participants did suggest other possible words to use alongside the word librarian including 'academic', 'learning', 'reader', 'reader support'; as well as alternative job titles such as 'Knowledge Awareness Academic' or simply 'Academic'.

Likewise the majority view **favoured the use of the word 'library'** to describe the physical entity, believing that this denotes a place that holds information and makes it available, suggesting a resource rather than a "storehouse of facts". One participant reflected that the recent overuse of the name 'Resource Centre' was passively suggesting "laptops and online stuff" rather than knowledge and learning. However people need to understand what a library is, once more suggesting that the service needs to boost its image and promote its value and relevance in the lives of the community that it serves.

The consensus of opinion was that librarians would be better served by attempting to change perceptions of their role, rather than their name. They should be "proud" of their title, but "update" and "reinvent" their role. As one participant put it, the profession should "change the temporality of the notion of librarian" so that librarians are no longer seen as the "searchers of the past....but creators of the future". Indeed as Shakespeare's Juliet famously stated "What's in a name? That which we call a rose by any other name would smell as sweet" (1595, Act 2, Scene 2).

15.15 Summary of research

In this section we summarise the research explored above.

We will then draw our conclusions and reflect on the significant themes arising from the interviews in section 15.16.

| Section | Majority view (5+) | Minority view (2-4) | Single participant |
|--|--|--|---|
| 15.2 Academic perceptions of our role | 'Traditional' view of our role as process experts and resource providers | Make participants lives and those of their students easier | Librarians do not have a qualification structure |
| | | Libraries changed due to technology and the Internet; role of librarian has had to change as a result | Role of the librarian affected by the relationship with academic |
| | | Librarians are a buffer between students and information: "Friendly gatekeepers" and "custodians of knowledge" | Academics do not value librarians enough |
| | | Librarians have become more skilled, expert and "cutting edge"; with more student focus | Have knowledge and problem solving skills |
| | Increased educative role recognised | | "Living embodiment of learning" through connectivism; Key role in "academic literacy" |

| Section | Majority view (5+) | Minority view (2-4) | Single participant |
|---|---------------------------|--|---|
| 15.3 Contribution to curriculum design | | Librarians have a lot of expertise to contribute to curriculum design and were probably under-utilised | Could see no reason for our involvement |
| | | Role in development of curriculum and assessment as an integral part of the learning and teaching team | |
| Section | Majority view (5+) | Minority view (2-4) | Single participant |
| 15.4 Our image matters | | Cliché image of librarians continues to haunt us | |
| | | Underselling of our role leads us to being wrongly viewed | |
| Section | Majority view (5+) | Minority view (2-4) | Single participant |
| 15.5 Don't do as I do, do as I say | | Now rarely visited the library | Considered Google as the answer to their information needs |
| | | Believed they had well developed library skills | |
| | | Inadequacy of "academic skills" amongst some of their colleagues | |
| | | Librarians have a support role in research | Library helping to manage the information needs of the whole University |

| Section | Majority view (5+) | Minority view (2-4) | Single participant |
|---------------------------------------|---|--|---|
| 15.6 Managing information overload | Librarians need to act as “guides” and “navigators”; “Provide order on chaos” | | Role to play in the creation of knowledge; transforming it |
| Section | Majority view (5+) | Minority view (2-4) | Single participant |
| 15.7 Can't do, won't do | | Students lack of engagement with reading as a key academic activity | Did not know what students can and cannot do; stated students understand how to research “better than ever” |
| | | | People are more digitally literate, so do not need librarians. |
| | | Lack of criticality, insight and basic awareness | Students do not question enough; educational experience before university did not teach them to do so |
| | | | Making judgements on what is found needs to be continually impressed on students |
| | | Bigger and more critical role [for librarians] in delivering better student skills | Graduate Skills Framework is out of date |

| Section | Majority view (5+) | Minority view (2-4) | Single participant |
|-------------------------------------|--|--|--|
| 15.8 Is academia losing its way? | Education has become too corporate | Concerned about where academia is going | Students just want a qualification and not an education |
| | | Disempowered as lecturers are no longer gatekeepers of knowledge | |
| | | Behavioural issues a major problem | Students' lack of skills has a significant impact on the way their HE is delivered |
| Section | Majority view (5+) | Minority view (2-4) | Single participant |
| 15.9 Academic conservatism | Academics are conservative regarding learning and teaching | | Academics are terrified of failing in front of their students |
| | | | Lack of time, skills and imagination cited as reasons for reluctance to innovate |
| | | | "Repetitive snobbery" between teaching and research |
| | | | Embedding information skills in curriculum would prompt academics to up-skill |

| Section | Majority view (5+) | Minority view (2-4) | Single participant |
|--|--|--|--|
| 15.10 The future is bright | | Envisage future for librarians in a virtual learning space | |
| | | Need for a “research hub” | |
| | | | Succeeded if information skills are “persistently embedded” to the extent that they become “norms” |
| Section | Majority view (5+) | Minority view (2-4) | Single participant |
| 15.11 Librarians and researchers, librarians as researchers | | | Librarians bring knowledge together |
| | Librarians will no longer be in the library but “out there” as fully fledged academics | Librarians will work within multidisciplinary teams to facilitate multidisciplinary research | No Schools in the future but transdisciplinary knowledge creation groups |
| | | | Break down barriers between support services and academics |
| | | | Liberating the thinking and awareness that librarians have for this new role |

| Section | Majority view (5+) | Minority view (2-4) | Single participant |
|--------------------------------------|---------------------------|---|---|
| 15.12 Graduate of the future | | Concerned about University's narrow focus on skills for work | |
| | | | Need to create open-minded and critical students |
| | | | Students need to become more like researchers |
| Section | Majority view (5+) | Minority view (2-4) | Single participant |
| 15.13 Making the library relevant | | Need to make the library integral in the lives of students | Students reluctant to use library as they see it as difficult to use |
| | | | Suggested return of key skills module |
| | | | Suggested pre-sessional style literacy course |
| | | | Integrate critical reading and writing into the 1 st year curriculum |
| | | Would like students to use library more and engage with information | Need to look at what is taught in the curriculum, but also where and how it is taught |

| Section | Majority view (5+) | Minority view (2-4) | Single participant |
|---------------------------|----------------------------------|--|--------------------------------|
| 15.14 What's in a name | | Title of 'Librarian' is tarnished by stereotypical image | |
| | Favour use of the word 'library' | 'Librarian' is still the best option | Name 'Librarian' is inadequate |
| | | Librarians should attempt to change perceptions of role | |

15.16 Research activity: conclusions and reflections

Fundamental issues have become evident as we have considered the opinions of our participants who displayed no discernible differences based on their discipline or experience. The views of our participants have aided our understanding of the perception of librarians and our role. These will influence the recommendations we make for the realisation of our vision which is for graduates to be fully information literate and, to achieve that, librarians need to be empowered to contribute. These key issues are listed below and then reflected on:

- Academics acknowledged that the professional role of librarians has changed. However they have a limited view of this role which suggests that librarians need to proactively contribute to changing these perceptions.
- Some participants believe that they already have good information skills and do not need the help of a librarian. Yet they also referred to the poor “academic skills” of their colleagues and their students.
- None of our academic participants actually used the term information literacy. There was, however, reference to “academic literacy” and “researchship”.
- There is concern about the corporatisation of education.

- Who is responsible for the teaching of literacies within the curriculum and how?
- The primacy of research leading to perceptions of research snobbery.
- The need for a virtual or physical social research space.
- Should librarians become academics?
- The need for changes to organisational structures and the creation of new and flexible ways of collaborating.

Academics acknowledge that the professional role of librarians has changed. However, this is generally seen in relation to a shift in technology rather than a move away from resource provision and process management. Interviews carried out in another UK HE institution identified similar perceptions of the role of librarians by academic staff (McCluskey, 2011). There is little understanding of the contribution that librarians can make in the development of IL in its fullest sense. Some participants also saw little role for librarians in curriculum design, clearly influenced by their *limited perception of our role*. If librarians can change the perception that academics have of our role, then perhaps this will lead to librarians having a greater involvement in curriculum design. Jackson comments on the image and status of academic librarians, whom he sees are perceived as “an ‘accidental profession’, a second career choice, or a refuge for the timid” (1999, p.111).

It is therefore necessary for the profession to promote and develop skills and attributes and to *manage the impression made on staff*, so they see their librarian as a valuable contact, skilled in appropriate literacies and research, who is capable of delivering what they need. In doing so, the profession must reinvigorate and redefine the term Librarian rather than changing what they call themselves. Removal of the artificial barriers which exist between the LDU, librarians and academic colleagues would enable us all to deliver IL in a spirit of mutual collaboration, the “researchship” envisaged by one of our participants.

This has implications for librarianship degrees which, in our experience, consistently fail to prepare new practitioners for HE work. Instead of often being positioned as a media and communications subject, perhaps library and information science should be seen as part of education enabling those that will one day teach gain a greater insight into the librarianship profession and its potential?

Some *participants believed that they have good information skills*, so do not need the help of a librarian. Yet they also criticised the poor “academic skills” of their colleagues. They were unaware that this might be an issue for them or indeed for their students and begs a question as to how librarians might encourage academic staff to *reflect on their own literacy skills*. In order to enhance the knowledge relationship between academics and librarians, librarians need to become more academic and academic staff need to become more aware of the value of advanced IL skills, in themselves and in their students. Indeed, as one participant observed, the relationship between themselves and their librarian is key to successful, collaborative initiatives.

Despite extensive discussion of student skills deficiencies described as “terrifying”, *none of our academic participants actually used the term information literacy*. There was, however, reference to “*academic literacy*” and “*researchship*”. We would argue that these are potentially more aspirational terms and that IL is synonymous with academic literacy as it encompasses a range of similar skills required from the point when information is needed, to the creation of new knowledge and its ethical distribution. This suggests a disjunction in terminology used by academics and librarians and thus a requirement for a jointly acceptable definition and understanding of the skills required by the graduate of the future. There is ample evidence in the literature (see Myth 6, section 8.6) and from our participants to suggest that academics overestimate the skills taught at school. Given this disconnect, it is perhaps hardly surprising that many academics complain about disengaged students, expecting them to be participating in much higher levels of reflection and discussion than secondary education has equipped them to deal with. One of our participants sees this as a wider threat to society. If schools are not teaching people to think for themselves and universities fail to do so too, the outlook is bleak for society as a whole.

Our participants are also concerned about the *corporatisation of education*, especially market led curriculum design, influenced by what is needed to sell the product rather than the pursuit of knowledge. This has resulted in traditional academic disciplines such as humanities being side-lined in favour of more profitable courses such as business. They are also critical of the pre-eminence of employability skills, which has resulted in many students rejecting the pursuit of knowledge in favour of merely making the grade.

Indeed there is a further danger that obsession with what sells may lead universities to overlook inconvenient truths that may not fit the marketing brief. We cite as an example the much trumpeted literacy testing introduced several years ago in our institution, the results of which were so alarming that the scheme was abandoned. Despite attempts to remove the problem by pushing up the A-Level tariff, significant numbers of students continue to arrive severely disadvantaged by a lack of academic skills. If students have a physical disability, the University is legally obliged to address their needs, as indeed is also the case with English language abilities. However there continues to be an absence of an effective strategy to help students overcome their literacy challenges which can arise out of contexts such as English as a second language and English not being spoken at home. To us the answer is clear. The way forward is a rigorous embedding of academic and IL skills into the curriculum as practicum, so critical appraisal of information and knowledge becomes the norm.

This leads on to concerns about *who then should teach these literacies and how?* There is awareness by our participants that some academic staff do not have the necessary skills, compounded by the reluctance of some to innovate and to collaborate with 'support services'. Indeed, those academic colleagues who absent themselves from library workshops, for whatever the reasons, remain unaware of the information their students receive and the potential value of these skills to student achievement. As we repeatedly observe, the answer surely lies in a new curriculum for literacies which draws on the strengths of librarians, the Learner Development Unit, academics and other stakeholders.

Another factor highlighted is *research snobbery*. If research is seen as a key driver for academic prospects, it can mean that teaching is given low priority and

devalued. If teaching is deemed unimportant, there is a risk that those who are perceived only to support teaching, such as librarians and the LDU, are also undervalued.

Given the importance of research to academics, there is a need for a *social research space*, either virtual or physical. This would enable those carrying out research to work, communicate, collaborate and share information in a transdisciplinary manner. Librarians could contribute to the effectiveness of such a space through their transdisciplinary skills bringing together people and information from different disciplines (Godin, 2011). Recent research evidences that librarians can in fact make a positive impact on research communities, making a much needed contribution to the improved IL skills of researchers (McCluskey, 2013). However research conducted for Research Libraries UK shows that while librarians are being increasingly integrated into research teams, their role is still passively supportive (Auckland, 2012). In view of space constraints at Middlesex University a virtual research environment could have significant advantages. Indeed we have already discussed the use of social media by undergraduate students to evaluate the quality of academic papers (Boukacem-Zeghmouri, 2014) and the library has investigated the possibility of using digital tools and environments more suited to high level research. As many academic staff have become remote users of the library, perhaps the institutional use of social media such as Research Gate or Academia.edu may provide the answer.

Many of our participants are keen for *librarians to become academics*, as they have become increasingly divorced from the day-to-day running of the library. Veaner suggests that:

“One key to the improvement of librarian’s academic status may be further off-loading of their production work onto support staff. For librarians to reach genuine parity with faculty it is necessary to get librarians completely out of the ‘manufacturing’ business.” (Veaner in Jackson, 1999, p.110)

However the quandary for us is how far we should take this. Should research active librarians remain in the library as practitioners or relocate to the academic domain as professors? As vocational professionals ourselves, the former is preferable, even though, as Jackson suggests, the image of librarians would be

much enhanced if they are seen as being research active (1999). McCluskey agrees and further suggests that librarians can best support academic research within an institution by actively participating in practitioner research themselves. She advocates the concept of “embedded librarianship” linking our professional role with academic activity within the institution (2013, p.5). However, practitioner research within the library profession remains rare (Auckland, 2012; McCluskey, 2013) resulting in a discord between theory and practice (McCluskey, 2013). Indeed, this context statement is a rare example of practitioner research at Middlesex University, which has given us a much better sense of research process and informed our own practice.

It has become apparent that IL should be fully integrated into the curriculum as a key component of wider academic literacies. Academic Literacy is key in the work of our LDU colleagues, who see “reading and writing as social practices that vary with context, culture and genre” depending on the practices of different academic communities at discipline and institutional levels (Lea and Street, 2010, p.368). Librarians have much to learn from this approach. Indeed, if the term academic literacy potentially has resonance for academic colleagues, is it better for librarians to talk about wider ‘academic literacies’ when broaching with them the input they might have in their curriculum?

Reflecting on all we have discussed so far, we believe that universities need to take a much wider view of current delivery models and see if they are fit for purpose. Just as departments, schools and faculties have become barriers to research across disciplines, if the answer for embedding transdisciplinary research is the *withering away of old structures and the creation of new flexible ways of collaborating*, then surely the same logic can be applied to the way in which librarians work with others to deliver IL as part of a wider academic literacies curriculum? There is clearly a need for better liaison between the library and academics in order to nurture more productive and symbiotic working relationships. The profession and the University need to consider how we can spread good practice, training and understanding in order to deliver our vision of an ANCIL type curriculum.

Having identified and reflected on a range of issues surrounding students, academics, and librarians; in particular skills, conservatism and image respectively; we will now explore the necessary drivers which will enable change to happen.

16 Drivers of change

We have considered the growing importance of IL in academia and as a fundamental contributor to lifelong learning within society. It has become clear to us that, within HE, librarians cannot develop IL alone and that the whole institution must be engaged in this process to drive forward change.

For the librarian of the future to become a tangible force within institutions, and especially in the development of IL and ethically sound research, they must embrace a different mind-set and develop new proficiencies. As Campbell suggests, librarians must be “drivers” not “passengers” (Campbell in Jackson, 1999, p.93) and be masters of our own destiny rather than leaving it to others to decide our fate (Jackson, 1999). Equally if the University is to truly embrace IL as an integral part of its educational ethos, then it must undertake what will inevitably be a highly political process in order to change the attitudes, aspirations and culture of the whole community.

Based on our research so far there are a number of factors which we believe will drive forward change. These are explored below.

16.1 Learning and teaching skills

If librarians are to be part of this change, we would argue that they need to become educators underpinned by a good foundation of knowledge of teaching and learning. (Peacock, 2001; Stubbings and Franklin, 2006; Bewick and Corral, 2010). Markless believes that “anyone who ‘teaches’ needs to begin with insights into learning rather than to focus primarily on teaching” and through this process librarians can then begin to reflect on their pedagogical practice (2004). It should also not be assumed that librarians are themselves information literate (Bent, 2008). For librarians to truly teach IL, they need to have these skills themselves and possess an understanding of it as a broad concept not restricted to merely the finding of information (Bent, 2008; Coonan, 2014).

Ideally institutions that educate librarians should offer modules focussed on academic librarianship that better prepare the trainee professional for a teaching role above and beyond the one-off workshop. In the absence of this the onus falls on library managers to ensure that librarians are sufficiently knowledgeable in learning, teaching, and presentation skills through attainment of a relevant qualification. As librarians begin to acquire teaching qualifications on a par with academic staff, perceptions may change as they see the potential for collaborative teaching. However as Peacock suggests:

“In order to build up effective and professionally dynamic teaching and learning partnerships, it is vital that systemic barriers between academics and librarians are broken down” (2001, p.30).

Secker points out optimistically that “Librarians are no longer seen simply as gatekeepers of information, but partners with faculty helping to facilitate learning” (Secker, 2011, p.14). Indeed for the last 2 years, we have been named along with the School’s AWL Lecturer as tutors for one of the University’s Masters computing modules covering a broad range of academic and information skills. This is an encouraging development, but is still restricted to one module in one programme. Information literacy skills are not integrated into the students’ learning within their discipline, but continue to be treated as a distinct set of skills, thus their relevance is lost.

We believe that a teaching qualification in HE can expand the possibilities for librarians by helping them to:

- Refocus their understanding of IL from bibliographic instruction to “...a culturally situated phenomenon based on the way communities construct meaning and belonging” (Elmborg, 2006, p.193), which parallels the LDU’s understanding of academic literacy, as noted in section 15.16.
- Improve their pedagogical understanding and practice amongst librarians (Bent, 2008).
- Share best practice through open discussion and teaching observation.

- Reflect on their practice in order to change and adapt as necessary.
- Devise a common approach to teaching (Bent, 2008).
- Develop a progressive framework for workshops to ensure effective provision across all years.
- Flexibly share the teaching workload.
- Understand the mind set and practices of academic colleagues by learning to “speak the same language” (Chen and Lin, 2011, p.409).
- Gain the recognition, respect and understanding of academic colleagues.

Once learning and teaching qualifications are standard within the team, we can embark on a wider collective reflection, ideally in collaboration with LDU colleagues, based on common foundations of theory and practice without threat or misunderstanding (Jacobs, 2008). Indeed a willingness to accept each other as critical friends will facilitate the achievement of a universal framework of IL skills to be used inside and outside the classroom and develop a more visionary sense of what our role can be (Jacobs, 2008). It is our belief that:

“Rather than merely demonstrating resources, we need to be able to articulate how the use of those resources might support the academic journey as an on-going process of making sense, constructing meaning, creating conceptual relationships and even negotiating one’s own identity within a community of practice.” (Coonan, 2014,)

Whilst this understanding will be a major step forward, when coupled with development of a shared pedagogy, librarians also need to understand the academic view of librarians as a profession. The perceptions of academics were shared in section 15 and how librarians might respond to these views are considered in section 16.4.

16.2 Think bigger

This critical engagement and our interviews with academic staff (section 15) have led us to this position: That librarians need to promote their ideas, vision and agenda to academic colleagues. The message librarians send out can position IL (or 'academic literacy' or 'researchship') as key to the learning process and boost our potential role in its achievement. If there is to be a future for librarians they need to reposition themselves, revise their purpose and their training to meet the changing environment of technology, higher education and global markets, think bigger and be more ambitious. Changing the way librarians teach is not sufficient and this should be coupled with a more radical rethink of all that they do (Coonan, 2011).

Students often start university with weak academic and information skills and many have a limited understanding of what libraries are, how they can be used, the value of information to their academic work and the process by which they might contribute to the discourse of their discipline (Elmborg, 2006; Secker, 2011; Head, 2013). In short they lack the understanding of how to learn in a more fluid educational environment. The 'teach to test' focus of the school system means that even the most academically strong students can lack the critical skills necessary to ask questions of their discipline or use information effectively. Undergraduates can experience similar difficulties as they progress from being "course-takers" to "independent researchers" (Lovitt in Coonan, 2011, p.18) who rather than being given the answer are now required to question, identify problems, investigate, analyse and construct new knowledge from what already exists (Coonan, 2011).

By developing knowledge and "reflective consciousness" of the information within their specific discipline (landscape) and its value to their studies and work, Lloyd believes that "transformation occurs" and results in more successful students and employees (2005, p.578) who can better engage in "information environments which are collaborative, complex and messy" (Lloyd and Williamson, 2008, p.9). This suggests that librarians need to develop an understanding of IL not as a linear process, but as a means to achieving "cognitive authority" (Wilson in Lloyd,

2012, p.780), with a recognition that an individual's information needs will vary as their contexts change during a lifetime (Lloyd, 2012).

Within academia, there are disparate views on how information is created. For the librarian, this is often viewed as a methodical process, but for academics it is more fluid and involves "high-level cognitive functions informed by individual expertise" (Coonan, 2011, p.17). Indeed Coonan acknowledges that there is often a "separation between the functional and intellectual aspects of the term 'information'" (Coonan, 2011, p.8). Equally when librarians talk of 'research skills' our meaning is frequently at odds with that of our academic colleagues, and it is therefore no wonder that library workshops are a low priority compared with the real business of academia (Fister, 1993; Jackson, 1999). Fister suggests that:

"Rather than describe the [re]search process as a matter of finding information-which sounds like panning for solid nuggets of truth-librarians should describe it as a way of tapping into a scholarly communication network." (1993, p.214)

Librarians have the potential to help release students from the tyranny of school by helping them develop a relationship with the library and information for life. It is not enough to concentrate on the 'finding' of information (Coonan, 2014) rather librarians need to empower them with critical skills to navigate the worlds of education and employment. Rather than remaining "consumers and passive receivers of knowledge" (Elmborg, 2006, p.193), librarians can help develop skills whereby students are empowered to be autonomous learners with the ability to tackle problems and find solutions in a variety of situations (Secker, 2011). As Beneli states:

"Information conveyed, when comprehended, becomes knowledge; knowledge, when applied, becomes empowerment; empowerment, when effected, is a catalyst for change. Librarians are a vital link in this equation... consequently, the potential of librarians to affect change in our communities is powerful..." (Beneli in Montiel-Overall, 2007, p.64).

Students themselves need to appreciate the difference between "gathering" information (Montiel-Overall, 2007, p.58) and creating knowledge i.e. having "critical consciousness" rather than a "banking concept" of learning (Freire in

Elmborg, 2006, p.193). Good academic writing is dependent on them knowing the difference, whereby they not only acquire information, but process it (Fister, 1993) by “analysing, evaluating, synthesizing, selecting, rejecting” (Kleine, 1987, p.151) to create knowledge. In essence, they become critically literate. Montiel-Overall suggests that “what is important about developing information literacy is not information itself, but the connection learners make with information as a means of constructing knowledge with others” (2007, p.63).

By embracing the idea of critical literacy (Elmborg, 2006), librarians can contribute to the development of students’ critical thinking, ensuring that they are not an obstacle to their own knowledge creation. If critical thinking is understood as being able to assess the “authenticity, accuracy and/or worth of knowledge claims and arguments” (Beyer, 1985), then librarians are ideally placed to contribute to its development. Library instruction frequently covers evaluation skills, although this generally constitutes little more than a check-list and therefore a procedure that must be followed. McPeck sees this as a useful starting point, the idea that critical thinking is procedural, but importantly that it also should be a “frame of mind” (McPeck in Beyer, 1985, p.271), being an instinctive understanding of why people need to evaluate information, as well as being inclined to test ideas and explore alternative opinions (McClure, Fraser and West in Beyer, 1985, p.271). Consequently what librarians can offer students with regards to the retrieval, selection, and evaluation of information, complements and supports what the academic will teach with regards to its consumption, manipulation and utilisation.

Equally the transdisciplinary nature of the librarian’s knowledge of resources and user needs ensures that they are well positioned not only to broaden the knowledge of our users (McMenemy, 2007) but to make connections between discourses which enhance an understanding of their own. Reflecting on Schön’s ideas on the acquisition of information and its effects on identity, Coonan suggests that the information “overload” experienced by people (such as our expert academics) as they try to assimilate new knowledge can be alleviated if they are information literate and thus equipped with “outlooks and strategies” (2011, p.19). Consequently the skills librarians can teach are crucial in an individual’s ability to learn and should be promoted as such. As Coonan states IL is not “merely a set of skills and competences, but a continuum that starts with skills and competences

and ascends towards high-level intellectual and metacognitive behaviours and approaches” (2011, p.20). Lloyd sums up by stating:

“If we accept that information literate people have a deep connection with their environment and through this connection are enriched, enabled and embodied, we begin to focus on the nature of information literacy as a way of knowing through learning to engage with the landscapes which constitute our working, educational and everyday lives.” (Lloyd, 2005, p.580)

16.3 Professionalism

To develop further librarians need to be professional in the broadest sense of the word. Traditional views see being professional as acquiring a set of qualifications to show one understands the profession’s common body of knowledge, a code of ethics and conduct which one follows to ensure one fulfils one’s duties to the “public good”, overseen by a professional body. The well-schooled professional then delivers solutions for clients based on their expertise. The professional knowledge is often assessed through competency standards, focusing in detail on what professionals do. We have seen shades of this approach in a number of the standards frameworks we investigated in section 12 and appendix 11. Changes to the common body of knowledge happen slowly as academic research filters down and the primary focus of professional work is solving problems (Lester, 2010). The way librarianship has changed particularly in the more technical aspects of the role reflects this, for example, the slow and steady way cataloguing and classification rules change. It is also still important that legal changes such as copyright are carefully dissected and acted upon, so this approach remains a valid foundation for professional practice (Lester, 2010, p.6).

However many authors argue this approach to professionalism is simply not responsive enough to be useful anymore. Lester argues that as professionals are shaped by the complex society and uncertain environment in which they work, then there is a need for a more reflective-interpretive model to be placed on top of the “technical-rational” model described above (2010, p.4). Lunt combines these qualities thus:

- Competence: Working reflexively, so we, as professionals, are aware that our own views influence what we learn from our work, learn from our mistakes, with the humility and courage to admit when we are wrong.
- Respect: Empathy for our clients, not a “doctor knows best” attitude.
- Integrity: Derived from reflective practice.
- Responsibility: Using evidence based practice. (2008 p.90-93)

Barnett (2008) argues professionals must also show creativity:

“...professionalism lies in discursive creation. For this the thoroughly modern professional will not rest even with critically deploying discourses and placing her own stamp on them but will become so energised that she will be discursively creative. She will find ways of so engaging with contending audiences in energising her projects that new social relationships, new networks, new groupings may be formed.” (Barnett, 2008 pp.205-6)

If all of this can be achieved, the professional will become higher performing, rapidly evolving their practice and changing it as they apply it in different contexts. They will have become knowledgeable and knowledge-generating practitioners (Lester, 2010). However, Lester argues there are further additional steps professionals must take to become collaborators rather than expert solution providers. Professionals need to work with the client or stakeholder to produce outcomes owned by the latter (Lester 2010). In librarianship the classic example here would be an enquiry where the librarian can either respond by simply finding the journal article or having a more in-depth discussion with the client so they understand how to frame their search, where they should look for information and how to pick out the best results. Or as a student once told Adam, the Good Prophet says “Don’t catch me a fish, teach me fishing”.

It is also vital that professionals draw on knowledge and ideas widely. Just as the transdisciplinary researcher is able to create solutions to large problems by breaking out of the silo of a single discipline and its norms, so a high performing professional should be able to learn from and adopt ideas gleaned from many other professionals and practices. Vieira (2014) describes this hybridization process as cultural *metissage*, from the French for cross fertilization between species of plants, or more controversially the interbreeding between races, which comes with a baggage of colonial history. The concept, developed by Laplantine and Nouss (1997), is however now used to describe the ongoing and active mixing of ideas and knowledge across boundaries. This cross-fertilisation process is never finished and is something actively sought to discover the new knowledge it will bring to those seeking it (Vieira, 2014).

Our professional has thus not only learnt from reflecting on their own practice, but also has actively sought out the ideas of others to inform and influence what they do. This expertise and wider knowledge enables Lester to see our ultimate goal as becoming “a capable practitioner able to apply a repertoire of abilities in roles and situations that cannot be predicted in advance” (2010, p.6). Schön (1990) sees such high performing professionals as going beyond professional practice into professional artistry using reflection-in-action i.e. intelligent, skilful and spontaneous reflection often in conjunction with ‘on the spot’ experimentation to make new sense of uncertain, unique or conflicted situations by going beyond the available rules, facts, theories and operations.

We have already heard the view of academic colleagues that becoming academic is a way for librarians to become effective professionals and that this means separating themselves from the clerical and routine parts of our work, so that they can focus on research, publishing, teaching and understanding (Jackson, 1999, p.105). This may ultimately result in a system Martin (1993, p.24) describes as a “two-track approach to librarianship”, encompassing both those who want simply to be “Occupational Librarians”, evaluated on their “9-5” performance, and what she calls “Professional Librarians” who “work until the job is done”, collaborate with others and engage in research and publication to advance the profession.

Commenting on Martin's paper, Jackson (1999) goes further suggesting such new professional librarians would need to demonstrate; "...high expectations for themselves and certainly engage in the type of "risky" thinking and behaviour needed to reinvigorate the profession. The payoff would be higher status, more respect from the academic community, and the beginning of the creation of a galvanized, new professional class of academic librarians" (Jackson, 1999, p.112). As Martin concludes:

"Just as we used to say that libraries had to change in fundamental ways to avoid becoming museums, librarians must now transform themselves to avoid being relegated to museum caretakers." (Martin, 1993, p.24)

We would argue that in our professional working lives we have already gone a long way down this road. As we saw in section 7, our work as librarians means we are now largely uninvolved in the operational management of the library. This leaves us free to concentrate on working collaboratively with willing academic staff to deliver our training and support for research. However, what has been largely missing from our work until now has been a research element.

This Doctorate has been a chance to reflect on our work as experienced teaching librarians and research its intellectual rationale. We know from the way we have created our public works and been engaged in this statement that we meet both Lunt (2008) and Barnett's (2008) criteria for professionalism as we work reflexively, creatively and responsibly. Indeed we would argue that we are moving towards the professional artistry described by Schön (1990). This has repositioned us professionally from a 'traditional' library role, seeing ourselves as 'on the margins' of the research process, to conceptualising our role as being at the interface of different domains. Librarians will move to proactively embracing a participatory role as skilled navigators and translators, filling gaps between knowledge, experience and practice, in fully collaborative 'researchship' (Maguire, 2012). The librarians of the future will be working in a fully participatory transdisciplinary manner, with the academic community, as co-synthesisers, co-creators and co-producers of new knowledge, working to bridge the gaps between knowledge

production and the demand for new knowledge to solve complex real world problems (Russell, Wickson and Carew, 2008, Mobjörk, 2010).

If librarians embrace this new vision we have described, the next developments for such a professional could be:

- A deeper understanding of what we have described as ‘researchship’, at a time when support for research is a key institutional driver.
- Enhanced professional practice as they develop what they do, as has been our experience.
- Higher professional performance as they engage in effective participation as transdisciplinary translators, navigators and co-researchers with their peers in the academic community, leading to greater mutual understanding and deeper embedding of their work.

But can the academic community itself see this happening?

16.4 Change perceptions

In order to find a place within the wider academic community, librarians need to increase their awareness of how academic colleagues see them, given they often perceive librarians as being in a purely supportive role (McCluskey, 2013) and how they contribute to this perception. Indeed “Faculty often view us as ‘helpers’ which, while friendly, is more subservient than collegial” (Pagowsky and DeFrain, 2014, p.3). While librarians are generally appreciated and valued as professionals within a limited role as providers of information resources, they are not considered as academic equals (Haynes in Jackson, 1999). This may well be for the following reasons:

- Librarianship qualifications are seen as purely vocational.

- Librarians do not engage in discipline based research and publishing (although librarians do research their own practice).
- Librarians are perceived to lack teaching experience (McGuinness, 2006; Badke, 2010).
- Failure to recognise the potential value of the contribution that librarians can make to learning and teaching (Peacock, 2001).

Indeed we would go so far as to say that the way librarians are seen by the academic community has not fundamentally changed since the start of our careers, what Pagowsky and DeFrain (2014) describe as “passive harm by neglect”. However less progressive library colleagues may in fact help perpetuate this “self-deprecating image” through an unwillingness to change their practice (Jackson, 1999, p.95; also McMenemy, 2007). Thus librarians continue to be seen as the providers of resources, enabling access through workshop instruction.

Consequently lip-service is often paid to ‘library matters’, despite the fact that our own institution has guidelines on graduate skills which are supposed to ensure that all appropriate skills are included in the curriculum (see appendix 12). As an example, having worked with academics to embed explicit IL learning outcomes in a new programme, the library and academic writing skills learning objectives were completely ignored once the course commenced. We eventually managed to secure workshop time fourteen months in to the programme and found ourselves teaching first year skills to second year students who were in desperate need of support as they grappled with the demands of university written work.

If librarians are to gain any sort of role in academia, they need to appreciate where they fall short of academic expectations. It is academics who lead academic institutions, so for change to occur and for librarians to gain increased acceptance within the curricula, it must happen on their terms. Martin suggests that librarians tired with the stereotypical image of our profession, must consider why they are perceived in such a way and what they can do to promote their value to the institution by “raising the expectations of an entire profession” (1993, p.24). Peacock offers this advice:

“The shift from training to education demands the librarian attains a high level of educational credibility by demonstrating sound pedagogical knowledge and reflective practice and by communicating effectively with faculty colleagues, using mutually understood language.” (2001, p.28)

Librarians therefore could benefit from considering their own professionalism and strive to enhance it through a range of measures such as engaging in research and becoming involved with academic activities (Jackson, 1999; McCluskey, 2013). Jackson stresses that in order to be professional and gain parity with academics, librarians need to have the flexibility to meet the ever changing demands of our role and lose any administrative functions (1999), something which has been a key feature of our professional journeys so far. McGuinness (2006) also suggests that librarians might better engage with academic staff through the following actions:

- **Offering IL training to academic staff as part of their professional development.** Our experience shows that academics with this insight are more willing to work with library staff and explore the possibilities of collaboration, as well as being able to make a link between the academic and library understandings of IL.
- **Raising the profile of IL at educational conferences and in educational journals.** Papers on the importance of IL are largely written by librarians for librarians (Lloyd, 2005; Weigand in Lloyd, 2009), rather than targeting an academic audience with research that resonates in the world of HE pedagogy. We have already made some progress as outlined in section 4.1.
- **Running discipline specific workshops, seminars and conferences on IL.** This is an option we have explored, presenting alongside academic staff in a School seminar (Smith, Bernaschina and Hill, 2012). Again while feedback and initial interest was encouraging, the long term impact has been minimal.
- **Encouraging their institutions to place a greater emphasis on IL development.** This will require the library executive to take the lead as the

representatives and managers of the whole library service. This is considered in the next section.

16.5 Engaged university

If universities are to fully embrace IL as a core foundation of the entire curriculum, then the willingness, understanding and leadership by management at all levels to make this happen will be crucial (Bruce, 1995).

While academic librarians will continue to advocate IL within their institutions, library management will need to influence university wide strategic planning and policy in order to take forward our vision of a curriculum which fully encompasses IL. If library services are to remain prominent in university life in an era of austerity and change, then library managers “taking leadership positions as campus innovators and change agents” (Bell and Shank, 2004, p.374) will be crucial. Similarly “committing to developing campus-wide information literacy initiatives on our campuses in order to facilitate our on-going involvement in the teaching and learning process is necessary” (2004, p.374).

Library managers need also to be comfortable with the concept of IL themselves, so that they can provide the time, space, guidance and support to their staff to contribute effectively to its achievement (Peacock, 2001; Bent, 2008). We wonder if there is an issue here that those best at IL teaching are not necessarily those who become library managers. Just as in academia where researchers are perceived to be promoted into management in preference to expert teachers, there would appear to be a need for IL practitioners to demonstrate their worth to their own managers in order for them to be able to advocate our work to the wider university. In our case, our success at the THELMAs has been particularly helpful (THELMAs, 2014) as well as the interest shown by other institutions of our changed pedagogy.

In our view, Middlesex University needs to reconsider its *Graduate Skills Framework* and consider how embedded IL can contribute to student achievement (Association of College and Research Libraries, 2000). This implies a significant

cultural shift across the whole organisation and is a major undertaking. Institutions will need to support all staff in engaging with this process, to ensure a proper understanding of IL and how it can have a transformative impact on student academic achievement and lifelong learning (Coonan, 2011). Johnston and Webber (2003) believe that it is not enough to teach students to be information literate and stakeholders at all levels of the university should become so in order to develop a shared understanding. They suggest that:

“By coming to conceive of themselves as information literate, universities would be able to position themselves as being different from, and on a higher level than, the growing competition in the education market” (Johnston and Webber, 2003, p.350).

17 Recommendations

This statement demonstrates a wide ranging critique of our public works which embody our thinking, knowledge and attitudes to the practice of being librarians in the context of major changes in UK HE and in the information society. We have been informed by the opinions of academic colleagues and the results of inquiry into the professional literature. From all that we have learned in this process, we put forward the following recommendations which are listed in the order we believe best supports a chance for them to be realised:

1. Librarians in HE start to talk in terms of *academic literacies* and *researchship* rather than *information literacy* to prompt more inclusive discussion with academic and other colleagues and the development of shared understanding.
2. Given the lack of understanding outside the library profession of the term *information literacy*, ANCIL and the other IL frameworks and curricula should consider incorporating *academic literacies* or *researchship* in their titles.
3. All academic librarians and teaching academics work towards an HE teaching qualification. This would enable them to fully engage with *academic literacy* and to revitalise their professionalism by embracing *researchship* through reflective practice and practitioner research.
4. Higher Education institutions adopt ANCIL as a well-developed model of good practice for the introduction of a collaborative approach to academic literacy, adapting as necessary. ANCIL becomes a transformative foundation for *academic literacy* and *researchship* at all levels, filling key gaps such as the transition from school to university and from taught course to research. By embracing ANCIL such institutions might have a competitive advantage in the market, as it could increase student retention and achievement and produce graduates with enhanced, transferable skills. Academic staff will also become more academically literate and thus better

able to guide students. Librarians will be able to contribute to the creation and sustainability of a research environment that starts as soon as the student enters university and is developed at every stage of student life, not just at Masters and Doctoral level.

5. Librarians promote *academic literacy* and *researchship* beyond their own profession, repositioning academic librarians as key contributors to its attainment. This is in collaboration with academics and other stakeholders, through education and other subject specific journals and at conferences. This will ensure that Librarians' contribution to student academic skills becomes mainstream and collaboration on *academic literacy* teaching and *researchship* becomes the norm resulting in improved student academic engagement.
6. Librarians should proactively seek a role in participatory transdisciplinary research, bringing their knowledge, experience and practice to the process as equal partners at the interface between information and knowledge co-creation.

This is a challenging agenda. The likelihood of success is dependent on many factors outside our control. These include:

1. The election of a majority Conservative government in May 2015 committed to major reductions in spending, which may have an adverse effect on budgets and resource provision at Middlesex University.
2. The priorities of LSS over recent years, which has concentrated on resources and facilities, not least because of the consolidation of teaching on to one UK campus. At the same time there has been considerable change to staff structures, which are on-going at the time of writing. For our recommendations to be enacted, a shift in the library management's agenda away from resources and facilities, to service, support and professional development is required.
3. The willingness of academic staff to work with us in exploring the full potential of IL in the curriculum. A small step in this direction has been our

recent co-authoring, with a group of academics, of a case study conference paper based on their research and our practice (Rahanu *et al*, 2015).

4. Middlesex University's new Vice Chancellor (July 2015) will bring his own agenda and focus to the institution. However he comes to us from an institution with a good track record of supporting student academic literacies. Early signs suggest that student retention and achievement will be priorities; a *Middlesex University Teaching Academy* will bring L&T excellence to the forefront; research excellence will be pursued only in certain strategic areas and innovation and a willingness to be inspired and learn from others will be encouraged.

18 Future direction and intentions

In writing this statement we have staked a claim to a changed role for librarians and recommended actions to make it happen. Librarians should no longer be seen as “nice” people who look after things, but key collaborators for academic literacy and research excellence.

Our new status as academics through this award will, we hope, give us greater credibility with academic colleagues. Looking to the future we see our next steps as follows:

1. We will write a paper about our research, collaboratively with academic colleagues for publication in a quality academic journal so as to bring this discussion into the academic mainstream.
2. We will present our findings at the 2016 Middlesex University Learning and Teaching conference to kick start discussion of the issues and bring ANCIL to the attention of our academic community.
3. In collaboration with researchers in Education, we will plan and deliver a workshop for researchers focussing on the enhanced contribution librarians can make to their work.
4. We will develop our existing portfolio of workshops used to promote enhanced pedagogy for librarians and target an academic audience. Through this we will introduce them to our ideas and demonstrate the contribution that librarians can make to academic literacies.

The following diagram illustrates our journey from the development of our core public work, the influence of the research we have undertaken and how this has lead us to the recommendations made and the future direction we intend to take:

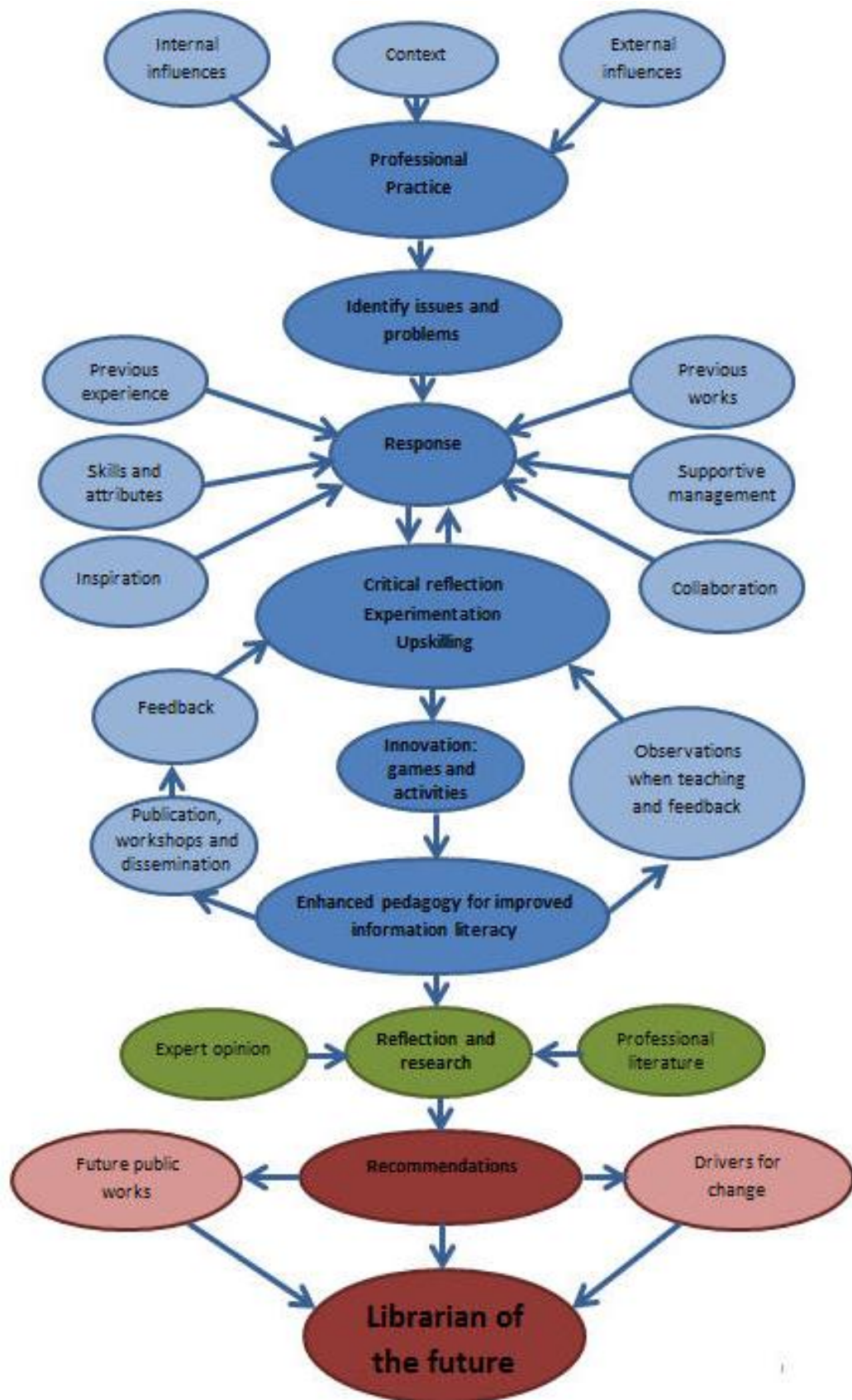


Figure 18: Taking our public works further

19 Final reflections

This final section contains our individual and joint reflections on the whole experience of creating this statement.

19.1 Vanessa's reflections

The writing of this statement constitutes part of a journey that I have undertaken jointly with Adam Edwards, my line manager, since we started working together in 2011. A number of personal reflections strike me as I look back over the past 18 months since we started our joint Doctorate.

The decision to undertake a Doctorate originated from a conversation that Adam had with Dr Kate Maguire from the Institute for Work Based Learning at Middlesex University. It was suggested that Adam might undertake a Doctorate based around what is now our core public work. Given the proposed public work had been and still is a collaborative venture, he felt it would be impossible for him to take credit for it alone. In doing so Adam has shown a respect and honesty that has typified the whole process of its development and, for me, represents an acknowledgement of the part I have played in it.

This recognition underpins the professional relationship that has developed between us, despite the potential power imbalance, and illustrates the manner in which we have undertaken the creation of this statement. I have been impressed by our ability to work cooperatively, sympathetically and supportively throughout. As already described, we have both brought skills to the proceedings which are mutually respected and understood without the need for defensive reactions which could have hindered the project. Such an undertaking was a huge risk to my personal and professional credibility, but I am relieved and just a little surprised that the process has been stimulating, unstressed, enjoyable and at times immensely diverting.

While I initially agreed to undertake the Doctorate simply because the opportunity

was proffered, as well as for the distant prospect that I could actually become a Doctor, the process has had far reaching consequences on my professional outlook and development. The simple process of reflecting on my career led to a realisation of how my profession has changed and the reasons why. Critical reflection has enabled me to envisage a whole new future where my role is intertwined with that of academics rather than merely remaining in a support role. Equipped with theoretical understanding and a broader perspective, such a position seems plausible, imminent and essential. I also believe that our findings can and should make an impact on the current review of the structure and purpose of the Directorate (LLD) within which I work. Equally the research process has enabled me to navigate learning and teaching theories and make sense of the thinking I already had and the practices that I had developed.

19.2 Adam's reflections

For me this statement has been a chance to explore many of the ideas I have learned from both my practice and the PGCertHE. It has reaffirmed my belief that IL should be more widely discussed as a key skill set any academic or student needs in order to succeed. On reflection it is disappointing, that after thirty years in the profession, librarians and the role they can play continue to be misunderstood.

What has become apparent to me in working on this statement is that although librarians talk about being embedded in the curriculum, this still normally means one off standalone teaching. Discovering ANCIL with its fully integrated approach has given me a vision of a way forward. For the student, the different skills sets of Librarians, LDU and academics should be invisible as we present a complete and well developed curriculum as a collaborative team.

As a manager I see myself having a role in persuading the LSS executive and through them the University, to see the full potential of our role and contribution librarians could make to an ANCIL type curriculum. My hope is that with the award of our Doctorates, this statement will have academic endorsement and credibility

which will encourage strategic managers and academics to read it, consider and act.

I have personally found this work stretching and challenging at times, but unlike the PGCertHE, far less stressful, because the process is reflective of our own work and because the agenda and narrative of the statement has been ours. I feel it has done far more to validate our practice than the PGCertHE did, but I suspect without that learning, many of my ideas would not have developed as I would have lacked that prior knowledge and experience. Some of the writing has taken me in to quite philosophical areas, which is the most demanding reading I have done since a French philosophy paper in my finals and I was pleasantly surprised that I was able to make sense and meaning out of it.

The actual process of writing this statement has been enjoyable. Just as Vanessa and I jointly created our approach to teaching, the discussions and sharing of knowledge we have gained from this work have been very rewarding. We have been able to do so thanks to our respect for each other's views, the discussion on and around them and those magic moments when one person says something which sparks a new idea, leading to fresh insights into the topics we have been working on.

19.3 Joint reflections

We are both 'amazed' at how this work has developed, from the starting point of wanting to change our pedagogy. We use the word 'amaze' as it captures the notion of a positive overwhelming experience. At every stage our ideas and vision have been enhanced as our understanding of the issues and challenges has deepened. For example at one point we considered that the review of the different IL models would be the end point. Through the guidance and direction of our advisor we have been able to go far beyond our own expectations and develop a more coherent understanding of academia and our vision for the future.

Our joint doctorate has also shown the strength of and the complementary nature of our working relationship. Many people observe how well we work together

despite the potential power imbalance of the manager – employee relationship. How we work is a reflection of our professionalism which transcends this issue. We bring different experiences to the partnership; Adam has worked in a wide range of roles in several different academic libraries and Vanessa, whilst working as a librarian in the same institution, has been a witness to significant change and development. The writing of this statement reflects this. Many sections have been developed by one of us writing and then the other critiquing and improving it. For example, Adam wrote the section on transdisciplinarity. Vanessa, coming to this without having read the source material, was able to challenge any unclear writing and as a result the finished product is much more cogent. The reverse is true with the myths, which Vanessa was inspired to create and which Adam then critiqued and developed. Some sections were truly collaborative, particularly the research (section 15) which we jointly wrote having analysed the information from our interviewees. This process required a high degree of flexibility and respect for each other, which has developed over the past four years.

This statement has also enabled us to explore a new conceptualisation of our role as librarians in higher education. In sections 13.2.2 and 16.3 we explored transdisciplinarity (TD) as it relates to our profession. Understanding the TD nature of our practice allows us to theorise this and enables us to envisage a positive, participatory role for us as librarians of the future. Instead of perceiving ourselves as marginalised between traditional library roles and academic research, we can now conceptualise ourselves as being at the dynamic interface between the knowledge, experience and practice of the information world and academia, working in transdisciplinary teams focusing on small and large real world problems. Through the writing of this statement we have become researchers. Our challenge is now to position ourselves as equals in research based on what Mobjörk (2010) describes as participatory transdisciplinarity. To achieve this would fundamentally change the role of librarians.

The reimagining of the role of librarians has been a theme throughout this statement. What has become apparent is that this is not the end of our journey and that we must build on these foundations, to move ourselves and our profession forward. There is a desire at Middlesex University for review and change in practice and we hope and anticipate that our new researcher status will

give us the knowledge, credibility and impetus to play a full part in the change process.

That change is needed is very evident to us. It frustrates us greatly that the problem of information illiterate students and researchers continues to exist. We are determined that we should use this opportunity to ensure IL and the role of the librarian in its delivery is fully understood by academia, becomes seen as a significant academic literacy and, once the conversation has begun, starts to be integrated into teaching and research as the norm, not the exception.

However, our enthusiasm for a role as librarians of the future is tempered by the knowledge that librarians still have a very long way to go. In section 6.1, we referred to problems observed by Ernest Roe in 1965, then one of Australia's most distinguished educators. He noted that;

“In general, ‘promoting the efficient use’ of resources has been nobody’s business. Even where there has been active concern, significant gaps persist. A teacher may urge his students to use the library resources, provide book lists, set work which effectively directs them to the library, but takes no interest in how they use the resources he is so keen for them to use, or in whether they have the necessary skills to do so....A librarian may be actively involved in helping, in actually training, users to be skilful in search strategies, be most eager that the resources are in every sense accessible to students; but regard what students do with the ‘right’ book when they have located it as none of their business...” (Roe, 1965, p.1)

Fifty years later, this divide between the concerns of academia and librarians continues. There still needs to be a cultural shift in HE to provide the conditions to overcome barriers to understanding, one of which is a mutually comprehensible language. As a profession, we still have a very long way to go, but we believe we have started a mapping for the librarian of the future to follow and develop new paths.

20 References

Abson, C. and Lahlafi, A. (2013). The application of IL to gain and undertake graduate employment: A collaboration between the library and the careers service at Sheffield Hallam University. Presented at: *LILAC 2013*, University of Manchester, UK. 25th-27th March 2013. Available at http://www.slideshare.net/infolit_group/abson-and-lahlafi [Accessed 23rd January 2015]

ACRL Information Literacy Competency Standards Review Task Force. (2012). *Memo to ACLR Information Literacy Standards Committee regarding Task Force Recommendations*. 2nd June 2012. Available at http://www.ala.org/acrl/sites/ala.org.acrl/files/content/standards/ils_recomm.pdf [Accessed 18th May 2015]

ACRL. (2015). *Framework for Information Literacy for Higher Education*, Association of College and Research Libraries, Chicago, Illinois. Available at <http://www.ala.org/acrl/standards/ilframework> [Accessed: 1st May 2015]

ALA. (1989). *Presidential Committee on Information Literacy: Final report*. ALA, Washington, D.C. Available at <http://www.ala.org/acrl/publications/whitepapers/presidential> [Accessed 10th November 2014]

Allen, L. (2005). Hybrid Librarians in the 21st Century Library: A Collaborative Service-Staffing Model, *12th National Conference, Association of College & Research Libraries*, April 7–10, 2005, Minneapolis, Minnesota., pp.291-301. Washington DC: ACRL. Available at <http://www.ala.org/acrl/sites/ala.org.acrl/files/content/conferences/pdf/allen05.pdf> [Accessed 4th May 2015]

American Association of School Librarians. (2007). *Standards for the 21st Century Learner*. AASL, Chicago, Illinois. Available at <http://www.ala.org/aasl/standards-guidelines/learning-standards> [Accessed 9th November 2014]

- ANCIL. (2011). ANCIL definition of information literacy. Available at http://implementingancil.pbworks.com/w/file/50984531/ancil_definition.jpg [Accessed 10th November 2014]
- Anderson, L. (2008). Reflexivity. In: Thorpe, R. and Holt, R. (Eds.), *The SAGE Dictionary of Qualitative Management Research*. SAGE, London. pp.183-185.
- Andrews, D and Edwards, C. (2008). Consciousness in transition: the experience of doctoral study. In: Cunningham, B. *Exploring Professionalism*. Institute of Education, University of London, London.
- Asher, C. (2003). Separate but equal: Librarians, academics and information literacy. *Australian Academic and Research Libraries*, 34 (1), pp.52-55.
- Association of College and Research Libraries. (2000). *Information Literacy Competency Standards for Higher Education*. American Library Association, Chicago, Illinois. Available at <http://www.ala.org/acrl/sites/ala.org/acrl/files/content/standards/standards.pdf> [Accessed 9th November 2014]
- Auckland, M. (2012). *Re-skilling for research: an investigation into the role and skills of subject and liaison librarians required to effectively support the evolving information needs of researchers*, RLUK, London. Available from <http://www.rluk.ac.uk/wp-content/uploads/2014/02/RLUK-Re-skilling.pdf> [Accessed 10th June 2015]
- Austin, T. and Bhandol, J. (2013). The Academic Librarian: buying into, playing out, and resisting the teacher role in Higher Education. *New Review of Academic Librarianship*, 19 (1). pp.15-35.
- Ausubel, D. (1968). *Educational psychology: a cognitive view*. New York, Holt, Rinehart.
- Badke, W. (2010). Why information literacy is invisible. *Communications in Information Literacy*, 4 (2), pp.129-141.
- Barnett, R. (2008). Critical professionalism in an age of supercomplexity. In: Cunningham, B. *Exploring Professionalism*. Institute of Education, University of London, London.

- Barzilai, S. and Blau, I. (2014). Scaffolding game-based learning: impact on learning achievements, perceived learning, and game experiences. *Computers and Education*, 70, pp.65-79.
- Bawden, D. (2001). Information and digital literacies: a review of concepts. *Journal of Documentation*, 57(2), pp. 218-259.
- Bawden, D. and Robinson, L. (2002). Promoting literacy in a digital age: approaches to training for information literacy. *Learned Publishing*, 15 (4), pp.297-301.
- Bawden, D. and Robinson, L. (2009). The dark side of information: overload, anxiety and other paradoxes and pathologies. *Journal of Information Science*, 35 (2), pp.180-191.
- Beall, Jeffrey (2014). Google Scholar is Filled with Junk Science. *Scholarly Open Access [Blog]*. Available at: <http://scholarlyoa.com/2014/11/04/google-scholar-is-filled-with-junk-science/> [Accessed 1st January 2015]
- Beeson, I. (2006). Judging relevance: a problem for e-literacy. *Innovation in teaching and learning in information and computer sciences*, 5 (4), pp.210-219. Available at <http://journals.heacademy.ac.uk/doi/abs/10.11120/ital.2006.05040210> [Accessed 27th February 2015]
- Beetham, H., McGill, L. and Littlejohn, A. (2009). *Thriving in the 21st century: learning literacies for the Digital Age* (LLiDA project). Glasgow, The Caledonian Academy.
- Bell, S.J. and Shank, J. (2004) The blended librarian: a blueprint for redefining the teaching and learning role of academic librarians. *College and Research Libraries News*, pp.372-375.
- Bell, S.J. (2007). Stop IAKT syndrome with students live search demos. *Reference Services Review*, 35 (1), pp.98-108.
- Bell, M., Moon, D. and Secker, J. (2012). *Undergraduate support at LSE: The ANCIL Report*. London, LSE.

Bennett, S., Maton, K., and Kervin, L. (2008). The 'digital natives' debate: a critical review of the evidence. *British Journal of Educational Technology*, 39 (5), pp.775-786.

Bent, M. (2008). Perceptions of information literacy in the transition to higher education(National Teaching fellowship Project report). Newcastle University. Available at: http://eprint.ncl.ac.uk/pub_details2.aspx?pub_id=55850 [Accessed 26th March 2015]

Bernaschina, P. and Smith, S. (2012). Embedding employability attributes into the 1st year curriculum workshop, presented at STEM Annual Conference *Aiming for excellence in STEM learning and teaching* 12th-13th April 2012, Imperial College, London.

Bewick, L. and Corral, S. (2010). Developing librarians as teachers: a study of their pedagogical knowledge. *Journal of Librarianship and Information Science*, 42 (97). pp. 97-110.

Beyer, B. (1985). Critical thinking: what is it? *Social Education*, 49 (4), pp.270-276.

Biggs, J. (2003). *Teaching for quality learning at University*. 2nd ed. Buckingham, Society for Research into Higher Education and Open University Press.

Bohman, J., (2015) Critical Theory. In: Zalta, E.N. (ed) *The Stanford Encyclopedia of Philosophy*. The Metaphysics Research Lab, Center for the Study of Language and Information (CSLI), Stanford University. Available at <http://plato.stanford.edu/archives/spr2015/entries/critical-theory/> [Accessed 7th May 2015].

Boukacem-Zeghmouri, C. (2014). When information literacy meets a scholarly borderless world. *Information Literacy Satellite Meeting of the IFLA World Library and Information Congress*, Limerick Institute of Technology, Ireland, 14th-15th August 2014.

Bowles-Terry, M., Davis, E. and Holliday, W. (2008). "Writing information literacy" revisited: application of theory to practice in the classroom. *Information literacy and instruction*, 49 (3), pp.225-230.

Boyle, S. (2011). Using games creatively to enhance information literacy sessions. *LILAC 2011*. London School of Economics, UK. 18-20th April 2011. Available at

http://www.slideshare.net/infolit_group/boyle-using-games-to-enhance-information-literacy [Accessed 26th June 2014]

Brady, N. and Bates, A. (2014). The impact of marketization on undergraduate curriculum in an English university: A Bernsteinian analysis. *Pedagogiká orientace*, 24 (6), pp.903-918.

Brookfield, S.D. (1990). Using critical incidents to explore learners' assumptions. In: Mezirow, J. (Ed). *Fostering Critical Reflection in Adulthood*. Jossey-Bass, San Fransisco. pp.177-193.

Bruce, C. (1995). Information literacy: a framework for higher education. *The Australian Library Journal*, 44 (3), pp.158-170.

Bruce, C. (1997). *The Seven Faces of Information Literacy*. AUSLIB Press, Adelaide.

Bruce, C. (2004). Information literacy as a catalyst for educational change. A background paper. In: Danaher, P. (Ed). *Proceedings Lifelong learning: whose responsibility and what is your contribution?, the 3rd International Lifelong Learning Conference*, Yeppon, Queensland, 13th-16th June 2004, pp.8-19.

Bruce, C., Edwards, S. and Lupton, M. (2006). Six Frames for Information literacy Education: a conceptual framework for interpreting the relationships between theory and practice. *Innovation in Teaching and Learning in Information and Computer Sciences*, 5 (1), pp.1-18.

Buendía-García, F., García-Martínez, S. Navarrete-Ibañez, E., and Carvelló-Donderis, M. J. (2013). Designing serious games for getting transferrable skills in training settings. *Interaction Design and Architecture(s) Journal*, (19), pp.47-62.

Bundy, A. (2004). *Australian and New Zealand Information Literacy Framework: principles, standards and practice*. 2nd edition. Australian and New Zealand Institute for Information Literacy, Adelaide. Available at <http://www.caul.edu.au/content/upload/files/info-literacy/InfoLiteracyFramework.pdf> [Accessed 5th May 2015]

Burgun, K. (2013). *Game design theory: a new philosophy for understanding games*. London, CRC Press.

Callison, R., Budny, D. and Thomas, K. (2005). Library research project for first-year engineering students: results from collaboration by teaching and library faculty, *The Reference Librarian*, 43 (89/90), pp.93-106.

Case, H. (2015). 22 May. Available at <https://twitter.com/Hollingtonn> [Accessed 23rd May 2015]

Chen, K. and Lin, P. (2011). Information literacy in university library user education. *Aslib Proceedings: new information perspectives*, 63 (4), pp.399-418.

Chickering, A.W. and Gamson, Z.F. (1987). Seven principles for good practice in undergraduate education. *American Association for Higher Education Bulletin*, 39 (7), pp.3-7.

CIBER. (2008). *Information behaviour of the researchers of the future*. UCL, London. Available at http://www.jisc.ac.uk/media/documents/programmes/reppres/gg_final_keynote_11_012008.pdf [Accessed 8th September 2014]

CILIP. (2004). *Information literacy definition*. CILIP, London. Available at <http://www.cilip.org.uk/cilip/advocacy-campaigns-awards/advocacy-campaigns/information-literacy/information-literacy> [Accessed 16th November 2014]

Coonan, E. (2011). *A new curriculum for information literacy curriculum: transitional, transferable, transformational – Theoretical background, Teaching learning: perceptions of information literacy*. Cambridge University Library. Available at http://ccfil.pbworks.com/f/emma_report_final.pdf [Accessed 23rd November 2014]

Coonan, E. (2014). *The 'F' word: information literacy, 'find', and other verbs*. Academia.edu. Available at https://www.academia.edu/9261623/The_F_word_information_literacy_find_and_other_verbs [Accessed 16th November 2014]

Coonan, E. and Secker, J. (2011a). *A new curriculum for information literacy curriculum: transitional, transferable, transformational*. Cambridge University

Library. Available at <http://newcurriculum.wordpress.com/using-ancil/> [Accessed 9th November 2014]

Coonan, E. and Secker, J. (2011b). *A new curriculum for information literacy curriculum: transitional, transferable, transformational* – curriculum and supporting documents. Cambridge University Library. Available at http://ccfil.pbworks.com/f/ANCIL_final.pdf [Accessed 9th November 2014]

Coonan, E. and Secker, J. (2011c). *A new curriculum for information literacy curriculum: transitional, transferable, transformational* – Executive Summary. Cambridge University Library. Available at http://ccfil.pbworks.com/f/Executive_summary.pdf [Accessed 16th November 2014]

Coonan, E. and Secker, J. (2014). ANCIL: integrating information literacy into curriculum through research, reflection and collaboration. *M25/CILIP Information Literacy Group mini conference: From the road less travelled to the information super highway: information literacy in the 21st century*. The British Library, London, UK. 31st January 2014.

Council of Australian University Libraries. (2001). *Information Literacy Standards*. Council of Australian University Librarians, Canberra. Available at <http://www.caul.edu.au/content/upload/files/caul-doc/InfoLitStandards2001.doc> [Accessed 1st May 2015]

Corrall, S. (2010). Educating the academic librarian as a blended professional: a review and case study. *Library Management*, 31 (8/9), pp.567-593.

Cruz, L. and Penley, J. (2014). Too cool for school?: The effects of gamification in an advanced interdisciplinary course. *Journal of Teaching and Learning with Technology*, 3 (2), pp.1-11.

Danforth, L. (2011). Why game learning works. *Library Journal*, 136 (7), p.67.

Davey, A. (2013). *The library of the future: a response to 'Envisioning the library of the future'*, London, Arts Council England.

Dempsey, J., Haynes, L., Lucassen, B. and Casey, M. (2002). Forty simple computer games and what they could mean to educators. *Simulation & Gaming*, 33 (2). pp.157-168.

- Dey, T. (2012). Cybrarian: the librarian of the future. *International Journal of Information Dissemination and Technology*, 2 (3). pp.209-211.
- Diehm, R. and Lupton, M. (2014). Learning information literacy. *Information Research*, 19 (1), paper 607. Available at <http://InformationR.net/ir/19-1/paper607.html> [Accessed 5th July 2015]
- Diekema, A., Holliday, W. and Leary, H. (2011). Re-framing information literacy: problem-based learning as informed learning. *Library & Information Science Research*, 33, pp.261-268.
- Doherty, T. (2014). Why do we still need public libraries in the digital age? British Council Voices Blog, 19th September. Available at <http://blog.britishcouncil.org/2014/09/19/why-do-we-still-need-public-libraries-in-the-digital-age/> [Accessed: 27th September 2014]
- Dochy, F., Segers, M. and Buehl, M.M. (1999). The relation between assessment practices and outcomes of studies: The case of research on prior knowledge, *Review of Educational Research*, 69 (2), pp.145-186.
- Dold, C.J. (2014). Critical information literacy: A model for transdisciplinary research in behavioural sciences. *The Journal of Academic Librarianship*, 40, pp 179-184.
- Donham, J. and Green, C. W. (2004). Developing a culture of collaboration: librarians as consultant. *The Journal of Academic Librarianship*, 30 (4), pp.314-321.
- Dutton, W.H. and Helsper, E.J. (2007). *The Internet in Britain: 2007*. Oxford, Oxford Internet Institute, University of Oxford. Available at <http://oxis.oii.ox.ac.uk/reports/> [Accessed: 29th December 2014]
- Edwards, J. A. (2007). A vital lifeline: UK Libraries Plus 1999-2006. *SCONUL Focus*, (40). pp.89-93.
- Edwards, J. A. (2012). It's a library knockout: engagement activity. Presented at *USTLG Autumn 2012 meeting Engaging science and technology students*,

University of Portsmouth, Portsmouth, UK. 3rd December 2012. Available at http://www.ustlg.org/?page_id=458 [Accessed 1st May 2015]

Edwards, J. A. and Hill, V. (2012). Does it really improve their marks?: A brief foray into measuring the impact of information literacy training at Middlesex University. *SCONUL Focus* (56). pp. 27-28. Available at <http://eprints.mdx.ac.uk/10230/> [Accessed 30th June 2014]

Edwards, J. A. and Hill, V. (2013a). *Games used in teaching information literacy skills*, JORUM. Available at <http://find.jorum.ac.uk/resources/18121> [Accessed 30th June 2014]

Edwards, J. A. and Hill, V. (2013b). Spotlight on information literacy skills. *Inspire*. Edition 2. Available at <http://teachingfellows.middlesex.wikispaces.net/file/view/NewsletterEd2.pdf> [Accessed 18th May 2015]

Edwards, J. A. and Hill, V. (2013c). What's the name of the game? Using games in library workshops. Presented at *ARLIS UK & Ireland workshop: Getting creative: teaching information literacy to art and design students*. Goldsmiths, University of London, UK. 24th June 2013. Available at <http://www.slideshare.net/EISLibrarian/arlis-workshop-june-2013> [Accessed 1st May 2015]

Edwards, J. A. and Hill, V. (2013d). The winner takes it all: Enhancing the quality and impact of library workshops. Presented at *cpd25 Liaison Librarians working with other professionals: seeing ourselves through others' eyes*. Senate House, University of London, London, UK. 17th July 2013. Available at <http://www.slideshare.net/EISLibrarian/cpd25-july-2013> [Accessed 1st May 2015]

Edwards, J. A. and Hill, V. (2013e). The winner takes it all: Enhancing the quality and impact of library workshops presented at *Ring Idea EU Tempus meeting on Information Literacy*. Middlesex University, London, UK. 10th December 2013. Available at <http://www.slideshare.net/EISLibrarian/eu-mdx-dec-2013> [Accessed 1st May 2015]

Edwards, J.A. and Hill, V. (2014a). The winner takes it all: enhancing the quality and impact of library workshops. *M25/CILIP Information Literacy Group mini conference: From the road less travelled to the information super highway: information literacy in the 21st century*. The British Library, London, UK. 31st January 2014. Available at <http://www.slideshare.net/EISLibrarian/british-library-29114> [Accessed 30th June 2014]

Edwards, J.A. and Hill, V. (2014b). The winner takes it all: enhancing the quality and impact of library workshops. Presented at *Information literacy skills day: Queen Mary University of London*. Middlesex University, London, UK . 23rd January 2014. Available at <http://www.slideshare.net/EISLibrarian/qmuofl-20th-jan-2014> [Accessed 4th May 2015]

Edwards, J. A. and Hill, V. (2014c). *Information literacy skills: East of England Health Libraries*. The Lister Hospital, Stevenage. 9th June 2014. Available at <http://www.slideshare.net/EISLibrarian/nhs-june-2014> [Accessed 4th May 2015]

Edwards, J. A. and Hill, V. (2014d). Thinking about keywords and searching Summon as in-class group activity In: *Teaching not telling: proceedings of the 2nd UK Information Literacy and Summon day*, Manchester Metropolitan University, UK. 25th July 2013, pp.44-48. Available at <http://eprints.mdx.ac.uk/13525/> [Accessed 4th May 2015]

Edwards, J. A. and Hill, V. (2014e). What's the name of the game? How Summon saves time for fun games. In: *Teaching not telling: Proceedings of the 2nd UK Information Literacy and Summon Day*, Manchester Metropolitan University, UK. 25 July 2013. Pp.12-19. Available at <http://eprints.mdx.ac.uk/13524/> [Accessed 30th June 2014]

Edwards, J. A. and Hill, V. (2014f). *Information literacy skills: London Health Libraries*. 12th September 2014. Middlesex University, London UK. Available at <http://www.slideshare.net/EISLibrarian/nhs-sept-2014> [Accessed 4th May 2015]

Edwards, J. A. and Hill, V. (2014g). *The winner takes it all: Enhancing the quality and impact of library workshops*. Presented to visiting MSC students as part of *MAHATMA Project*. Middlesex University, London, UK. 31st October 2014.

Available at <http://www.slideshare.net/EISLibrarian/visiting-m-sc-students-oct-2014> [Accessed 4th May 2015]

Edwards, J. A. and Hill, V. (2015a). *Information literacy skills: Health Education: Kent, Surrey and Sussex*. Caverley House, Tunbridge Wells, 21st May 2015. Available at <http://www.slideshare.net/EISLibrarian/nhs-may-2015> [Accessed 8th May 2015]

Edwards, J.A. and Hill, V. (2015b). The winner takes it all: Enhancing the quality and impact of library workshops. Presented at: *CILIP 2015*, St. Georges Hall, Liverpool. 2nd-3rd July 2015. Available at <http://www.slideshare.net/EISLibrarian/cilip-2015> [Accessed 30th June 2015]

Edwards, J. A., Hill, V. and Walsh, A. (2013). Games and gamification for information literacy. Presented at *LILAC 2013*. University of Manchester, UK. 25th-27th March 2013. Available at <http://eprints.mdx.ac.uk/11230/> [Accessed 4th May 2015]

Edwards, J.A. and Rushe, S. (2014). The winner takes it all: Enhancing the quality and impact of library workshops. Presented at: *Facing the future: librarians and information literacy in a changing landscape, Information Literacy Satellite Meeting of IFLA World Library and Information Congress 2014*, Limerick Institute of Technology, Ireland. 14th-15th August 2014. Available at <http://www.slideshare.net/EISLibrarian/limerick-ifla-aug-2014> [Accessed 4th May 2015]

Egenfeldt-Nielsen, S. (2011). What makes a good learning game? *E-learn Magazine*. Available at <http://elearnmag.acm.org/archive.cfm?aid=1943210> [Accessed 12th March 2015]

Elmborg, J. (2006). Critical information literacy: implications for instructional practice. *The Journal of Academic Librarianship*, 32 (2), pp.192-199.

Ershova, T. and Hohlov, Y. (eds). (2002). *Libraries in the Information Society*. Saur, Munchen.

Falagas, M. E., Pitsouni, E. I., Malietzis, G. A. and Pappas, G. (2007). Comparison of PubMed, Scopus, Web of Science, and Google Scholar: Strengths and

- weaknesses. *The FASEB Journal* 22 (2), pp.338–342. Available at <http://www.fasebj.org/content/22/2/338.full.pdf+html> [Accessed 1st January 2015]
- Farrell, R. (2013). Reconsidering the relationship between generic and situated IL approaches: The Dreyfus model of skill acquisition in formal information literacy learning environments, part II. *Library Philosophy and Practice*, Paper 1049.
- Febey, K. and Coyne, M. (2007). Program evaluation: The Board Game- an interactive learning tool for evaluators. *American Journal of Evaluation*, 28 (1), pp. 91-101.
- Ferrer Kenney, B. (2008). Revitalizing the one-shot instruction session using problem-based learning. *Reference & User Services Quarterly*, 47 (4), pp.386-391.
- Fieldhouse, M. and Nicholas, D. (2008). Digital literacy as information savvy: the road to information literacy. In: Lankshear, C. and Knobel, M. (eds). *Digital literacy: concepts, policies and practices*. New York, Peter Lang Publishing Group, pp.47-72.
- Filippou, J., Cheong, C., and Cheong, F. (2014). Improving study habits using a behaviour change framework incorporating social motivation and gamification. *PACIS 2014 Proceedings*. Paper 264. Available at <http://aisel.aisnet.org/pacis2014/264> [Accessed 13th March 2015]
- Fister, B. (1993). Teaching the rhetorical dimensions of research. *Research Strategies*, 11 (4), pp.211-219.
- Foskett, D.J. (1962). The Creed of a Librarian: No Politics, No Religion, No Morals, Library Association Occasional Papers No. 3, Library Association, London. In: McMenemy, D. (2007), Librarians and ethical neutrality: revisiting The Creed of a Librarian, *Library Review*, 56 (3) pp.177 – 181.
- Foster, A. E. (2015). *DS34020 Information literacy*, Aberystwyth University. Available at <http://www.aber.ac.uk/en/modules/deptfuture/?m=DS34020> [Accessed 2nd June 2015]
- Foster, N. (2014). Studying students to advance information literacy. Presented at: *Facing the future: Librarians and Information Literacy in a changing landscape*.

Information Literacy Satellite Meeting of the IFLA World Library and Information Congress, Limerick Institute of Technology, Ireland, 14th-15th August 2014.

Frazer, A., Recio-Saucedo, A., Gilbert, L. and Wills, G. (2013). Profiling the educational value of computer games. *Interaction Design and Architecture(s) Journal*, 19, pp.9-27.

Gardner, H. (2006). *Multiple intelligences: new horizons*. New York, Basic Books.

Gerolimos, M. and Konsta, R. (2008). Librarians' skills and qualifications in modern informational environment. *Library Management*, 29 (8/9), pp.691-699.

Gherardi, S. and Poggio, B. (2007). Tales of ordinary leadership: A feminist approach to experiential learning. In: Reynolds, M. and Vince, R. *Handbook of experiential learning and management education*. Oxford University Press. Pp. 155-168.

Gibbs, P. (2014). *Abductive reasoning for transdisciplinary problems*. Unpublished paper.

Glover, I. (2013). Play as you learn: gamification as a technique for motivating learners. In: Herrington, J. Couros, A. and Irvine, V. (eds.) *Proceedings of World Conference on Educational Multimedia, Hypermedia and Telecommunications 2013*. Chesapeake, VA, AACE, pp.1999-2008.

Godin, S. (2011). *The future of the library*. [Blog]. Available at <http://sethgodin.typepad.com/sethsblog/2011/5/the-futruure-of-the-library.html> [Accessed 3rd January 2015]

Goldstein, S. (2015). Reaction to the House of Lords report on digital skills. *Information literacy and information skills teaching discussion list*. 2nd April 2015. Available email: LIS-INFOLITERACY@JISCMAIL.AC.UK

Hamari, J., Koivisto, J. and Sarsa, H. (2014). Does gamification work? A literature review of empirical studies on gamification. Presented at *47th Hawaii International Conference on Systems Science*, Waikoloa, HI, 6th-9th January 2014, pp.3025-3034.

Head, A. (2012). Learning curve: How college graduates solve information problems once they join the workplace (Project Information Literacy Research

Report). Available from
http://projectinfoit.org/images/pdfs/pil_fall2012_workplacestudy_fullreport_revised.pdf [Accessed 11th June 2015]

Head, A. (2013). Learning the ropes: How Freshmen conduct course research once they enter college (Project Information Literacy Research Report). Available from http://projectinfoit.org/images/pdfs/pil_2013_freshmenstudy_fullreport.pdf [Accessed 9th June 2015]

Head, A. and Eisenberg, M. (2009). Lesson learned: How college students seek information in the digital age (Project Information Literacy progress Report). Available from
http://projectinfoit.org/images/pdfs/pil_fall2009_finalv_yr1_12_2009v2.pdf [Accessed 11th June 2015]

Head, A. and Eisenberg, M. (2010). Truth be told: How college students evaluate and use information in the digital age (Project Information Literacy Progress report). Available from
http://projectinfoit.org/images/pdfs/pil_fall2010_survey_fullreport1.pdf [Accessed 11th June 2015]

Helsper, E. J., and Eynon, R. (2010). Digital natives: Where is the evidence? *British Educational Research Journal*, 36 (3), pp.503-520.

Hill, V. (2015). The winner takes it all: Enhancing the quality and impact of library workshops. Presented at *North London School Librarians*. East Barnet School, London. UK. 4th February 2015. Available at
<http://www.slideshare.net/EISLibrarian/east-barnet-school-feb-2015> [Accessed 9th February 2015]

Hill, V. and Edwards, J. A. (2012). Jeux sans frontières: it's a library knockout. Presented at CLTE + Teaching Fellows mini-conference *Enhancing behaviour for learning*, Middlesex University, London, UK. 13th September 2012.
<http://www.slideshare.net/EISLibrarian/lt-mini-conference-13th-sept-2012>

Hill, V. and King, S. (2011). Notes from *Teaching information literacy in HE: What? Where? How?* Workshop at: Chartered Institute of Library and Information Professionals, London, UK. 9th December 2010.

Hill, V., Patel, S. and Rizvi, M. (2014). *Introduction to Library & Student Support 2014-15*. Middlesex University, London. Video available at <https://www.youtube.com/watch?v=lw-uOWri6Gc&index=1&list=PLBf5DygWN03RyHbUIQ0oITrzKSDwVg8ml> [Accessed 27th September 2014]

Hill, V. and Syratt-Barnes, M. (2014). Art & Design students: Information. Presented at: *Information literacy skills day: Queen Mary University of London*. Middlesex University, London, UK . 23rd January 2014. Available at <http://www.slideshare.net/EISLibrarian/gmuofl-23rd-jan-2014-afternoon> [Accessed 4th May 2015]

Holton, D. (2010). *The Digital Natives/Digital Immigrants distinction is dead or at least dying*. EdTechDev. Available at <https://edtechdev.wordpress.com/2010/03/19/the-digital-natives-digital-immigrants-distinction-is-dead-or-at-least-dying/> [Accessed 9th June 2015]

Howard-Jones, P. (2011). Toward a science of learning games. *Minds, Brain and Learning Games*, 5 (1), pp.33-38

Hsieh, C. and Knight, L. (2008). Problem-based learning for engineering students: an evidence-based comparative study. *The Journal of Academic Librarianship*, 34 (1), pp.25-30.

Hsiung, P-C. (2010). Reflexivity: A process of reflection. In: *Lives and Legacies: A Guide to Qualitative Interviewing*. University of Toronto. Available at: <http://www.utoronto.ca/~pchsiung/LAL/reflexivity> [Accessed 8th May 2015]

Human Library. (2014). Available at: <http://humanlibrary.org/archive-reports-from-human-libraries.html> [Accessed 27th September 2014]

IFLA. (2014). Facing the future: Librarians and Information Literacy in a changing landscape. *Information Literacy Satellite Meeting of the IFLA World Library and*

Information Congress, Limerick Institute of Technology, Ireland, 14th-15th August 2014.

Ingersoll, P. and Culshaw, J. (2004). *Managing Information technology*, Libraries Unlimited, Westpoint, CT.

Inskip, C. (2015). Conversation with Charlie Inskip, 3rd July.

Ipri, T. (2010). Introducing transliteracy: What does it mean to academic libraries? *College and Research Libraries News*, November 2010, pp.532-533 continued on 567. Available at <http://crln.acrl.org/content/71/10/532.full> [Accessed 3rd January 2015]

Isbister, K., Flanagan, M. and Hash, C. (2010). Designing games for learning: insights from conversations with designers. *CHI2010: remember and reflect*, Atlanta, GA, USA. pp.2041-2044.

Jackson, M.G. (1999). Image and status: academic librarians and the new professionalism. *Advances in Librarianship*, 23 (1), pp.93-115.

Jacobs, H. (2008). Information literacy and reflective pedagogical praxis. *The Journal of Academic Librarianship*, 34 (3). pp.256-262.

JISC. (2014). *Developing students' digital literacy*. Available at <http://www.jisc.ac.uk/guides/developing-students-digital-literacy> [Accessed 16th June 2015]

Johnston, B. and Webber, S. (2003). Information literacy in higher education: a review and case study. *Studies in Higher Education*, 28 (3), pp.335-352.

Jones, B. and Flannigan, S. L. (2006). Connecting the digital dots: Literacy of the 21st century, *Educause Quarterly*, 29 (2), pp.8-10.

Jones, C., Ramanau, R., Cross, S. and Healing, G. (2010). Net generation or Digital Natives: is there a distinct new generation entering university? *Computers and Education*, 54, pp.722-732.

Kapp, K. (2016). 2015 reflections on games and gamification for learning. *Karl M. Kapp: Intelligently fusing learning, technology and business [Blog]*. Available at:

<http://karlkapp.com/2015-reflections-on-games-and-gamification-for-learning/>

[Accessed on 10th January 2016]

Kennedy, G., Judd, T., Dalgarnot, B. and Waycott, J. (2010). Beyond natives and immigrants: exploring types of net generation students. *Journal of Computer Assisted Learning*, 26, pp.332-343.

Kim, B. (2012). Harnessing the power of game dynamics: why, how to, and how not to gamify the library experience. *College & Research Libraries News*, 71 (8), pp.465-469.

Kleine, M. (1987). What is it we do when we write articles like this one-or how can we get students to join us? *Writing Instructor*, 6. pp.151-161.

Kolb, D. (1984). *Experiential learning: experience as the source of learning and development*. New Jersey, Prentice Hall.

Kope, M. (2006). Understanding e-literacy, In Martin, A. and Madigan, D. (Eds), *Digital literacies for learning*, Facet, London, pp.68-79.

Kurke, L. (1999). Ancient Greek board games and how to play them. *Classical Philology*, 94, pp.247-67.

Laplantine, F. and Nouss, A. (1997). *Le métissage: un exposé pour comprendre, un essai pour réfléchir*. Flammarion, Paris.

Lea, M.R. and Street, B.V. (2010). The “Academic Literacies” model: Theory and applications. *Theory into Practice*, 45 (4), pp.368-377.

Lester, S. (2010). *On professions and being professional*. Available at <http://www.sld.demon.co.uk/profnal.pdf> [Accessed 18th May 2015]

Lloyd, A. (2003). Information Literacy: The Meta-Competency of the Knowledge Economy? An Exploratory Paper, *Journal of Librarianship and Information Science*, 35 (2), pp.87-92.

Lloyd, A. (2005). Information literacy landscapes: an emerging picture. *Journal of Documentation*, 62 (5), pp.570-583).

- Lloyd, A. (2010). Framing information literacy as information practice: site ontology and practice theory. *Journal of Documentation*, 66 (2), pp. 245-258.
- Lloyd, A. (2012). Information literacy as a socially enacted practice: Sensitising themes for an emerging perspective of people-in-practice. *Journal of Documentation*, 68 (6), pp. 772-783.
- Lloyd, A. and Somerville, M. (2006). Working information. *Journal of Workplace Learning*, 18 (3). Pp.186-198.
- Lloyd, A. and Williamson, K. (2008). Towards and understanding of information literacy in context: implications for research. *Journal of Librarianship and Information Science*, 40 (1), pp.3-12.
- Lunt, I. (2008). Ethical issues in professional life. In: Cunningham, B. *Exploring Professionalism*. Institute of Education, University of London, London.
- Mackey, T. P. and Jacobson, T. E. (2011). Reframing information literacy as a metaliteracy, *College & Research Libraries*. 72. pp.62-78.
- Macklin, A. (2001). Integrating information literacy using problem-based learning. *Reference Services Review*, 29 (4), pp.306-14.
- Maguire, K. (2012). Perspectives 2: Transdisciplinarity and professional doctorates: Facilitating metanoia through the art of translation. In: *Doctorate in Professional Studies by Public Works Candidate Handbook*, Middlesex University. pp.64-68.
- Maguire, K. (2015). Transdisciplinarity as translation. In: Gibbs, P. (ed) *Transdisciplinary professional learning and practice*. Springer International, Cham. pp.165-178.
- Maitland, M. (2010). 'It's not just a game, it's a religion': games in ancient Egypt. *The Eloquent Peasant: An Egyptologist's blog about everything ancient Egyptian*. [Blog]. Available at: <http://www.eloquentpeasant.com/2010/10/14/it-not-just-a-game-its-a-religion-games-in-ancient-egypt/> [Accessed 10th January 2016]
- Margaryan, A., Littlejohn, A. and Vojt, G. (2011). Are digital natives a myth or reality? University students' use of digital technologies. *Computers and Education*, 56, pp.429-440.

- Markless, S. (2004). Teaching your Users: What you Really Need to Know. *Legal Information Management*, 4 (4). pp.221-225.
- Markess, S. (2009). A new conception of information literacy for the digital learning environment in higher education. *Nordic Journal of Information Literacy in Higher Education*, 1 (1). pp.25-40.
- Markless, S. (2010). *Teaching information literacy in HE: What? Where? How?* Workshop at: Chartered Institute of Library and Information Professionals, London, UK. 9th December 2010.
- Martin, J. L. (2013). *Learning from Recent British Information Literacy Models: A Report to ACRL's Information Literacy Competency Standards for Higher Education Task Force*. Mankato, US. Available at <http://mavdisk.mnsu.edu/martij2/acrl.pdf> [Accessed 23rd November 2014]
- Martin, S. (1993). Visions: Raising our professional expectations with a two-track approach to librarianship. *The Journal of Academic librarianship*, 19 (1), p.24.
- McArthur, J. (2011). Reconsidering the social and economic purposes of higher education. *Higher Education Research & Development*, 30 (6), pp.737-749.
- McCluskey, C. (2011). Creating information literacy partnerships in Higher Education. *Library and Information Research*, 35 (111), pp.59-72.
- McCluskey, C. (2013). Being an embedded research librarian: supporting research by being a researcher. *Journal of Information Literacy*, 7 (2), pp.4-14.
- McGuinness, C. (2006). What faculty think: Exploring the barriers to information literacy development in undergraduate education. *Journal of Academic Librarianship*, 32 (6), pp.573-582.
- McMenemy, D. (2007). Librarians and ethical neutrality: revisiting The Creed of a Librarian. *Library Review*, 56 (3), pp.177-181.
- Merriam-Webster Dictionary. (2015). Definition of 'Game'. Available at <http://www.merriam-webster.com/dictionary/game> [Accessed 4th May 2015]
- Meyer, J. and Land, R. (2003). *Threshold concepts and troublesome knowledge: Linkages to ways of thinking and practising within the disciplines*. Edinburgh

- School of Education, Edinburgh. Available at <http://www.etl.tla.ed.ac.uk/docs/ETLreport4.pdf> [Accessed 16th June 2015]
- Middlesex University. (2012). *Enhancing behaviour for learning: Mini Learning and Teaching Conference*. Middlesex University, UK, 13th September 2012.
- Miltenoff, P. (2015). Gaming, gamification and BYOD in academic and library settings: bibliographic overview. *Library Faculty Publications*, Paper 46. pp.1-25.
- Mobjörk, M. (2010). Consulting versus participatory transdisciplinarity: A refined classification of transdisciplinary research. *Futures*, 42, pp.866-873.
- Montiel-Overall, P. (2005). Toward a theory of collaboration for teachers and librarians. *School Library Media Research*, 8, pp.1-31.
- Montiel-Overall, P. (2007). Information literacy: Toward a cultural model. *Canadian Journal of information and Library Science*, 31 (1) pp.43-68.
- NCIHE. (1997). *National Committee of Inquiry into Higher Education (Dearing Committee): Records*. Department of Education and Employment.
- Nicolescu, B. (2010). Methodology of transdisciplinarity - levels of reality, logic of the included middle and complexity. *Transdisciplinary Journal of Engineering & Science*, 1 (1), pp.19-38.
- Nonthacumjane, P. (2011). Key skills and competencies of a new generation of LIS professionals. *IFLA Journal*, 37 (4), pp.280-288.
- Norgaard, R. (2003). Writing information literacy: contributions to a concept. *Reference and User Services Quarterly*, 43 (2). pp.124-130.
- Norgaard, R. (2004). Writing information literacy in the classroom: pedagogical enactments and implications, *Reference and User Services Quarterly*, 43 (3), pp.220-226.
- OCLC. (2006). *College students' perceptions of the libraries and information resources: a report to the OCLC Membership*. Dublin, OHIO. Available at <http://www.oclc.org/content/dam/oclc/reports/pdfs/studentperceptions.pdf> [Accessed 8th September 2014]

- Orr, D., Appleton, M. and Wallin, M. (2001). Information literacy and flexible delivery: creating a conceptual framework and model. *The Journal of Academic Librarianship*, 27 (6), pp.457-463.
- Owusu-Ansah, E. (2003). Information literacy and the academic library: a critical look at a concept and the controversies surrounding it. *The Journal of Academic Librarianship*, 29 (4), pp.219-230.
- Pagowsky, N. and DeFrain, E. (2014). Ice, ice baby: Are librarian stereotypes freezing us out of instruction? *In the Library with the Lead Pipe*, 3/6/14. Available at <http://www.inthelibrarywiththeleadpipe.org/2014/ice-ice-baby-2/> [Accessed 3rd January 2015]
- Palfrey, J. and Gasser, U. (2008). *Born digital: understanding the first generation of digital natives*. Basic Books, New York.
- Parker, R. (2006). *Fruit market*. Available at <https://www.flickr.com/photos/rossjamesparker/89414788> [Accessed 6th May 2015]
- Parliament. House of Lords. (2015). *Make or Break: The UK's Digital Future*. Select Committee on Digital Skills, Report of session 2014-2015. Available at <http://www.publications.parliament.uk/pa/ld201415/ldselect/lddigital/111/11102.htm> [Accessed 11th May 2015]
- Partridge, H., Menzies, V., Lee, J. and Munro, C. (2010). The contemporary librarian: skills, knowledge and attributes required in a world of emerging technologies. *Library and Information Science Research*, 32, pp.265-271.
- Partridge, H. (2011). Librarian 2.0: It's all in the attitude! In: Mueller, D. (ed). *Declaration of Interdependence: the Proceedings of the ACRL 2011 Conference*, Association of College and Research Libraries, Philadelphia, pp.256-263.
- Peacock, J. (2001). Teaching skills for teaching librarians: postcards from the edge of the educational paradigm. *Australian Academic and Research Libraries*, 32 (1), pp.26-42.
- Peng, Y. (2014). Job satisfaction and job performance of university librarians: a disaggregated examination. *Library and Information Science Research*, 36, pp.74-82.

- Pisano, G.P. and Verganti, R. (2008). Which kind of collaboration is right for you? *Harvard Business Review*, 86 (12), pp.78-86. Available at <http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=35387060&site=ehost-live> [Accessed 13th January 2015]
- Prensky, M. (2001a). Digital natives, digital immigrants. *On the Horizon*, 9 (5), pp.1-6.
- Prensky, M. (2001b). Digital natives, digital immigrants: do they really think differently? *On the Horizon*, 9 (6), pp.1-6.
- Prensky, M. (2009). *H.Sapiens Digital: From Digital Immigrants and Digital Natives to Digital Wisdom*. The Wisdom Page. Available from <http://www.wisdompage.com/Prensky01.html> [Accessed 9th June 2015]
- Rahanu, H., Georgiadou, E., Khan, N., Colson, R., Hill, V. and Edwards, A. (2015). The development of student learning and information literacy: a case study. In: *Proceedings 12th International Scientific Conference "Western Balkan Information Literacy"*, Bihac, Bosnia and Herzegovina, 18th-20th June 2015, pp.25-36.
- Ramberg, B. and Gjesdal, K. (2014). Hermeneutics. In Zalta, E (ed). *The Stanford Encyclopedia of Philosophy*. Available at <http://plato.stanford.edu/archives/win2014/entries/hermeneutics/> [Accessed 20th March 2015]
- RCUK. (2013). *RCUK Policy on Open Access and Supporting Guidance*, Research Councils UK. Available at <http://www.rcuk.ac.uk/RCUK-prod/assets/documents/documents/RCUKOpenAccessPolicy.pdf> [Accessed 1st January 2014]
- Roe, E. (1965). The educational irrelevance of libraries: I. the indictment. *Australian Journal of Education*, 9 (1), pp.1-12.
- Roschelle, J. (1992). Learning by collaborating: Convergent conceptual change. *The Journal of the Learning Sciences*, 2 (3), pp.235-276.
- Russell, A. W., Wickson, F. and Carew, A. L. (2008) Transdisciplinarity: Context, contradictions and capacity. *Futures*, 40, 460-472.

Ryan, A. and Tilbury, D. (2013). *Flexible pedagogies: New pedagogical ideas*. Higher Education Academy, London.

SADL. (2014). Workshop 2: Academic Practices: reading and research. London School of Economics. Available at <http://www.slideshare.net/LSESADL/lse-sadl-workshop-2-2014> [Accessed 16th June 2015]

Sailer, M., Hense, J., Mandl, H. and Klevers, M. (2013). Psychological perspectives on motivation through gamification. *Interaction Design and Architecture(s) Journal*, 19, pp.28-37.

Schön, D. A. (1990). *Educating the reflective practitioner*. Jossey-Bass, San Francisco.

SCONUL. (1999). *Information skills in Higher Education: a SCONUL Position paper*. London, Society of College, National and University Libraries.

SCONUL. (2011). *The SCONUL Seven Pillars of Information Literacy-Core Model for Higher Education*. London, Society of College, National and University Libraries. Available at <http://www.sconul.ac.uk/sites/default/files/documents/coremodel.pdf> [Accessed 9th September 2014]

SCONUL. (2014), *SCONUL Access*. Available at <http://www.sconul.ac.uk/sconul-access> [Accessed 26th June 2014]

Scottish Information Literacy Project. (2013). *The right information: information skills for a 21st century Scotland*. Available at <http://www.therightinformation.org/> [Accessed 24th November 2014]

Secker, J. (2011). *A new curriculum for information literacy curriculum: transitional, transferable, transformational – expert consultation report*. Cambridge University Library. Available at http://ccfil.pbworks.com/f/Expert_report_final.pdf [Accessed 24th November 2014]

Secker, J. (2015). Email to Adam Edwards, 16th June 2015.

Shakespeare, W. (1595). The tragedy of Romeo and Juliet. Act 2, Scene 2. Project Gutenberg, Carnegie Mellon University. Available at <https://www.gutenberg.org/cache/epub/1112/pg1112.html> [Accessed 2nd June 2015]

Silipigni Connaway, L. and Dickey, T. (2010). *The digital information seeker: report of findings from selected OCLC, RIN and JISC user behaviour projects*. JISC.

Available at

<http://www.webarchive.org.uk/wayback/archive/20140615023510/http://www.jisc.ac.uk/media/documents/publications/reports/2010/digitalinformationseekerreport.pdf>

[Accessed 27th February 2015]

Smith, S., Bernaschina, P. and Edwards, J. A. (2012). Superhighways into the curriculum and employability: a three-way collaboration Presented at: *National HE STEM Conference*, University of Birmingham, UK. 4-6th September 2012.

Smith, S., Bernaschina, P., Edwards, J. A. and Hill, V. (2013). Superhighways into the curriculum and employability: a three-way collaboration. Presented at: *HEA STEM Seminar: Embracing employability in HEIs*, School of Science and Technology, Middlesex University, London, UK. 20th February 2013. Available at <http://www.slideshare.net/EISLibrarian/hea-stem-seminar2013-embracing-employability-in-heis> [Accessed 5th May 2015]

Smith, S., Bernaschina, P. and Hill, V. (2012). Superhighways into the curriculum and employability: a three-way collaboration. Presented at: *EIS Research Seminar*, Middlesex University, London, UK. 9th May 2012. Available at <http://www.slideshare.net/EISLibrarian/eis-school-seminar-may2012> [Accessed 4th May 2015]

Smith, S. and Edwards, J.A. (2012a). Embedding information literacy skills as employability attributes. Presented at: *LILAC 2012*. Glasgow Caledonian University, Glasgow, UK. 11th-13th April 2012. Available at <http://eprints.mdx.ac.uk/11231/> [Accessed 4th May 2015]

Smith, S and Edwards, J.A. (2012b). Embedding information literacy skills as employability attributes, *ALISS Quarterly*, 7 (4). pp.22-27. <http://eprints.mdx.ac.uk/9298/> [Accessed 30th June 2014]

Sotto, E. (1994). *When teaching becomes learning*. London, Cassell.

Stephens, M. (2014). *Learning Everywhere: Hyperlinked Libraries*

& Life Literacies. Presented at: *Facing the future: librarians and information literacy in a changing landscape, Information Literacy Satellite Meeting of IFLA World Library and Information Congress 2014*, Limerick Institute of Technology, Ireland. 14th-15th August 2014. Available at <https://dl.dropboxusercontent.com/u/239835/StephensLearningEverywhereIFLAINfoLIT.pdf> [Accessed 30th December 2014]

Stiller, E. & LeBlanc, C. (2006). From computer literacy to cyber-literacy, *Journal of Computing Sciences in Colleges*, 21 (6), pp.4-13.

Stone, G., Ramsden, B., and Pattern, D. (2011). Looking for the link between library usage and student attainment. *Ariadne*, 67. Available at <http://www.ariadne.ac.uk/issue67/stone-et-al/> [Accessed 8th September 2014]

Streatfield, D. and Markless, S. (2008). Evaluating the impact of information literacy in Higher Education: progress and prospects. *Libri: international library review*, 58 (2), pp.102-109.

Stubbings, R. and Franklin, G. (2006). *Does advocacy help to embed information literacy into the curriculum? A case study*. Available at <https://dspace.lboro.ac.uk/dspace-jspui/handle/2134/677> [Accessed 1st March 2015]

Sun, H., Chen, K., Tseng, C. and Tsai, W. (2011). Role changing for librarians in the new information technology era. *New Library World*, 112 (7/8), pp.321-333.

THELMAs. (2014). Times Higher Education Leadership and Management Awards 2014. Available at <http://www.thelmawards.co.uk/thelma2014/shortlist> [Accessed 18th May 2015]

Thomson, A.M. and Perry, J.L. (2006). Collaboration processes: inside the Black Box. *Public Administration Review*, Special Issue, pp.20-32. Available at http://www.indiana.edu/~jlpweb/papers/Collaboration%20Processes_Inside%20the%20Black%20Box_Thomson%20%26%20Perry_PAR_2006%20Supplement.pdf [Accessed 9th January 2015]

Tobias, S. (1994). Interest, prior knowledge and learning, *Review of Educational Research*, 64 (1), pp.37-54.

- Tomlinson, M. (2015). Between instrumental and developmental learning: ambivalence in student values and identity positions in marketized UK higher education. *International Journal of Lifelong Education*, 34 (5), pp.569-588.
- Turner, A. (2013a). The ideas factory: A collaborative project for the information literate filmmakers of tomorrow. Presented at: *LILAC 2013*, University of Manchester, UK. 25-27th March 2013. Available at http://www.slideshare.net/infolit_group/turner-the-ideas-factory-a-collaborative-project-for-the-information-literate-filmmakers-of-tomorrow-poster-abstract [Accessed 21st August 2014]
- Turner, A. (2013b). The Ideas Factory: a collaborative project for the information literate filmmakers of tomorrow. Presented at: *Getting creative: teaching information literacy to art and design students*, ARLIS UK & Ireland workshop. Goldsmiths, University of London, UK. 24th June 2013.
- UNESCO. (2005). *Beacons of the information society*. Available at http://portal.unesco.org/ci/en/ev.php-URL_ID=20891&URL_DO=DO_TOPIC&URL_SECTION=201.html [Accessed 16th November 2014]
- Vaaland, T. (2004). Improving project collaboration: start with the conflicts. *International Journal of Project Management*, 22, pp.447-454.
- Vassilakaki, E. and Moniarou-Papaconstantinou, V. (2014). Identifying the prevailing images in library and information science profession: is the landscape changing? *New Library World*, 155(7/8), pp.355-375.
- Vieira, R. (2014) Life stories, cultural metissage, and personal identities, *SAGE Open*, 4 (1). Pp.5-6.
- Walsh, A. (2014). The potential for using gamification in academic libraries in order to increase student engagement and achievement. *Nordic Journal of Information Literacy in Higher Education*, 6 (1), pp.39-51.
- Wang, L. (2006). Sociocultural learning theories and teaching activities in higher education. *Reference and User Services Quarterly*, 47 (2), pp.149-158.

Webber, S., Ford, N., Crowder, M. and Madden, A. (2013). Collaborating for deep critical information behaviour. Presented at: *LILAC 2013*, University of Manchester, UK. 25-27th March 2013. Available at

http://www.slideshare.net/infolit_group/webber-ford-2013-18177230 [Accessed 11th September 2014]

Webber, S and Johnston, B. (2013). Transforming information literacy for higher education in the 21st century: a lifelong learning approach. In: *Developing people's information capabilities: fostering information literacy in educational, workplace and community contexts* (Library and Information Science volume 8), Emerald Group Publishing, pp.15-30. In: Lankshear, C. and Knobel, M. (eds). *Digital literacy: concepts, policies and practices*. New York, Peter Lang Publishing Group, pp.47-72.

Weetman, J. (2005). Osmosis- does it work for the development of information literacy? *The Journal of Academic Librarianship*, 31 (5), pp.456-460.

Weetman DaCosta, J. (2010). Is there an information literacy skills gap to be bridged? An examination of faculty perceptions and activities relating to information literacy in the United States and England. *College and Research Libraries*, 71 (3), pp.203-222. Available at http://derby.openrepository.com/derby/bitstream/10545/254393/1/C%26RL_May2010.pdf [Accessed 4th January 2015]

Welsh Information Literacy Project. (2011). *Information Literacy Framework for Wales: Finding and Using Information in 21st Century Wales*. Cardiff: Welsh Information Literacy Project. Available at http://welshlibraries.org/uploads/media/Information_Literacy_Framework_Wales.pdf [Accessed 24th November 2014]

White, D. and Le Cornu, A. (2011). Visitors and residents: a new typology for online engagement. *First Monday: peer reviewed journal on the Internet*, 16 (9). Available from <http://firstmonday.org/article/view/3171/3049> [Accessed 9th June 2015]

Wickson, F., Carew, A. L. and Russell, A. W. (2006). Transdisciplinary research: characteristics, quandaries and quality, *Futures*, 38 (9), pp.1046-1059.

Wood, E., Miller, R. and Knapp, A. (2007). *Beyond survival: managing academic libraries in transition*, Libraries unlimited, Westport, CT.

Wright, F., White, D., Hirst, T. and Cann, A. (2014). Visitors and residents: mapping student attitudes to academic use of social networks. *Learning, Media and Technology*, 39 (1), pp.126-141.

Zagal, J., Rick, J. and His, I. (2006). Collaborative games: Lessons learned from board games. *Simulation & Gaming*, 37 (1). pp.24-40.

Zurkowski, P. (1974). *The information services environment, relationships and priorities*. Related paper no. 5. National Commission on Libraries and Information Science, USA. Available at <http://eric.ed.gov/?id=ED100391> [Accessed 10th November 2014]

21 Appendices

Appendix 1: Feedback from Library colleagues at other institutions regarding use of our games.

Appendix 2: Interview with Festus Louis, 22nd May 2014.

Appendix 3: Edwards, J. A. and Hill, V. (2015). *Instructions for use of our games and activities*, Jorum.

Appendix 4: Hill, V. and Tomkinson, P. (2007). *Itinerary for Interior Architecture field trip to Istanbul 2007*. Middlesex University.

Appendix 5: Hill, V. (2008). *Report on Interior Architecture fieldtrip to Istanbul 18th - 22nd November 2007*. Middlesex University.

Appendix 6: Hill, V. (2008). *Review of exhibitions held in Art & Design Learning Resources September-December 2007*.

Appendix 7: Hill, V. and King, S. (2011). Report on *Teaching Information Literacy in HE: What? Where? How?* Workshop led by Sharon Markless at CILIP 9th December 2010.

Appendix 8: Edwards, J. A. and Hill, V. *Information literacy menu*.

Appendix 9: Davis, C. (2012). Email to Nick Bevan and Matthew Lawson, 31st May 2012.

Appendix 10: Library and Learner Development management structure, Middlesex University, August 2012.

Appendix 11: Information literacy standards, frameworks and curricula review.

Appendix 12: Middlesex University. *Graduate Skills Framework*, 2014-2015.

Appendix 13: Interview methodology.

Appendix 14: Letter to interviewees.

Appendix 1: Feedback from Library colleagues at other institutions regarding use of our games.

Tweets in response to our presentation at the British Library (Edwards and Hill, 2014a):

[claire duddy @sovietta Jan 31](#) Oo an abba themed presentation for after lunch [#m25il](#)

[Emma Woods @woodsemma Jan 31](#) Enjoyed the ABBA theme during that presentation! [#m25il](#)

[Jane Secker @jsecker Jan 31](#) Let's not demonstrate another database again! I loved the fruit and veg stall photo to stimulate students thinking about keywords [#m25il](#)

[Federica Oradini @federicaoradini #m25il](#) fun keywords game with Adam Edwards pic.twitter.com/HEX1JQM6rh

[Emma Coonan @LibGoddess Jan 31](#) Loving this hugely engaging talk by Adam Edwards and Vanessa Hill from Middlesex [#m25il](#)

[Federica Oradini @federicaoradini #m25il](#) Games and gamification for information literacy with Adam Edwards pic.twitter.com/zZoQiY50m4

[Julian Robinson @julianzzzz #M25IL](#) "You came to our library skills session and got better marks!" pic.twitter.com/a41hUZ5Wqz

[Jennifer Rowland @Bradscimlib Jan 31](#) Some nice [#infolit](#) games from Middx. Uni: MT [@woodsemma](#) <http://bit.ly/GamesMDX> [#m25il](#)

[Emma Woods @woodsemma Jan 31](#) <http://bit.ly/GamesMDX> [#m25il](#)

Response from Pat Simons, Queen Mary University of London, to training for her staff (Edwards and Hill, 2014b; Hill and Syrratt-Barnes, 2014):

From: Patricia Simons [<mailto:p.simons@qmul.ac.uk>]
Sent: 27 January 2014 10:34
To: Adam Edwards
Cc: Martin Beeson; S Mitchell
Subject: Thank you very much

Hi Adam

I just wanted to say that you very much to you and your colleagues for giving the QML contingent such a good day. The comments I've heard from them were "inspirational", "really motivating", "helped us to focus on things we want to do", "lovely spaces to teach in".

They particularly noted

- Less is more, separate content of sessions from supporting materials
- Take an assertive approach to academics
- Have proper session plans, with learning outcomes and evidence that it works
- Teaching qualifications give librarians confidence
- Be prepared to experiment and review success honestly
- Track progress of students
- All working as a team, all librarians have bought into the approach

They enjoyed working with the artefacts in the Art& Design library and were impressed by the Unihub student enquiry centre in the library and the screensavers used for advertising. Sally found the seamless experience of information skills blending into study and writing skills impressive.

As far as I am concerned, the day has met my expectations for the team very well and I hope they will use what they have experienced to develop practices that will work here.

You are very welcome to pay a return visit although I'm not sure we will be able to impress you on so many fronts.

Thank you

Pat
Pat Simons
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Emails from other librarians using our games:

You forwarded this message on 11/09/2014 13:34.

From: O'Neill, Ruth <roneir@croydon.ac.uk> Sent: Fri 05/09/2014 16:57
To: Vanessa Hill
Cc:
Subject: RE: LILAC

Hi Vanessa,

Following your request for feedback I (together with my colleagues) have had great success with the Big 5 (and adapted Big 4 for FE) students and have distributed the separate colour pieces to them to match up with the type of resource; although as our sessions take place in a library IT room the layout and limited desk space has not been ideal.

The market stall picture idea for keywords has also worked well generating discussion amongst the students.

The Dewey game has not been quite so successful with some of our (HE) students not being very keen to participate, we have this as an option for the subject librarian but it depends on the subject group and level.

The additional evaluation activity has been produced for our future research skills session and has been adapted to become a tick sheet for very important/important/not important with a matching Smart file moving the criteria under the heading on the board.

Thank you very much,

Ruth

You replied to this message on 30/06/2014 09:18.

From: J.Secker@lse.ac.uk Sent: Wed 25/06/2014 17:17
To: Vanessa Hill
Cc:
Subject: RE: Games in information skills training

Hi Vanessa

We've used a few of your resources in Jorum and I will speak to colleagues and get some feedback to you. Overall we found them very helpful and we plan to share our resources in Jorum soon too. We have referenced you! The resources card sorting exercise went down very well in two sessions we did. We also used the fruit stall for a level students to help them think about keywords and again it seemed to work well.

All the best
Jane

You replied to this message on 25/06/2014 14:03.
Extra line breaks in this message were removed.

From: Antony Osborne <a.osborne@hud.ac.uk> Sent: Wed 25/06/2014 11:57
To: Vanessa Hill
Cc:
Subject: RE: Games in information skills training

Hello Vanessa

Since we met at Lilac 2013, myself and my team have made extensive use of the games etc. We all loved the "fruit" picture and it has worked very well with groups of students across many different disciplines. Also, we have used the "resources" one where students have to decide which resources are good for which things. I have found these particularly useful with Art/Design students, as they seem to engage with them much more readily than more traditional means. We have done laminated packs of them, and I will be encouraging my team to use them again in the ensuing academic year. We didn't feel the need to modify them, but have used them simply as they are. They have been great.

Best wishes
Antony

Dr Antony Osborne, EdD, MSc, BA (Hons), MCLIP, FHEA, LTCL Academic Librarian (Applied Sciences, Art, Design & Architecture, Human and Health Sciences)

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From: Richard Swift [<mailto:R.Swift@derby.ac.uk>]
Sent: 23 June 2014 15:02
To: Vanessa Hill; Adam Edwards
Subject: [SPAM: 3.100] Card games

I've been using some card games that you showed at the ARLIS Information Literacy event about a year ago, especially the Types of Resources one. It's been working really well, and gets good feedback (apart from the time that I used it with a group who I'd also used coloured cards with for Cephalonian at their induction, but hey ...)

I talked about it at a TeachMeet event in Leicester a couple of weeks ago, and have had a couple of people asking for the link to the cards, which I've sent to them. I know it's open access but I just want to reassure you that I do give you full credit for it! I'm feeling the need to cite and acknowledge my sources ethically ☺

Thanks for sharing those ideas. It took me out of my comfort zone to use them, but they work a treat.

Best regards

Richard

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📧 You replied to this message on 09/02/2015 10:27.

From: A Cobb <acobb@eastbarnet.barnet.sch.uk>
To: Vanessa Hill
Cc: L Latulip; P Shah
Subject: Thanks

Sent: Mon 09/02/2015 09:53

Hi Vanessa,

I just wanted to thank you for your great presentation last week. Your games are amazing and we are planning to incorporate them into our induction programme. I believe Lauren has already used some with her Y7 classes (1st years).

I know that the other school librarians were really impressed and thoroughly enjoyed the training.

We will let you know when we plan to do a lesson using the ideas and you can come along and observe as we discussed.

Kind Regards

Annette

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Appendix 2: Interview with Festus Louis, 22nd May 2014

Interviewer: [not spoken] What do you use in the library?

Festus: What I use the library for? I think I might have covered that, I use the library to come study, get my coursework done, broaden my knowledge, meet my students in the library and try to facilitate their study.

Interviewer: Do you want to mention the online resources you talked about to me before we started?

Festus: Right, one good thing, again, one good thing you could use the library for its.....with this University, the Library has incorporated into it, the University has provided a database whereby you don't have to worry about I'm having to hand in a coursework and I've had to use Ask.com and you're not sure you've got the right information, the information seems to be right, but you've got it for example from Ask.com, you're asking yourself is this academically acceptable? Will they accept my coursework if I use references such as that, possibly? If you don't know it, all you need to do is go to this database provided by the University and it gives you links, it gives you material which you can use, it tells you all the websites, which after your coursework you can put them in and they are academically acceptable. You know you can cite this reference, you can cite this work, you can reference it, two different things you need to know, citing is different from referencing, so all of it is in this database, where it helps you get good coursework and you can refer to this work, you know you can cite where you actually got the information from and at least you're be escaping from you know plagiarism because sometimes you get this from a site which is not recognised academically and you want to make it your own. They will always find you, so there is no point making the work that is not yours. Go to the database in MyUniHub account, student account, sign into it, go to the database, pick the information you want, put the topic there and it will find you loads and loads and loads and loads and loads of information and you can reference that and you can say that you told me it was acceptable and I've used you so there is no way you can go wrong about it.

Appendix 3: Edwards, J. A. and Hill, V. (2015). *Instructions for use of our games and activities, Jorum.*

Introduction

Our basic rule when developing these activities and games is to promote reflection, discussion and peer learning amongst students to ensure deeper learning and understanding of information literacy skills. We believe it is better to cover a small number of topics in detail than to try and cram too much in. We don't use on screen demonstrations, as this does not encourage users to experiment or think about what they are doing. All our sessions include hands on exploration of our resources, and a range of varied activities (games) to cover the core components of:

- Thinking about resources
- Constructing keywords (Search terms)
- Searching resources
- Evaluation of information

Our use of games was inspired by Susan Boyle's (Librarian: UCD) presentation at LILAC 2011.

Our teaching and learning principles were inspired by Sharon Markless (Senior Lecturer Higher Education, Kings College London), in particular 'Teaching information literacy in HE: What? Where? How' which she presented at CILIP Dec 2010.

Other people have also inspired and influenced us including library colleagues from Middlesex University, Phil Bradley (Information Specialist and Internet Consultant), Amanda Clossen (Librarian: Penn State University) and Alan Turner (Librarian: Art University Bournemouth).

This document describes how we provide information skills training for two of our subject areas: Computing and Product Design.

Templates for all our games and activities plus worksheets are available alongside this document in JORUM and the relevant game, activity or worksheet is noted at the end of each section below.

If you would like more information, please email: Adam Edwards a.edwards@mdx.ac.uk or Vanessa Hill v.hill@mdx.ac.uk

Workshops for Computing Students

A typical workshop for computing students comprises of:

- Thinking about resources
- Constructing keywords
- Self exploration of resources for current project
- Evaluating resources

These four elements form the basis of all workshops from Foundation through to PG. We use different games and activities for each level.

A 1st year workshop will take around 90 minutes which avoids information overload. 2nd, 3rd year and M-level workshops take longer (120 mins) as we cover more resources such as citation indexes and bibliographic management software.

Workshops are always linked to a current student project (with the exception of 2nd year computing students) and where possible we will include the coursework marking criteria. This criteria is a good way of showing the link between use of good quality library resources and better grades.

Slides for use with all our activities can be found in the Library Subject Guide for Computing in the Information Skills section here: <http://libguides.mdx.ac.uk/ComputingWorkshops>. These change and get updated, so if you cannot find what you are looking for, please email us.

Note our slides are deliberately image rich, short and to the point, so as not to distract from teaching.

Workshops and activities for computing students are described below:

Foundation/1st year UG workshop

See the following links for a Foundation (SAT0100) and a typical 1st year workshop (BIS1100). The workshops are called 'Better than Google' to directly challenge student overuse of Google and demonstrate the ease and value of using academic resources provided by the library. The presentations show how we use each game in a context of feedback and discussion:

<http://www.slideshare.net/EISLibrarian/cmt0100-2014>

<http://www.slideshare.net/EISLibrarian/bis1100-oct-2013-better-than-google>

A typical Foundation/1st year workshop for computing students is described below:

Thinking about resources: card game (Foundation and 1st year)

This is designed for Foundation and 1st year UG students, but has been used successfully with direct entry third years and M-level students unfamiliar with western HE and information searching.

First make your cards. Aim to have a set of cards for every 3 students i.e. you will need 10 sets for a class of 30. Each set consists of 20 cards (i.e. 5 yellow resource cards, 5 green definition cards, 5 pink 'Not so good for' cards and 5 purple 'Good for' cards) Laminate the sheets and cut them up removing the white edges. Secure each set of 20 cards with elastic bands.



The game aims to get the students thinking about the value of good quality information sources in their academic work. When asked, they will usually admit that 'Google' is their preferred information source.

Working in groups of 3 they have 10 minutes to match a definition, a 'good for' and 'not so good' card against each resource type e.g. Website or Book.

When the game is completed take feedback. Ask a group to give you the definition of one of the resources e.g. Book, then the 'good for' and finally the 'not so good for'. Follow up with discussion regarding the resource e.g. with books we would discuss why they are good for a broad overview of the subject, but also why they can be out-of-date etc.

Do the same with each other resource. Things we raise during feedback are:

- **Webpage:** Anyone can create them, not necessarily checked for accuracy, do not know who the authors are on pages like Wikipedia etc. There is usually quite a lot

of discussion around use of Wikipedia, so we try to stress that while it is a good starting place to get keywords, it should not be used and referenced in academic work.

- **Newspaper:** Issues of bias and especially sensationalist style of the British tabloids.
- **Academic Journal:** Ask what 'peer review' means and explain how the process works. Discuss the value of using this sort of resource in academic work and why lecturers will prefer them.
- **Popular trade journal (magazine):** ie what you might buy at a newsagents. Point out similar risks to newspapers of bias or promotion of products e.g. Mac User will never say PCs are better than MACs. Also discuss positives i.e. up-to-date, latest news etc
- **Books:** Good overview of a subject, but can be out-of-date, many books now available electronically, editorial control etc.

Sum up that the library enables access to quality resources for their studies. They will need to use websites, newspapers and popular journals with care, but should ensure that most of their references are from books and academic journals.

See: Types of resources All years.docx

Constructing keywords: Fruit market exercise (Foundation, 1st year, 3rd year and M-level)

This is designed for Foundation, 1st and 3rd year UG students, and M-level students. This is best done as a whole class activity or you can give out the worksheets and ask students to think about keywords in groups.



<http://www.flickr.com/photos/rossjamesparker/89414788>

1. Start off with the fruit market image. We include it in our presentation, so everyone can easily see it.
2. Opening question: What do you see in the picture? Answer will usually be *fruit*.
3. Ask them to be more specific and they will probably say *Bananas*. Get them to say a few more ie. apples, strawberries etc. Explain that searching for *fruit* is like searching the library for a book on *computers* or *management*. You will get far too many vague results. Searching for *bananas* is like searching for *computer networks* or *financial management tools*. Be as specific as you can.
4. Then ask about the *people* in the image i.e. who are they? You will probably get *customer* so ask for synonyms e.g. *client, shopper, buyer, consumer* etc. The *old lady/OAP/pensioner/senior citizen/elderly lady* is another example. Point out the need to use a variety of words as different databases use different terminology or use USA English. Give examples from your subject.
5. Ask about the bigger picture i.e. things related to the picture which are not in it e.g. nutrition, economy etc. Again get them to think of other terminology e.g. *vitamins and minerals, 5-a-day, health, or competition, high street economy, credit crunch* and so on.
6. Finally ask for fruit which have a double meaning in a technical sense i.e. *Apple, orange, blackberry and raspberry (pi)* should be mentioned. Point out the problems of false positives and double meanings and therefore the need to use several keywords in combination.

Then repeat the exercise using a real current project, either as a whole class or as small groups. A worksheet can be used if running as a group exercise. The keywords they come up with are then used to search for information using our resource discovery system (Summon).

See: Thinking about keywords 1st year.docx

See: Thinking about keywords general worksheet.docx

Self-exploration of resources (Foundation and 1st year)

We do not use a game for this part of the workshop, but ask students to search Summon our resources discovery tool for information relevant to the project they are currently working on. We do not demonstrate use of Summon, although we do explain where they can access it and what it covers. We are on hand to answer questions and offer advice, as well as pointing out the reference creation tool on Summon and other useful features such as refining tools.

Evaluating resources (Foundation, 1st year and M-level)

This is designed for first year UG students, but has been used with direct entry third years and M-level students unfamiliar with western HE and information searching.

Each group (ideally 3 people) is given a pack of 4 photocopied items (academic journal article, newspaper article, trade journal article and Wikipedia article) on a subject related to their studies. We use 'Network security' for all computing students, and the 4 items are genuine search results.

Our 4 items include:

- A **peer reviewed journal article**, which has citations, references, biographies of authors, but is over 10 years old.
- A **trade journal article** from a title linked to a retailer, which ranks the product they sell as being superior. It's up-to-date, but bias.
- **Wikipedia article**, which is very up-to-date, but has no authority.
- **Newspaper article** from The Sun, which is sensationalist and uses non-academic language.

The students are asked to pretend that they are researching an essay on 'Network Security' and these are the items found. We ask them in groups to consider a range of questions using the worksheet (see below) e.g. which items are relevant, contain bias, could not be used, have the most academic authority and which is the most up-to-date.

| Evaluating Information | | | | |
|--|--------------------|--------------------|---------------------------|------------------------|
| Imagine that you are writing an essay on Network Security . | | | | |
| Each group has been given the same 4 items. | | | | |
| Have a look at the items and discuss the following questions in your groups. | | | | |
| | Item 1 (Wikipedia) | Item 2 (Newspaper) | Item 3 (Academic journal) | Item 4 (Trade journal) |
| Which items are the most relevant to your essay? | | | | |
| Which items would be no use? | | | | |
| Which item has the most academic authority? | | | | |
| Which items might have bias? | | | | |
| Which item is the most current? | | | | |

Once activity is completed, follow with feedback and discussion. We then conclude by saying none of these is good enough to use as all are flawed in some way. Therefore more searching required in order to find quality and relevant resources.

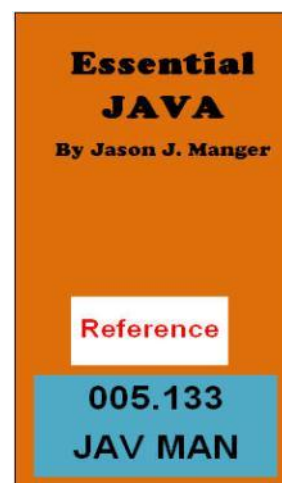
See: Evaluating ResourcesNetwork security.docx

Dewey game (Foundation only)

This game was initially created by our library colleague Vivienne Eades, but adapted by us to resemble book covers and incorporate issues such as different loan statuses, editions etc. This is designed for Foundation students and is done as a whole class activity usually at the end of the session. If the class is small then make use of any staff present to pretend to be human books.

Make the cards: You will need to create 12 A4 laminated cards for books for their subject. Make sure you include:

- Simple and long numbers
- Alternative editions
- Different loan periods
- Similar numbers with different suffixes
- Any peculiarities e.g. we use a double suffix for software books e.g. 005.133 JAV SMI for books on Java programming.
- Each card has *Not on shelf* on the back.



In class, volunteer 12 students to be the books. Give each student volunteer a card. They stand in a row and hold the cards up. Then get the rest of the class or a couple of students to be the librarians and put the books in order. This means moving the people with their cards. The books are not allowed to help! The rest of the class can join in with suggestions or heckling!

Once they think the books are in order, check and then raise issues such as different loan periods, what 'reference' means, different editions, Dewey numbers mean subjects etc.

Then get two students to turn their cards round to say '*Not on shelf*' and ask what we should do? This provides the opportunity to mention reservations, inter library loans or book purchase suggestions etc.

See: Dewey Game.docx

2nd year UG workshop

Workshops for 2nd year students follow the same basic layout as Foundation and 1st year workshops i.e. Thinking about resources, constructing keywords, self exploration of resources and evaluation. However we have developed different games and activities intended to get students curious about their academic work and projects. See the following link for a typical 2nd year computing workshop (CCE2060):

<http://www.slideshare.net/EISLibrarian/cce060-oct-2014>

Keyword images activity (2nd year)

This activity was initially created for 1st year Product Design students (see section on 'Workshops for Product Design and Design Engineering students'), but has been successfully used with computing students.

A random image is used as a metaphor for a student project. Students are expected to use lateral and creative thinking to research a random image, in the

same way that they need to approach a new unknown subject when a project is set by their tutor.



Students are divided into groups (ideally 3 students) and given a worksheet which includes an image (see example right). Students are asked to note on the worksheet 'What it is?' i.e. what do they see in the image. They then need to list as many words as they can think of to describe the image. Students may need prompting, as often they do not know what the image is of. Encourage them to write down what they see, even if they don't know what it is.

Using Google (or their preferred search engine), students then need to search for 3 interesting or surprising facts connected with the image and also note down how they found these facts.

Each group then presents their findings to the rest of the class.

This exercise takes about half an hour.

See: 2nd year Computing keywords.docx

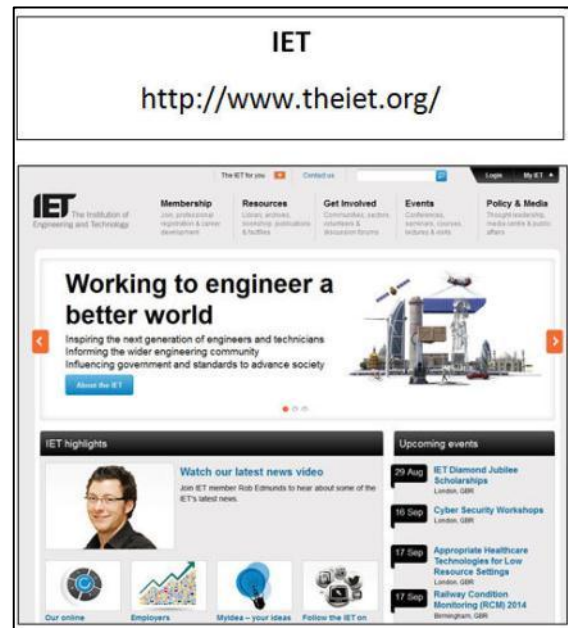
Envelope activity: self-exploration of resources (2nd year)

This activity was inspired by a teaching technique used by Phil Bradley in a workshop presented at Euston House, London on 11th March 2014 on behalf of UKeIG 'Using multimedia tools to present information'. In this workshop Phil handed an envelope of resources to each delegate (hence the name), who then could select those resources of interest to them and investigate. This activity gets students both thinking about what different resources available to them, as well as exploring a range of diverse resources in their own way.

To make this activity, you need to create a number of cards, each one depicting a resource relevant to the subject area. In our case we have 24 x laminated A4 cards which depict a range of Middlesex University subscribed or open access resources relevant to computing.

Resources include:

- IET website
- Ted talks
- IEEE.TV
- Cite Them Right Online
- Easelly
- Project Smart
- BCS website
- Britannica Online
- Computing Library Subject Guide
- Box of Broadcasts
- British Standards online
- BBC News Technology
- Computing Research Repository etc.



Students are divided into groups (ideally 3 students) and each group is given 4-5 of the cards. Each group then has approx. 20mins to look at all the resources and choose the one that they think would be most useful to their studies.

Each group then presents the resource to the class using the demonstration computer, and should note in particular:

- What it is?
- Useful or interesting features
- How it could be used in their studies.

See: cards.docx

Evaluation game (2nd year)

This game was inspired by Amanda Clossen, Learning Design Librarian, from Penn State University, USA in her presentation at the Information Literacy Satellite Meeting (IFLA World Library and Information Congress 2014) at Limerick, Republic of Ireland, Aug 2014.

This game is made in the same way as the Foundation/1st year 'Thinking about resources' game and comprises 22 laminated cards. The game is ideally played in groups of three, so for example 10 sets will be required for a class of 30.

Each pack contains 2 black cards labelled *Authority* and *Currency*, plus a duplicate set of 10 cards depicting a range of information sources from a Tweet and Blog Post through to a Conference proceeding and a Movie.

The activity starts with a discussion around the meanings of the words *currency* and *authority* in the context of information i.e. *currency*: how old, last updated, what has been updated; *Authority*: who is the author, what are their qualifications and how has the information been verified?



Each group is then given a pack of cards. Students must rank each set of information sources against the two black cards *Authority* and *Currency*. The outcome is open to debate, but will look something like this:

| Authority | Currency |
|--------------------|--------------------|
| Academic journal | Eyewitness account |
| Conference paper | Tweet |
| Book | Blog post |
| TV documentary | TV news report |
| Newspaper article | Newspaper article |
| TV news report | TV documentary |
| Blog post | Conference paper |
| Tweet | Academic journal |
| Eyewitness account | Book |
| Movie | Movie |

End the activity by taking feedback from the class and leading discussion e.g. which source offers the most authority, which source has the least currency, when do blogs and Tweets have more authority, when are eyewitness accounts useful? Etc.

See: 2nd year evaluation game.docx

3rd year UG workshop

Workshops for 3rd year students follow the same basic layout as for other years i.e. Thinking about resources, constructing keywords, self-exploration of resources and evaluation. Different games and activities are used for 3rd year workshops which generally last 120 minutes and students are introduced to a wider range of library resources. See the following link for a typical 3rd year workshop (CMT3342):

<http://www.slideshare.net/EISLibrarian/cmt3342-oct-2014>

Reference list game: using the right information for your project (3rd year)

This game has been designed for 3rd year students and is an alternative to the Foundation/1st year 'Thinking about resources' game.

The game is played in groups of 3 and is intended to make students think about the information sources they should use to support their written work. We usually show an example of marking criteria used for student work before we play this game, which demonstrates how using the library can improve their grade e.g. 10% of total marks given for use of good quality and relevant information sources.

Students are asked to imagine that they are a lecturer teaching on a computing module who is about to mark a project on computer security and malware. 15% of the total marks will be awarded for the quality of the references used in the project. In this game each group of students is given a pack of 3 reference lists about computer security and malware, which they need to mark against various criteria such as relevance to the project and quality of the resources used.

Each list varies in its quality e.g. List 1 uses a range of good quality, up-to-date resources, but there are a couple of errors with the Harvard referencing. List 2 includes lots of websites including Wikipedia, an out-of-date book and an irrelevant newspaper article. The Harvard referencing is poor. List 3 is the mid-range list including a variety of sources of varying currency.

Reference List 1: Computer Security and malware

British Standards Institute. (2013). BS ISO/IEC 27001: Information technology. Security techniques. Information security management systems. Requirements. [Online]. Available at: <https://bsip.bsigroup.com/Bibliographic/BibliographicInfoData/00000000030192065>. [Accessed 19th December 2013].

Encyclopaedia Britannica. Computer security. [Encyclopaedia Britannica Online Academic Edition][Online]. (2013). Encyclopaedia Britannica Inc. Available from: <http://www.britannica.com/EBchecked/topic/130682/computer-security> [Accessed 18th December 2013].

Ford, R., Ford, R., Allen, W.H. & Allen, W.H. (2009). Malware Shall Greatly Increase. *IEEE Security & Privacy Magazine* [online], vol. 7, no. 6, pp. 69-71. Available from: http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=5370704 [Accessed 18th December 2013].

GOLLMANN, Dieter. (2011) *Computer security* (3rd edition). Wiley, Chichester.

Howe, A.E., Ray, I., Roberts, M., Urbanska, M. & Byrne, Z. (2012). The Psychology of Security for the Home Computer User. Paper presented at *IEEE Symposium on security and privacy* [online], 20th-23rd May 2012, San Francisco, CA. Pp. 209-223. Available from: http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=6234414. [Accessed 19th December 2013].

Massicotte, F., Couture, M., Normandin, H. & Letourneau, M. 2012. Navigating and visualizing the malware intelligence space. *IEEE Network* [Online], vol. 26, no. 6, pp. 19-25. Available from: http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=6375889 [Accessed 18th December 2013].

O'Kane, P., Sezer, S. & McLaughlin, K. (2011). Obfuscation: The Hidden Malware. *IEEE Security & Privacy Magazine* [Online], vol. 2, no. 5, pp. 41-47. Available from: http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=5975134 [Accessed 19th December 2013].

M.Y. Way. (2013). *Wireless mobile internet security* (2nd ed). Wily & Sons, Chichester.

Stallings, William et al. (2012) *Computer security: principles and practice* (2nd edition). Pearson Education.

Once all groups have completed, take feedback. Students are asked what marks they gave each list and why. Discussion should raise issues of use of appropriate resources for academic work, and the value of using academic journals and conference proceedings etc.

NB: The attached file includes the student worksheet, 3 x reference lists for student activity and 3 x reference lists (named 'correct') for the librarian. In the latter, missing parts of the Harvard references are included and highlighted in yellow.

See: Reference List game consolidated V2.docx

See: Using the right information for your project worksheet.docx

Constructing keywords (Foundation, 1st year, 3rd year and M-level)

When the students have a common project, we run the keyword exercise as for Foundation/1st year students using the fruit market stall image.

Then repeat the exercise using a real current project, either as a whole class or as small groups. A worksheet can be used if running as a group exercise.

If students have individual projects, see below (Constructing keywords: individual projects).

See: Thinking about keywords general worksheet.docx

Constructing keywords: Individual projects (3rd year and M-level)

When students are working on individual projects, we use the following exercise.

Thinking about keywords

Name:

Details of your project (underline the keywords and pass on):

Alternative keywords, more specific keywords, related subjects:

Other ideas and useful resources:

Do you have some research knowledge in this area that you would like to share? Add your name below:

Run the 'Constructing keywords' activity (Fruit market stall picture) as described above for Foundation/1st year workshops. Then give each student a project planning worksheet. Ask them to note down their name and project details on the form. The form should then be passed to the person on their right.

The next person should note down alternative keywords, more specific keywords and related subjects, as well as any other ideas or useful resources. Also, if they know something about the project area, ask them to add their name to the bottom of the form. Pass round a further two or three times.

After 10-15 mins, the forms should be returned to the owner, who hopefully will get some keywords and ideas that they had not thought of. These keywords

can be used when searching our resources.

See: Thinking about keywords worksheet PGs.docx

Self-exploration of resources (3rd year)

We do not use a game for this part of the workshop, but ask students to search our resources for information relevant to the project they are currently working on. We will initially ask students to use Summon our research discovery tool, but will also introduce them to specialist journal databases such as ACM Portal, IEEE Xplore and British Standards Online.

We do not demonstrate use of these resources, although we do explain where they can access them and what they cover.

Ranking evaluation criteria (3rd year students)

This is designed for third year UG students. It has also been used successfully with Phds and DProfs. The game is played in groups of 3. The game is an alternative to the 1st year 'Evaluating resources' game and is created in the same way. It is intended to get students thinking about the criteria they might use when evaluating information for quality.

Hand out a pack of cards to each group (ideally 3 students). Each pack contains 3 red cards 'Very important', 'Important' and 'Not important' plus 20 'criteria' cards e.g. 'Up-to-date', 'Written by an expert', 'Found using a journal database' etc. Each group needs to consider the different



criteria and decide how important that criteria is when selecting information for use in their academic work. For example if they consider 'Up-to-date' to be 'Very important', they should place this criteria card by the 'Very important' card.

The game should take 5-10 mins. If a group completes the task quickly, then ask them to rank the 'Very important' criteria.

When all groups have completed the task, take feedback e.g. ask a group what criteria they consider as 'Not important' and why? Then ask another group what they consider as 'Very important' and so on. This



should bring out issues like peer review, citation count, or related to use of Google Scholar or Wikipedia etc. Be prepared for differing opinions, as some of the criteria ranking can vary depending on the students. For example, it might not always be important that information has lots of references, is written by an expert or is balanced.

You don't need to cover every card as they will have discussed them all in their groups, but make sure that the most significant issues are covered.

Sum up with a slide showing authority, relevance, intent, objectivity and currency to consolidate the issues raised and discussed.

See: ranking eval criteria game 3rd years.docx

M-level workshop

Workshops for M-level students follow the same basic layout as for other years i.e. Thinking about resources, constructing keywords, self-exploration of resources and evaluation. Different games and activities are used and workshops generally last 120 minutes. Students are introduced to a wider range of library resources. See the following link for a typical M-level workshop (BIS4430):

<http://www.slideshare.net/EISLibrarian/bis4440-jan-2015>

Sources game (M-level)

This is a variation on the Foundation/1st year 'Thinking about resources' game and is intended to get students thinking about the value of a wider range of resources.

Each pack consists of 25 cards. Create cards in same way as described for the 'Thinking about resources' card game.

Students work in groups of 3 to match different resource against three criteria: 'Trustworthy', 'Be suspicious' or 'Risky'. This activity should take about 10 mins. Cards cover conventional sources such as academic journals, textbooks and British Standard, but also things like Wikianswers, Blogs and Friends.

Once all groups have completed the activity, take feedback. As with many of our games, there are no right or wrong answers, and the objective is to provoke discussion and understanding of the different types of resources available to students, which ones can be relied on for quality and which ones need to be used with care. The usual issues will be raised during discussion, such as the value of peer reviewed journals, bias in newspapers, trade journals, company websites; and the way that information can be misused for example statistics.

See: Sources game.docx

Constructing keywords (Common project)

When the students have a common project, we run the keyword exercise as for Foundation/1st year students using the fruit market stall image.

Then repeat the exercise using a real current project, either as a whole class or as small groups. A worksheet can be used if running as a group exercise.



If students have individual projects see below (Constructing keywords: individual projects).

See: Thinking about keywords general worksheet.docx

Constructing keywords: Individual projects (3rd year and M-level)

When students are working on individual projects, we run the 'Constructing keywords' activity (Fruit market stall picture) as described for Foundation/1st year workshops. Then give each student a project planning worksheet and run activity as described for 3rd year workshops.

See: Thinking about keywords worksheet PGs.docx

Self-exploration of resources (M-level)

We do not use a game for this part of the workshop, but ask students to search our resources for information relevant to the project they are currently working on. We will initially ask students to use Summon our research discovery tool, but will also introduce them to specialist journal databases such as ACM Portal, IEEE Xplore, and British Standards Online, as well as Citation Indexes.

We do not demonstrate use of these resources, although we do explain where they can access them and what they cover.

Evaluating resources (M-level)

This activity is designed M-level students and is played in groups of 3. It is intended to get students thinking about the criteria they use to evaluate resources and which resources are suitable for post-graduate research. The activity should take about 30 mins.

Each group is given a worksheet which asks them to imagine that they are researching 'The right to be forgotten'.

We chose this subject because it is topical and is generic enough to be used across all the subject areas that we support.

Students are then asked go to a website and look at a number of items which address this subject. The items we have chosen include:

| Evaluating search results | |
|--|--|
| Imagine you are researching 'The right to be forgotten'. | |
| Go to: http://libguides.mdx.ac.uk/EvaluatingInformation | |
| Have a look at the items and then answer the following questions: | |
| Which of these items are suitable for postgraduate level research? | |
| What are your criteria for choosing these items? | |

- An article on a blog about privacy, human rights, law and the Internet which is authored by an academic
- Online magazines
- Wikipedia
- Factsheet from the European Commission
- Sensationalist article from The Sun newspaper
- Article from the Guardian newspaper
- Peer-reviewed academic journal article
- Twitter post and feed from the founder of Wikipedia
- An article on Google's blog
- Conference proceeding
- Article from BBC News Technology page

The website can be viewed here: <http://libguides.mdx.ac.uk/EvaluatingInformation> (Please note that some of the links on the website are to journals subscribed to by Middlesex University, so people outside of the University will not be able to access all of the items).

Having looked at the items, the groups are asked to answer the following questions and write their answers on the worksheet:

- Which of these items are suitable for postgraduate research?
- What are your criteria for choosing these items?

When all groups have finished, take feedback and discuss issues around academic authority, peer-review, reliability etc. Students should be encouraged to discuss appropriateness of material selected i.e. which of the items are aimed at postgraduate readership and why?

Sum up with a slide showing authority, relevance, intent, objectivity and currency to consolidate the issues raised and discussed.

See: Evaluating search results PG.docx

Workshops for Product Design and Design Engineering students

The main issues with these students, particularly 1st year Product Design students are:

- Getting them into the Library
- Making the library seem relevant to their work
- Getting them to search the Internet more effectively (it is a valid source for them), but not to rely on it completely
- Making them understand the value of academic resources in their work ie. there is more to life than Google

A selection of our presentations can be seen here:

<http://libguides.mdx.ac.uk/PDworkshops>

Our workshops for 1st year Product Design students are described below:

Workshops for 1st year Product Design students

Since 2011 we have worked closely with the 1st year Product Design tutors to rework the information skills workshops offered to their students. It was obvious from previous years that these students did not respond to lengthy, traditional, didactic workshops, and that shorter regular workshops might be more palatable.

Inspired by a Sharon Markless workshop we decided to let the students discover the library and its resources for themselves and let them tell us why something is useful, rather than the other way round. Over the next couple of years we experimented with various lesson plans and activities, which did appear to engage the students, whilst introducing them to the library and the information searching process.

Summer 2013 we attended an ARLIS workshop as presenters, and were inspired by a presentation by Alan Turner and his 'Ideas factory' at Arts University Bournemouth, where he encouraged the students to get curious and enhance their work through research and discovery. This got us thinking about how we could refine our workshops further. Following discussion with the 1st year tutors, we came up with the following lesson plans, which we introduced academic year 2013/14 (tutors always attend workshops):

Session 1 (1 hour) Getting Started: Resources

Our presentation can be seen here:

<http://www.slideshare.net/EISLibrarian/babscpd-1st-year-session-1>

- This session is held in our Materials Room (home of our Special Collections).
- We start off by running the 'Thinking about resources' game to get students thinking about the range of resources available and their value in an academic context. We use a slightly different version to the one used with computing students, which includes 'Objects' as a resource. Feedback and discussion follow in the usual way.

- Then in groups (ideally 3 people), the students are then given a box of 5 items/objects from our special collections. Each box was different. As an example one box included a hat from the fashion collection, item of building material from the Samples Library, some library date stamps from our Hornsey College of Art



Archive, Great Exhibition Catalogue 1851 and a 1930s A-Z of London.

- Students have 15 mins to examine their items and complete a worksheet, which necessitates them identifying certain aspects of the items such as date of manufacture, what it is made of, what it could be used for etc.
- Each group have to choose their favourite item, talk about it and discuss how they can find out more ie. what keywords they can use, paths they can follow etc.
- Students report back to the whole class.
- The session is lively and fun and portrays the library as interesting and exciting. Although we do not go into detail about the Special Collections, students now know enough, and quite a few have come back to further explore.

See: Types of resources All years PDE.docx

See: 1st yr PD session 1 worksheet.docx

Session 2 (1 hour) Getting curious: information to feed your creativity

Our presentation can be seen here:

<http://www.slideshare.net/EISLibrarian/babsc-pd-1st-year-session-2-dec-2013>

- Session is held in a computing lab in the library.
- The session is aimed at developing student curiosity and demonstrating how research can feed their creativity and make their finished products/designs better.
- The tutors have requested that we focus at this stage on searching the Internet, and making the students better searchers through use of keywords and search tips.
- We start off by running the keyword activity using the fruit market stall image as described for Foundation/1st year workshops.



- Then in groups (ideally 3 people), students are given an image (and worksheet) to investigate on Google, noting 3 interesting/fun facts connected with the image, plus how they found this information. They can search for any aspect of the image that interests them. Each group is given a different image.
- Groups give feedback to the rest of the class including their 3 interesting/fun facts, and how they carried out their search, what keywords used, what worked, what didn't work etc. This use of images has subsequently been introduced into 2nd year computing workshops with much success.
- The session ends with a couple of extra slides on image searching and other library resources at the request of the tutor.

See: 1st year product design session 2 worksheets V2.docx

Session 3 (1 hour) Searching for information

Our presentation can be seen here:

<http://www.slideshare.net/EISLibrarian/bscba-product-design-1st-yr-session-3-jan-2014>

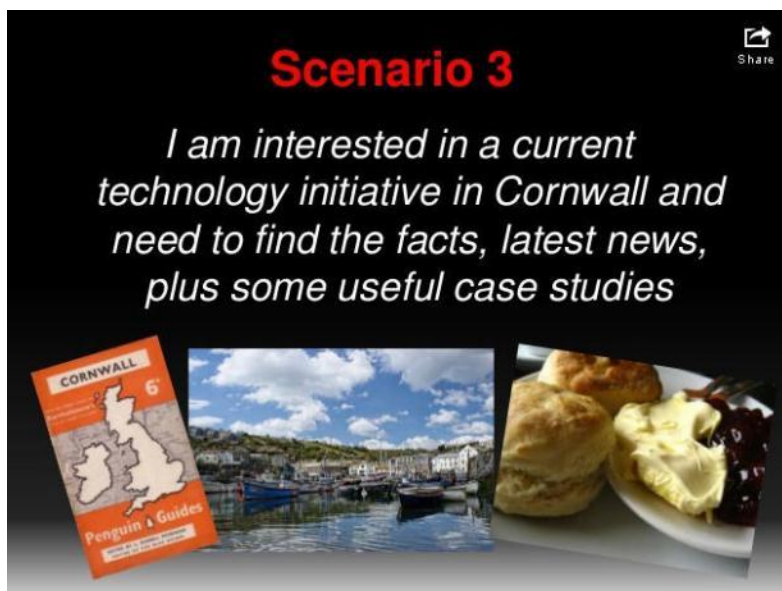
- Session held in a computer lab in the library.
- Reiterate the importance of research in the design process.
- Follow by a brainstorming exercise to come up with keywords for their current project.
- Students then left to explore our resource discovery tool Summon and find relevant info.
- Brief discussion to compare Google and Summon.
- Finally run the 1st year Evaluation exercise. We use a slightly different version geared towards Product Design, which includes: a book, peer-reviewed journal article, newspaper article and hoax website.

See: Evaluating resources PDE.docx

Games we no longer use

Scenario game (3rd year students)

This is a variation on the Foundation/1st year 'Thinking about resources' game and works in a similar way. Create cards in same way as described for the 'Thinking about resources' card game.



Each group (ideally 3 students) is given a pack of cards containing 5 scenarios and a number of resources such as books, academic journals and conference proceedings.

Ask the students to consider the different scenarios and match against each one, the

resources that would best help them find suitable information.

The slides we use are in this set used for CMT3342:

<http://www.slideshare.net/EISLibrarian/cmt3342-nov-2013information-skills-for-research>

When all groups have completed the task, take feedback. Cover one scenario at a time. The feedback will allow various issues to be raised e.g. books might not be best for providing current information for Scenario 3 (above) as they become out-of-date. More suitable resources might be websites, trade journals and newspapers.

Having trialed this game in a few workshops, we have ceased to use it. We found the game was not very effective as students lacked the initial understanding to participate and our questions demonstrated their ignorance rather than activating prior knowledge and allowing us to build on it. This game has been replaced with the 'Reference list' game.

See: V2 Scenario game DEntry and PG.docx

9th Dec 2013: Updated 21st May 2014, Updated 31st Oct 2014, Updated 21st Jan 2015

Appendix 4: Hill, V. and Tomkinson, P. (2007). *Itinerary for Interior Architecture field trip to Istanbul 2007*. Middlesex University.

Istanbul 2007

Monday 19th Nov (Sunday arrivals)

Staff will be leaving hotel at 9.30am for those who wish to join us.

Suleymaniye Mosque (Suleymaniye Camii)

Located: Tiyakiler Carsisi off Prof Siddik Sami Onar Caddesi, Suleymaniye.

Open: daily c9am-dusk (closed at prayer times). Admission: free.

Built between 1550-57, this is Istanbul's most important mosque, and is both a tribute to its architect, the Great Sinan, and to its founder Suleyman the Magnificent. Like the city's other imperial mosques, the Suleymaniye Mosque was not only a place of worship, but a charitable foundation or 'kulliye'. The Mosque is surrounded by its former hospital, soup kitchen, schools, caravanserai or hans (accommodation for travellers), and bath house.

Spice Market/Egyptian Bazaar (Misir Carsisi)

Located: Cami Meydani Sok. Open: Mon-Sat c8am-7pm. Admission: free.

Built in the early 17th century as an extension of the New Mosque complex, it originally specialized in spices from the orient, with its revenues supporting the philanthropic institutions of the mosque itself. Nowadays a wider variety of items can be purchased including household goods, clothes and toys.

New Mosque (Yenni Camii)

Located: Eminonu Maydani/Yeni Cami Meydani, Eminonu.

Open: daily 7pm-dusk Admission: free

Situated at the southern end of the Galata Bridge, the new Mosque completed in 1663, is one of the most prominent in the city. Construction on the mosque actually began in 1598, but suffered a setback when the architect was executed for heresy. Though the mosque was built after the classical period of Ottoman architecture had passed, it shares many traits with earlier imperial foundations, including a monumental courtyard.

Sirkeci Station (Sirkeci Istasyonu)

Located: Istasyon Caddesi, Sirkeci.

On its completion in 1881, this was the eastern terminus for trains from Europe, including the famous Orient Express. Its street-facing façade has been disfigured by modern additions, but the waterfront profile retains an element of grandeur. The original Orient Express restaurant besides platform one remains largely intact.

Tram back to **Grand Bazaar** (see: 'Other places to visit' below).

Tuesday 20th Nov

Meet at Mosque at 10.30am (Staff will leave hotel at 9.30am and make way on foot to Mosque)

Sultanahmet (Blue) Mosque (Sultanahmet Camii)

Located: Meydani Sokak 17/21, Sultanahmet.

Open: daily c9am-4pm/dusk (closed for prayers noon-1.45pm) Admission: free.

The Blue Mosque takes its name from the blue Iznik tilework which decorates its interior. Commissioned by Sultan Ashmet I, it was built between 1609-16 by Mehmet Aga, the imperial architect and student of Sinan. The splendour of the plans provoked great hostility at the time, especially because a mosque with six minarets was considered a sacrilegious attempt to rival the architecture of Mecca itself.

Arrive c11.45am

Basilica Cistern (Yerebatan Sarnici/Sarayi) www.yerebatan.com

Located: 13 Yerebatan Cad, Sultanahmet. Open: daily c9am-4pm. Admission: YTL10

*This vast underground water cistern, was laid out under Justinian in 532, mainly to satisfy the growing demands of the **Great Palace (Bucoleon)** on the other side of the **Hippodrome**. The cistern's roof is held up by 336 columns, each over 8m high. Only about two thirds of the original structure is visible today, the rest having been bricked up in the 19th century. Prior to restoration in 1987, the cistern could only be explored by boat. Nowadays there are concrete walkways, a café and a platform for occasional concerts.*

Lunch c12.30pm

Arrive c.2.00pm

Hagia Sophia (Ayasofya Camii Muzesi)

Located: Sultanahmet Square/Ayasofya Meydani.

Open: Tues-Sunday c9.30am-4.30pm/dusk. Admission: YTL10

The 'church of holy wisdom,' Hagia Sophia is among the world's greatest architectural achievements. The vast edifice was built on the site of two earlier churches and inaugurated by Emperor Justinian in 537. It towered above all else, and was topped by the largest dome ever constructed, a record it held until just over a thousand years later with the construction of Michelangelo's dome for St Peters. The church was later converted into a mosque by the Ottomans in the 15th century. The minarets, tombs and fountains date from this latter period.

Wed 21st Nov

Leave hotel at 9.30am and make way to Eminonu on foot.

Bosphorous boat trip: Eminonu-Anadolu Kavagi

Departing 10.30am Bogaz Hatti Pier 3 (100 metres east of Galata Bridge).

*6 hour cruise stops at **Besiktas** near **Dolmabahce Palace**, then the ferry tacks back and forth between the European and Asian shores, stopping at several Bosphorus villages along the way notably **Kanlica**, **Yenikoy**, **Sariyer**, **Rumeli Kavagi** and **Anadolu Kavagi** (arrive 12.05pm). Sufficient time for lunch before return journey (depart 3pm) stopping only at **Besiktas** arriving at **Eminonu** at 4.30pm*

Thurs 22nd Nov

Leave hotel at 9.30am and catch tram from 'Universite' (on Ordu Caddesi) to 'Gulhane'.

Arrive c10.30am

Sogukcesme Sokagi ("The street of the cold fountain")

*Narrow, cobbled street between Hagia Sophia and the outer walls of the Topkapi Palace. Lined with traditional, painted, wooden houses; which were renovated in the 1980s. Some of them now form the **Ayasofya Pansiyonlari**, a series of pastel-painted guesthouses. Another building has been converted into a library of historical writings on Istanbul, with an archive of engravings and photographs of the city. A Roman cistern towards the bottom of the lane has been converted into the Sarnic Restaurant.*

Arrive c11.00am

Topkapi Royal Palace (Topkapi Sarayi) www.topkapisarayi.gov.tr

Located: Babihumayun Caddesi, Gulhane.

Open: Wed-Mon 9.30am-4pm (Harem Wed-Mon 9.30am-4pm).

Admission: YTL10 for Palace and YTL10 for Harem (guided tour every half an hour).

Built between 1459 and 1465 by Mehmet II as his principal residence, shortly after his conquest of Constantinople. The palace was conceived as a series of pavilions contained by four enormous courtyards, a stone version of the tented encampments from which the nomadic Ottomans had emerged. During their 470 year reign, the Ottoman Sultans amassed a glittering collection of treasures, which after the foundation of the Turkish Republic in 1923, were nationalized and displayed in the Topkapi Palace by now a museum. Topkapi's harem (Arabic for 'forbidden') was laid out by Murat III in the late 16th century and is a labyrinth of brilliantly tiled corridors and chambers designed to house the Sultan's wives, concubines and children. The Treasury and kitchens are also worth a visit time permitting.

Cemberlitas Hamami (Cemberlitas Turkish Bath) www.cemberlitashamami.com.tr

Located: Vezirhan Caddesi 8, Cemberlitas. Admission: YTL24 wash, YTL36 massage. Open: 6.00 am-midnight.

Built in 1584 by Sinan, it was commissioned by Nurbanu, wife of Sultan Selim the Sot, as a charitable foundation for the poor. The hamam has been in continual use ever since. The building dates to Sinan's last period, one in which his long experience and great skill allowed him to combine functionality, elegance and tranquillity. Although the original women's section no longer survives (to allow for street widening in 1868), the baths still have separate facilities for men and women. The baths were later restored by architects Onur Yalcin and Ali Dereli. The staff are used to foreign visitors, so this is a good place for your first experience of a Turkish bath.

Friday 23rd Nov (Monday arrivals)

See: Monday 19th for details.

Other places to visit:

Grand Bazaar (Kapali Carsisi 'covered market')

Located: Carikapi Cad, Beyazit. Open: Mon-Sat c8.30am-7pm. Admission: free.

Established by Mehmet II shortly after his conquest of the city in 1453, the Bazaar is a labyrinth of interconnecting vaulted passages lined with thousands of booth-like shops. The bazaar also has its own banks, baths, mosques, cafes and restaurants, a police station and post office. Shopkeepers price their goods according to their needs, so varying prices for the same item is usual. Be prepared to haggle.

Kanyon (shopping mall) www.kanyon.com.tr

Located: Buyukdere Caddesi 185, Levent Open: 10am-10pm. Metro: Levent.

The latest addition to Istanbul's mall society, this is a mall with a difference. Designed by US retail architect The Jerde Partnership and Turkish architect Tabanlıoğlu, the mall is open to, yet sheltered from the elements. Its canyon-inspired design houses 170 boutique-style shops plus a new Apple flagship store, many restaurants, the plushest cinema in town, 26 storey office block and 179 apartments.

Istanbul Museum of Modern Art (Istanbul Modern Sanat Muzesi) www.istanbulmodern.org

Located: Meclis-i Mebusan Cad, Liman Isletmeleri Sahasi, Antrepo 4, Karakoy.

Open: Tues-Sun 10.00am-6.00pm (until 8.00pm on Thurs). Admission: YTL 7 (YTL 3 for groups over 20) Free on Thursdays.

Opened in 2005, the Istanbul Modern is located on the edge of the Golden Horn, on the banks of the Bosphorus in a former customs warehouse. There are stunning views across Bosphorus from the museum's restaurant.

Beyoglu

Across the Golden Horn from Sultanahmet and Eminonu is the area called **Beyoglu**, the main place to go after nightfall for evening entertainment. Either walk across the Galata Bridge or catch a tram from Sirkeci Station to Karakoy (at the north side of the bridge) where a short walk, or journey on the one-stop 19th century Tunel (an underground funicular railway) will take you to **Tunel Square** at the southern end of **Istiklal Caddesi**. This long paved boulevard, which runs between Tunel and Taksim Squares, is the backbone of the area, whose narrow off-shoots are filled with shops, cafes, bars, clubs and restaurants. It links all the Beyoglu destinations such as **Galata**, **Tunel**, **Asmalimescit**, **Galatasaray**, and **Taksim**. At Nos.475-477 Istiklal Caddesi is **Botter House**, an Art Nouveau masterpiece by Raimondo D'Aronco.

In Galata look out for the **Galata Tower** or Galata Kuleshi, which has spectacular views from its pinnacle (located in Galata Square and open daily 9.00am-8.00pm Admission YTL10), and the **Jewish Museum** or Turk Musevileri Muzesi housed in the beautifully restored Zulfaris Synagogue (located near Karakoy Meydani and open Mon-Thurs 10.00am-4.00pm and Fri 10.00am-2.00pm Admission YTL5). An interesting **fish market** can be found just over the Galata Bridge on the north side.

The **Asmalimescit** neighbourhood, is home of the city's low-rent art scene. The back streets are full of studios and galleries, as well as countless laid-back cafes, bars and cheap eateries. Close by at No.65 Mesrutiyet Caddesi is the swish new **Pera Museum**. Formerly the famous Bristol Hotel, it has been completely renovated and reopened in 2005 to serve as a museum and cultural centre (Open Tues-Sat 10.00am-7.00pm Admission: YTL7, groups of 10+ YTL5, students YTL3) www.peramuzesi.org.tr

Near **Galatasaray Square** on *Istiklal Caddesi*, look out for **Balik Pazari** (fish market) and the *meyhane* (Turkish Tavernas) districts of **Cicek Pasaji** ('Flower Passage') and **Nevizade Sokak**, the liveliest and loudest dining areas in town, favoured by the locals. The **Taksim** area north of Galatasaray Square is more modern with malls, mega-stores and multiplexes, as well as endless bars and cafes. *Istiklal Caddesi* ends in **Taksim Square** (Taksim Meydani), which derives its name from the stone reservoir built in 1732 to collect water gathered from the Belgrad Forest. The 1928 **Monument to Independence**, is located in the southwest corner of the square and the **Taksim Art Gallery** is close by on *Cumhuriyet Caddesi* no.24.

Public Transport

Public transport is cheap. Each type of transport has an individual ticket system. For **municipal buses** (red and white or green with IETT written on the front), purchase a ticket (cYTL1.30) before boarding from main bus departure centres, newsagents and kiosks. On **private buses** (pale blue and green) pay the conductor (cYTL1.30). Buses run from 6am until 10 or 11pm. The **tramway system** is clean and modern and is the fastest way to get around the city. To access the tramway, purchase a flat-fare token (cYTL1.30) from the booth (gise) near the tram stop, which operates the turnstile. Trams are frequent running every 5 minutes, between 5am and midnight. The **Metro** system is very small (5 stops). Journey tokens can be purchased on entry, and operates the turnstiles. **Taxis** are cheap and run all day and night. Licensed taxis are bright yellow, with a roof mounted 'taksi' sign. Check that the metre is running before setting-off.

Visiting Mosques

Foreign visitors should avoid visiting mosques during prayer times (5 times a day) of which noon and especially Friday noon, is the main one. Shoes should be removed before entering the mosque, although some mosques supply disposable plastic covers for shoes. Women should cover their heads and arms, and not wear mini skirts. Men should not wear shorts. Photography is usually allowed, but don't point your camera at people at prayer.

Other information

Accidents and healthcare: In event of serious injury/hospitalisation contact Paul/Amber who have insurance details.

Banks: Most banks open from 9am-noon, 1.00pm-5.00pm. Bureaux de change are readily available and have longer opening hours.

Currency: Turkish Lira (YTL) approx YTL2.450 = £1

Crime: Occasional pick pockets, but generally pretty safe. You must report any theft and get a crime report for insurance reasons. Tourist police located at Yerebatan Cad 6, Sultanahmet. Tel. 0212 527 4503

Drugs: Cheap, available and dangerous. You are very likely to be asked to carry a 'package' for a friend in London-**Don't even think about it!!!**

Electricity: 220v Plugs have 2 round pins, so pack adaptor.

Emergency telephone numbers in Turkey: Ambulance 112 Police 155

Hassle: You will get plenty if you are female, but be firm, polite and smile.

Hotel: Hotel Barin, Sehzadebasi Fevziye Cad. No.7, 34470 Istanbul, Turkey. Tel. (+09 212) 513 91 00

Fax. (+90 212) 526 44 40 Email. info@barinhotel.com www.barinhotel.com

Time: 2 hours ahead of UK time

Visa: Most people will need to purchase a visa at Istanbul on arrival. £10 sterling.

Weather: Similar to UK. Winter is the wettest season in Istanbul. Average Nov. temps. 12-16c (50-50f)

Flight information

Luton Airport on **Easyjet booking ref: 201593/F7201593**. Flight time 3 ¾ hours

Flights **out** 18th or 19th Nov depart: Luton 14.05 arrive: Istanbul 19.50 **EZY2385**

Flights **return** 22nd or 23rd Nov depart: Istanbul 20.20 arrive: Luton 22.25 **EZY2386**

Arrive at airport 2 hours before departure time.

Luggage restrictions: Hand luggage up to 10kg max dimensions 55x40x20cm

Checked-in (Hold) luggage up to 20kg

Don't forget to pack:

- Your passport or photo ID
- Photocopy of your passport or photo ID and keep separate to the original. *VH/PT Nov 2007*

Appendix 5: Hill, V. (2008). *Report on Interior Architecture fieldtrip to Istanbul, 18th - 22nd November 2007. Middlesex University.*

Report on Interior Architecture fieldtrip to Istanbul 18th-22nd Nov 2007

Introduction

In this report I will explain my contribution to the recent Interior Architecture (IA) fieldtrip, whilst reflecting on what I and the students gained from the experience, the benefits to my professional and personal development, and what I can share with my Subject Librarian (SL) colleagues.

Senior Learning Resources (LR) staff recently acknowledged that participation on student fieldtrips by LR staff is a positive thing, and should be considered, along with attendance at conferences, workshops, lectures and other courses, as valid types of personal and professional development. As such this report will also endeavour to enforce and support this recognition by senior colleagues, so that other SLs can continue to benefit from similar opportunities in the future.

Background

The IA students are offered 2 fieldtrips during their 1st year. The first trip, usually in the Autumn term, is to an overseas city of architectural note. The second shorter trip is to East Anglia, which is home to examples of work by Norman Foster, Michael Hopkins, James Stirling and Denys Lasdun; as well as historic classics such as Kings College Chapel in Cambridge. *[Photo right:*



view of the New Mosque, Istanbul.]

The city of choice for the overseas fieldtrip, must offer good examples of contemporary architecture and design, a range of architectural styles, as well as a selection of other important, classic or iconic buildings. Although the destination is selected by the fieldtrip leader, I am often involved in this process by virtue of my awareness of contemporary architecture gained through my subject work. The 2004 visit to Athens was my suggestion, because the city had recently hosted the Olympic Games. As such, the city offered the very latest works by Santiago Calatrava in the Olympic complex and the obligatory urban regeneration that occurs when hosting such an event, as well as the obvious ancient sites.

Istanbul is not an obvious choice, as it lacks good contemporary work, although there is a lot of new development in the Taksim and Levent areas of the city. However the city offers a host of important sites such as the Suleymaniye Mosque, Sultanahmet (Blue) Mosque, Basilica Cistern, Hagia Sophia and the Topkafi Palace to name but a few. Above and

beyond this, Istanbul with its location at the crossroads of Europe and Asia, offers an insight into different cultures, architecture, design and decorative styles, which would be a new experience to many of the students taking part in the fieldtrip.

Whilst the two fieldtrips are not part of the IA curriculum, the benefits to the students are such that they have become an established element. The fieldtrips enable the students to experience at first hand the work of many prominent architects and designers. It is opportunity to study, consider and evaluate structure and design,



use of materials, and detail. This opportunity is fundamental to their understanding of the subject, contributing to their own ability to conceive, formulate and realise ideas for their design projects. The fieldtrip leader believes that the volume and breadth of learning that occurs on the trips completely justifies a week away from the normal academic programme. The idea of being 'on-site' continues throughout their studies, during their 3rd year placement and also in project related site visits. Besides these obvious academic benefits, the fieldtrips also offer students an opportunity to get to know their fellow students. During Induction Week, the first years are divided into 4 smaller groups. Subsequent teaching and project work is based within these groups, so the trips enable interaction within the whole group. *[Photo above: students outside the Suleymaniye Mosque, Istanbul. Photo below: carpet in the Blue Mosque, Istanbul]*

For several years, the IA fieldtrip has been opened out to students from courses with whom IA works closely. In 2001, Product Design students from Trent Park joined us in



Barcelona, a small number of BA Graphic Design students in Athens 2004, and BA Design students have attended in 2006 (Paris) and again for the latest fieldtrip to Istanbul. This in itself enables students from different courses to mix and perhaps understand things from the point of view of different disciplines within the arts. Staff from other areas are also invited to join the fieldtrips, including course secretaries, and staff from the student and finance offices.

Again, this enables the staff and students to get to know each other, and from my perspective, enables me to liaise with administrative and academic staff from other areas of the University. [Photo below: rush hour in Istanbul.]

My role and contribution

As SL for Interior Architecture, I am always invited to accompany the 1st year students on their fieldtrips. I contribute prior to the fieldtrip by researching the local architecture, finding out other information as required, and assisting with planning the timetable of visits. I often write up this information into the final itinerary and



add additional tourist, cultural and historical information such as details of currency, use of public transport, protocol, interesting facts and figures etc. All this inevitably means that I am familiar with our destination before we arrive, and as such are able to contribute in a practical way once there.

Whilst on the trip, I help lead the group to and from, and around sites, answer questions - anything from 'Who built this?' and 'How do we get there?' to 'Where can I change money' or 'How do I phone home?' - as well as taking on the role of *loco parentis*. For many students this is their first trip away from their parents and this can manifest itself in many ways, from insecurity and nervousness to over indulgence and 'boisterous' behaviour. For the accompanying staff, care of the students can on occasion be a 24 hour



responsibility. The trips do involve long hours spent with the students and professionalism at all times. This can be tiring and frustrating, but also enormously rewarding, enjoyable and very satisfying when you observe their obvious interest and enjoyment in the places we visit. [Photo left: locals enjoying the Shisha and a glass of tea, Istanbul.]



For the fieldtrip to Istanbul I worked closely with the group leader (Paul Tomkinson: Senior Lecturer: Interior Architecture) to devise an itinerary that would make the most of our time in the city. Paul had previously visited Istanbul with a group of students in the '90s, so had an idea of places to visit. An initial brief itinerary was drawn up, and I was asked to research the opening hours and admission charges, as well as information about public transport. From this information

we were able to rearrange the visits into a workable timetable. I also researched and noted brief information about each site that we were to visit. In addition I carried out research to identify and locate contemporary buildings¹, which were also included in the schedule such as the Pera Museum, Jewish Museum, Istanbul Modern and Kanyon². A slightly unconventional task was to research the possibility of hiring a ferry for a return trip up the Bosphorus to the Black Sea, so that we could see many of the palaces and traditional Ottoman houses that line the shores of the river. I managed to locate a suitable company³ who offered this service, and subsequently a ferry and English speaking guide were hired for the day. *[Photo above: view towards the Hagia Sophia, Istanbul.]*

For the majority of my research I used the 'Eyewitness'⁴ and 'Time Out'⁵ travel guides to Istanbul. However, the internet also proved useful⁶, as did contact with the Turkish Culture and Tourism Office in central London who provided a map and guide⁷. The final itinerary is attached at the end of this report.

Professional development

Involvement with fieldtrips may be seen as beyond the role of the SL, however I consider such support of the academic programme as fundamental to the SL role. Indeed, the SL job description states the need to "maintain close contact with academic staff" and to "maintain and develop links with users...". Added to this, my job description states that I must be able to identify user requirements "to ensure that the collection anticipates and reflects user needs." Spending time with academic staff and students on fieldtrips is an ideal way of doing this, and is invaluable for finding out about their needs, interests, and work etc. It is also a means of developing a rapport with them, which continues long after the fieldtrip has ended.

¹ The following publications held in Art & Design Learning Resources proved useful:
BECK, Christa and FORSTING, Christiane *Istanbul: an architectural guide*, (London, Ellipsis, 1997) 720.949618
BEC and the May 2007 issue of *Abitare* (whole issue about Istanbul). I also used the RIBA Catalogue Online.

² RICHARDSON, Vicky 'A consuming passion,' *Blueprint*, no.246 (Sept 2006), pp.50-52.

³ <http://www.toursistanbul.com/bosphoruscruises.htm>

⁴ *Eyewitness Travel: Istanbul*, (London, Dorling Kindersley, 2007)

⁵ *Time Out Istanbul*, (London, Time Out Group Ltd, 2007)

⁶ <http://www.ido.com.tr/en/index.cfm> <http://www.gototurkey.co.uk/>
<http://www.cemberlitashamami.com.tr/html/en> <http://english.istanbul.com>
<http://www.topkapisarayi.gov.tr/>

⁷ Turkish Hotels Federation, *Istanbul*, Turkey Pocket Guides series (Istanbul, Ekin Group, 2005)

My previous contribution to student fieldtrips, and other such collaborative work with courses was recognised and noted when I was awarded a Middlesex University Learning Support Fellowship in 2005. The scheme acknowledges the value of liaison, and encourages activities and involvement that help gain the trust and respect of students. Similarly, the Higher Education Academy (HEA) of which I am a Fellow, recognises the diversity of ways that the learning support professional can accomplish their role and enhance their practice. Indeed SL's support of courses can take many forms and any opportunity to liaise formally or informally can be advantageous to our work. Besides the usual academic business such as QAAs, Boards of Studies (BOS), course validations and reviews; and the annual cycle of user education; SLs can also enhance their role through other activities. This could include direct involvement in the curriculum through work with student projects; assisting academic research; production of newsletters, Blogs, subject webpages; curation of exhibitions; or involvement in any event where our role, resources and services can be promoted such as open days, student events, visits, road shows etc.

Benefits

In this report I have made reference to the benefits of fieldtrips to students, and to myself both personally and professionally. In addition, Art & Design Learning Resources (ADLR) and the LR service, can also benefit from this sort of collaboration between SLs and their



subject areas. The contribution that I have made to the IA fieldtrips is much appreciated and recognised by the course. My participation with the Istanbul fieldtrip was noted at the recent Interior Architecture and Design BOS in late Nov 2007, where I was thanked for my involvement. The chair of the BOS also acknowledged my input as a good example of collaboration between the library and the course.

The ability to work confidently with academic colleagues and students, and to be seen as competent, reliable and responsible, is a definite boost to our professionalism and positively contributes to their perception of SLs. *[Photo above: view up the Bosphorus towards Anadolu Kavagi and the Black Sea. Europe is on the left and Asia on the right.]*

It stands to reason that direct involvement by SLs with their courses, raises the profile of the service locally and across the University. Any successful collaboration encourages recognition of the essential and invaluable role that LR can play in the academic programme. This also directly informs the work of the SL and their ability to support their programmes in the best possible way. In a time of upheaval and change, it is essential that the Library, ADLR and the LR service as whole, are seen to be pro-active, responsive, flexible, and able to meet the varying demands that constitute subject support.

My previous research for IA fieldtrips has also been utilised by other courses. For example I recently passed my itineraries for Paris 2006 and Berlin 2002, to History of Art and Design, and Applied Arts staff respectively as they planned their fieldtrips. Graphics are also visiting Berlin in Feb 2008, so I have been able to pass on some suggestions and information to Marion Syrratt-Barnes (SL for Communication Arts) who will be accompanying them.

Istanbul

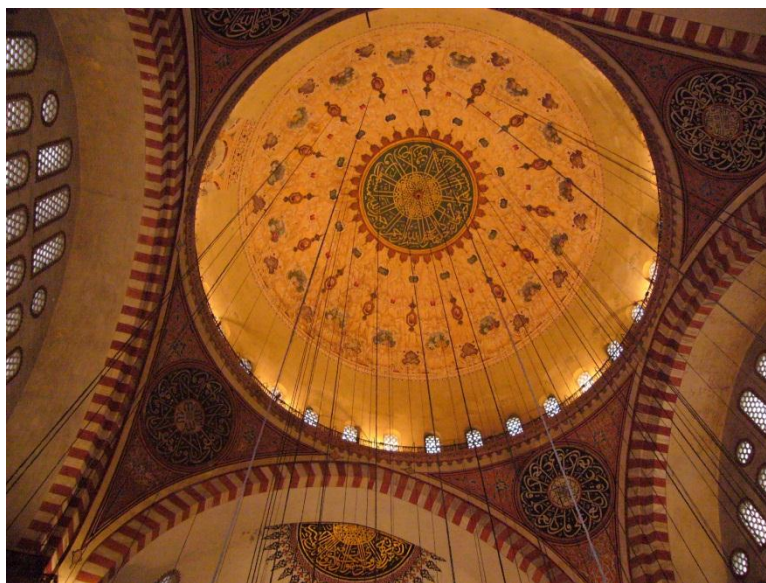
The fieldtrip to Istanbul was on the whole a great success. Verbal feedback was positive, and the students appeared to enjoy the various visits. See attached itinerary.

[Picture right: flag seller outside the New Mosque, Istanbul.]



Whilst in Istanbul we visited 3 Mosques plus the Hagia Sophia, which has been

deconsecrated and now functions as a national museum. The scale, beauty and proportions of these buildings was breath-taking and worth the small effort of removing footwear and covering heads. Whilst some of the students had visited Mosques before, for most of us



this was a new experience. As stated earlier, Istanbul offered little in the way of good contemporary architecture, however the perfection in terms of proportion and scale of buildings such as the Sultanahmet (Blue) Mosque certainly compensated for this. *[Photo left: interior of the Suleymaniye Mosque.]* A brief visit to the Sirkeci Station was possibly less successful. Whilst most of the students could appreciate the tarnished grandeur of the

old part of the station, and the benefit of observing how this terminus of the Orient Express had been ‘modernised’ and a new extension linked to the old, others were less interested. On hearing a fellow student moaning about visiting the station, another student responded by stating that they might have understood why, if they had bothered listening. To be fair, we were a large group and due to a morning of heavy rain, were a little bedraggled (it brightened up shortly after).



As with the Sirkeci Station, the majority of students enjoyed the Bosphorus boat trip. However, some found the trip too long and suggested that an evening cruise would have been preferable. I have to agree, that the city would have looked stunning from the water at sunset. Whilst, I enjoyed the boat trip, I do think that a shorter trip would have been better and this would have allowed more of the city to be explored. There was in reality, little time left to visit some of the additional suggestions on the

itinerary, although some did manage to venture forth. *[Photo above: old part of the Sirkeci Station, Istanbul.]*

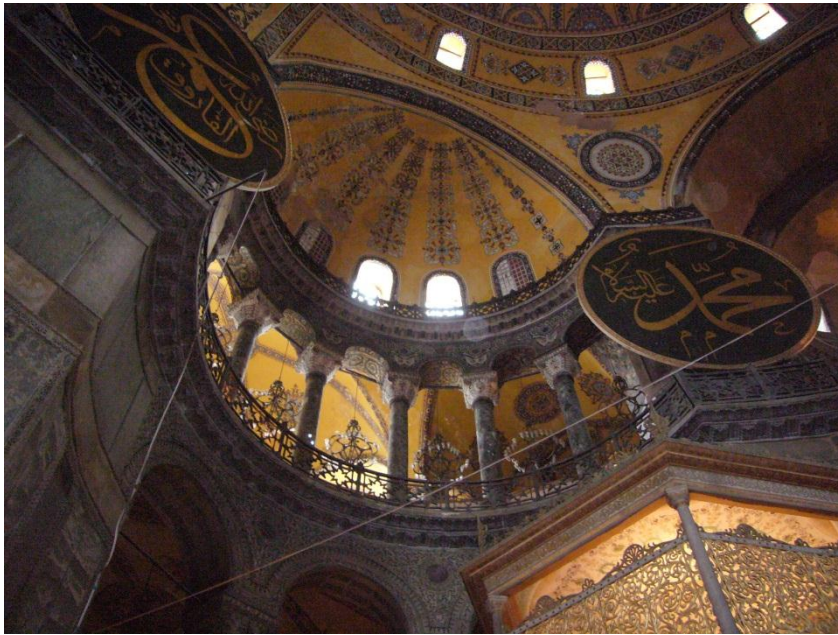
The final day of visits were thoroughly enjoyed by all. The splendour of the Topkapi Palace, and especially the beauty and grandeur of the Harem were not wasted on our group. The glorious weather added to the visit, with the location of the palace providing stunning views across the junction of the Golden Horn, Bosphorus and the Sea of Marmara. *[Picture below: inside the Spice Market, Istanbul.]*



Some of the students are quite happy to make their own way around the city, during their free time. Others however lack the confidence to go out and try new food, use public transport, or make themselves understood in local restaurants and shops. Our hotel⁸ in Istanbul had a lobby/bar area, which was useful as a meeting place for our group and enabled the staff to spend time with the students discussing what we had seen that day, hear their views and opinions

and answer any questions. On some previous trips, we have arranged an evening meal for the whole group at a local restaurant on the last night, however as the Istanbul group was so large (61) this would have been difficult and it was a shame that this was not possible. *[Photo below: interior of Hagia Sophia, Istanbul.]*

⁸ <http://www.barinhotel.com/index.php>



Conclusion

I have attempted to demonstrate the benefits of SL participation in student fieldtrips, as well as similar activities. Fieldtrips benefit all involved in different ways and on many levels. For the SL they are a great opportunity for personal and professional development. For the student, they enrich the learning experience and contribute towards a

greater understanding of their area of study. The perception that academic staff and students have of LR is greatly enhanced and contributes to the notion that the LR service continues to be fundamental to the academic environment and the student experience.

All photos are my own. Three (from the many that I took) have been entered into the 'fieldtrip competition', in which each entrant is asked to submit 3 photos on a common theme, which sum up Istanbul for them. Along with the Shisha smokers on page 3 and the Suleymaniye Mosque photo on page 2, I also submitted this local cat photographed in Anadolu Kavagi.



*Vanessa Hill
Jan 2008*

Appendix 6: Hill, V. (2008). *Review of exhibitions held in Art & Design Learning Resources, September–December 2007*

Art & Design Learning Resources
Cat Hill

Review of exhibitions held in Art & Design Learning Resources Sept-Dec 2007

Overview

The new academic year got off to a good start with two exhibitions ('Autumn' and 'Product information in Art & Design Learning Resources') aimed at promoting our resources and collections. Art & Design Learning Resources (ADLR) hosted an important exhibition during

October and November to celebrate the 125th anniversary of the founding of Hornsey College of Art, from which the current day art and design courses at Cat Hill (CH) are descended. A number of smaller exhibitions followed including work by students, and further displays to promote our Special Collections and varied resources. [Image above from 'Autumn' exhibition, image below from 'Product information in ADLR' exhibition]



In September ADLR purchased 4 new display cabinets to enhance the display facilities available. With the help of Christopher Passon (Senior Computing Adviser), these were constructed and located within the learning resource centre. Two of these new cabinets have been positioned in the Reprographics Area to replace two older cabinets, which were relocated close to the Quiet Study Room (near Computer labs 2&3



Two of these new cabinets have been positioned in the Reprographics Area to replace two older cabinets, which were relocated close to the Quiet Study Room (near Computer labs 2&3

and the toilets!). In celebration of this glamorous location, Marion Syrratt-Barnes (Senior Subject Librarian) curated a small exhibition entitled 'At your convenience'. The remaining new cabinets were also located in the Reprographics Area, specifically to promote video and DVD purchases. However Vanessa Hill (Senior Subject Librarian) and Susan Nolan (Subject Librarian) have both utilised them to promote audio visual resources including examples of contemporary artists who are now using CDs and DVDs to illustrate their practice, DVDs and videos about artists, and a selection of sound recordings from our short loan CD collection.
[Image below from 'Autumn' exhibition]

Additional clear acrylic bookstands have been purchased to further improve the display of material in the cabinets. Unfortunately, the cabinet lighting installed earlier in 2007 is currently not in use due to safety issues with the wiring. A number of the older cabinets located in the entrance corridor are showing signs of age,



and ideally should be replaced. Vanessa Hill has also contacted one of the studio technicians regarding the need for replacement locking devices for the cabinets. It is hoped that new 'locks' can be made, as at present in order to ensure the security of items on display, the cabinets need to be turned around making the installation of items quite difficult, and adding to the wear and tear of the cabinets themselves.

[Image left from 'Product information in ADLR' exhibition].



The Spring term promises to have another interesting programme of exhibitions. Current exhibitions include the return of the fascinating and ever popular display of book arts from Hereford College of Arts, as well as two smaller exhibitions based on student projects

from 'Textiles: applied print', and 'Fashion design, styling and promotion'. Exhibitions to come this term, include a return of the 'Sketchbooks' exhibition by Marion Syratt-Barnes, new items from the Product Information Collection by Vanessa Hill, work by 3rd year BA Design student Oluwadamilaju Osinaike, a display of doilies by Textiles lecturer Ted Houghton and knitted cakes by students studying 'Textiles: weave, mixed media and knit'.

Vanessa Hill continues to coordinate the use of the display cabinets, as well as promoting the exhibitions and gathering feedback for those held in the main display area. Further information about the exhibitions held during Sept-Dec 2007 is listed below:

Feedback

Autumn: an exhibition of books and items from the collections of Art & Design Learning Resources

Curated by Vanessa Hill and Marion Syratt-Barnes

5th-28th September

An exhibition of items loosely based around the theme of Autumn, whether by subject or colour, to celebrate the new term and illustrate the broad range of collections held in ADLR. The exhibition included books from the main collection such as poetry, literature and artists'



work; images from the Illustrations Collection; feature films on DVD; and items from the Product Information, Fashion, Special Books and Ephemera collections. Feedback suggests that the display was well received and people had responded positively to the theme and choice of materials.

For several years, Vanessa and Marion have used the first exhibition of the academic year to promote our varied resources and collections to new and returning students and staff. *[Image above from 'Autumn' exhibition]*

Feedback:

"A wonderful display of the varied and rich examples from the collection arranged on a theme based on a simple idea. Excellent! Keep up the good work. Your displays just get better and better."

"What an innovative and attractive way of showing the range of LR collections! Love the colours and themes- brilliant!"

"Yet another great display, well done, may it last forever at Cat Hill."

*"These displays are always fascinating and beautifully presented. Thankyou.
(Maggie Butt: Head of Media Department)*

Product information in Art & Design Learning Resources

Curated by Vanessa Hill

11th Sept-2nd Nov

This exhibition was located in two areas, utilising the cabinets situated near the Multimedia helpdesk in the Reprographics Area and the two located near Labs 2&3. All the items in the exhibition were from the Product Information Collection (PIC) and the main book library in ADLR. The exhibition aimed to promote the PIC and relate items from that collection with books about products and materials that are held in the Book Library. The exhibition also aimed to show how our different collections can offer information, inspiration and support to visual and practical students and staff. The exhibition changed every week to show the range of material available.



Informal feedback was positive, and the exhibition did generate interest in the collection and related book stock. [Image above from 'Product information in ADLR exhibition']

The Spirit of Hornsey College of Art 1882-2007

Curated by Judy Vaknin (University Archivist)

1st Oct-16th Nov

This exhibition looked at the origin and development of the College from its first home built in Crouch End in 1882, through its growth and spread across North London, to a final relocation to the Cat Hill site in 1970.

It explored the changes in art education over the



last century and a quarter, as well as the historical context of events and changes at the College. The material used in the exhibition came from the Hornsey College of Art (HCA) Archive held on the Cat Hill campus, which contains material relating to the history of the college. The items on display in ADLR, were

accompanied by a series of information panels located in the foyer at Cat Hill. The exhibition commenced with an 'opening' in early September, attended by several ex students, current staff and members of the Swinstead family who founded the College in 1882. Speakers at the opening included Richard Tufnell the then Dean of Arts and Education, and a short film by BA Design students on the founding of the College was screened. [Image above from the 'Spirit of Hornsey' exhibition and image right: one of the panels from 'Spirit of Hornsey' exhibition]



The Summer term 2008 will see a second exhibition about HCA to commemorate the 40th anniversary of the 1968 sit-in. This will be held in the context of a series of events all over London

relating to the protests of 1968. Related to the exhibition, Judy is also working on an oral histories project in conjunction with the British Library Sound Archive to record the memories of ex staff and students who worked and studied at Hornsey during the 1960s.

Feedback:

*"It was all worthwhile Judy. Great display. Good Luck for the 'Grand Opening'...."
"Excellent display! I am certainly better informed about HCA now-the exhibits bring history to life. Thank you."*

"Great selection"

"Fascinating exhibition and beautifully presented-I love the choice of illustrations and photographs."

"Very interesting: Rosalie Laymont Cornwall: Great Granddaughter [of Charles Swinstead], John Hayworth: Great Grandson of Charles Swinstead [and] Liz Slater: Great Great Granddaughter of Charles Swinstead"

"...nice to commemorate the college."

At your Convenience

Curated by Marion Syratt-Barnes

5th-23rd Nov

This small exhibition was well placed (outside the toilets) to celebrate the 'convenience' in its varied forms, from chamber pot to luxury bathroom. The materials on show were from the main book collection as well as a number of the Special Collections held by ADLR. The theme of the exhibition caused much amusement, whilst serving to illustrate the breadth of our collections.

Typography and imagery: Visual Poetry

Curated by Rhed Fawell (Graphics lecturer and module leader) and Marion Syratt-Barnes

5th Nov-14th Dec

This was another in a series of working exhibitions, starting with books from the module reading list being displayed in the library by Marion Syratt-Barnes for direct inspiration. Groups of students were then introduced to the project by Rhed Fawell, with reference to the selected books. The students were encouraged to refer to, photocopy and develop ideas from the material during the module. Two or three weeks into the project, previous students' work on a similar theme, was

placed in the display cabinets alongside the books. This sets a creative pace to encourage and draw out ideas and techniques from the students, who can often be motivated by work produced by their peers. This working exhibition is a good example of how the use of the display facilities in ADLR, and the work of Subject Librarians can directly support student work and specific projects, as well as promoting our resources. It also demonstrates the value of displaying student work for inspirational purposes, as well as enabling staff and students from other areas to appreciate what other courses do. The project brief is below:

“You have been commissioned to produce a piece of promotional design for the organization ‘The Poetry Society’, the subject is ‘Fait accompli’ (something that has happened and cannot be changed). The aim of the design is to encourage the appreciation of contemporary and 20th century poetry. The client has requested that the final design must communicate the language of a poem through both typography and imagery.” [Module: VCD1400 Visual Communication Workshop 1, level 1]

Pre-sale exhibition of work by final year BA Jewellery students

Curated by final year BA Jewellery students

16th-30th Nov

The exhibition showed a diverse collection of original and cleverly designed pieces by the Jewellery students, which were available for purchase in the Foyer at Cat Hill 3rd-7th Dec.

Feedback:

“Well done- Caroline [Broadhead] and Ros [Conway]”

“An inspired and imaginative array as ever”

Artists’ Books

Curated by Marion Syrratt-Barnes

5th-21st Dec

This display showed examples from ADLR’s collection of artists’ books, which form part of the Special Books Collection, housed in the Collections Room. The exhibition particularly highlighted some of the recent purchases of artists’ books, which continue to be popular with students from all of the studio courses. The display inspired some students to visit the Collections Room to see more of the artists’ books that we hold.

Jewellery: a wider context (contemporary pieces to wear)

Curated by Julia Manheim (Lecturer) and 2nd year BA Jewellery students.
12th-21st Dec

This was a small display showing a selection of student project work. Such activities enable students to gain experience of staging exhibitions, be it on a small scale, and also allows fellow students to have an insight into the work of other disciplines.

Feedback:

"Always good to see student work. Some really interesting examples."



[Image above of 'Autumn' exhibition]

Vanessa Hill 31st Jan 2008

Appendix 7: Hill, V. and King, S. (2011). Report on *Teaching Information Literacy in HE: What? Where? How?* Workshop led by Sharon Markless at CILIP, 9th December 2010

Teaching Information Literacy in HE: What? Where? How?

Sharon Markless (King's College London)

CILIP 9th Dec 2010

According to the course documentation "Information Literacy work is growing exponentially across higher education. Librarians are working to engage as many students as possible, producing materials/tutorials for the digital environment as well as devising face-to-face activities." During the day we considered what is likely to make 'teaching' more interesting and effective and what different approaches are possible? Much material was covered during the workshop, so our highlights are listed below:

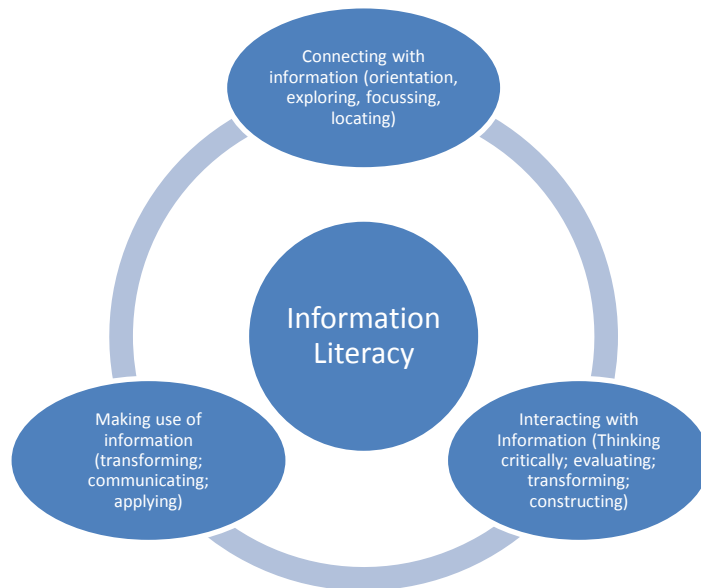
1. Information literacy (IL) is knowing what information is needed, how and where to find it, how to extract, evaluate, and organise it, and how to use it ethically. From an academic point of view, it is a skill for life, empowering students and increasing employability.
2. The disciplinary context is a key influence on student learning. Learning needs to be linked with the specific subject, as different subjects require different ways of learning. One method does not fit all.
3. The new digital environment has had a major impact on learning. The environment is less structured, work and play can be integrated on screen, students can be more creative and spontaneous, and have new patterns of communication.
4. In a digital age, students need to be able to harness, challenge and critique information, enabling them to make meaningful connections with the information found, and able to create something new out of it. This is the challenge for librarians. Ross Todd (Head of Library and Information Science at Rutgers University, NJ, USA) believes that Librarians contribute to plagiarism because we help students find information, rather than helping students use it.

5. What we know about learning:
 - a. The 'need' to learn is crucial to the process of learning. People learn when they are ready to learn.
 - b. In order to engage students, we should learn/discover together. Joint exploration and dialogue can lead to real discovery ie. Using open questions and problems, rather than planning the answer/outcome in advance. This teaching style can be unnerving for some librarians who may prefer more prescribed sessions, however we should not be afraid of not knowing the answer.
 - c. As librarians we can hinder learning by oversimplification of our expertise into a chain i.e. First you do this, then this, then this etc. This can be learnt and reproduced by students, but is not flexible ie. cannot be transferred to a different situation and students do not know what to do with the information found.

6. We tend to provide students with a 'shopping list' of skills we think they need, focusing on the technical procedures or tools to find information. Basic skills such as 'how to search the library catalogue' should be at a second level, preceded by something more powerful and engaging. Professor Carol Kuhlthau (i3 Conference, 2007) believes ".....we need to focus on tools for the construction of meaning and understanding and for interpreting information; on using information for problem-solving, not on the technology of finding; access is no longer the main issue." When planning sessions we need to consider what will make the biggest difference to students given limited time. A hierarchical environment should give way to increased collaboration and interaction. Ross Todd (i3 Conference, 2009) believes "Our aim is to make the student a producer of knowledge, not just a re-producer and consumer of knowledge; a person who can build new knowledge, new understanding."

7. According to Daniel Churchill (Information literacy with Web 2.0, June 2009), students need help with managing, consuming and designing information. For the Librarian, there are challenges connected with the new information behaviour associated with Web 2.0. Students are willing to accept 'good enough' information, find it by trial and error rather than by using manuals, spend little time evaluating and fine tuning, and view rather than read.

8. Framework for IL:



9. In an ideal world librarians should 'intervene' in student learning when they have a need i.e. At the point it will make a difference. Inductions are too soon for IL and should be used as an introduction/welcome and an opportunity to make the library interesting and relevant to students. The Library can be made to stand out in the student induction programme by asking students what they want, how can we best help them, and what are their expectations i.e. encourage a dialogue and listen. We should not waste this opportunity by concentrating on structures, rules and regulations or procedures, which can be made available through other means e.g. VLE.

This model would seem appropriate for art and design students in particular, given their preference for the visual and creative e.g. Scavenger hunt: give students a blank map and ask them to find out what would be useful to them in the library/collections and discuss. Alternatively library staff could display a range of resources from the collections such as product information, ephemera, variety of books and journals etc and facilitate a discussion around the objects and their use.

10. When are interventions most effective?

- a. When needed so that intervention has real consequences (timely) i.e. When have essay/project to complete
- b. During initial exploration of a topic/project (building background knowledge)
- c. At point where students need to break down question into search terms/questions that need to be asked (could use group discussion)

- d. When students are evaluating and using information to solve problems (transforming information)

11. Different ways that students search. All are appropriate depending on circumstances and task:

- a. looking for a needle in a haystack (Google approach)
- b. finding way through a maze
- c. using tools as filter
- d. panning for gold (browsing, cherry picking, monitoring etc)

IL needs to be adaptable, as different circumstances (discipline, purpose, task etc.) require different approaches. Could use problem solving or case studies encouraging students to choose appropriate methods and try out different strategies for finding information, then reflecting on the differences eg. Quantity and quality of results, when was a search method more successful etc.

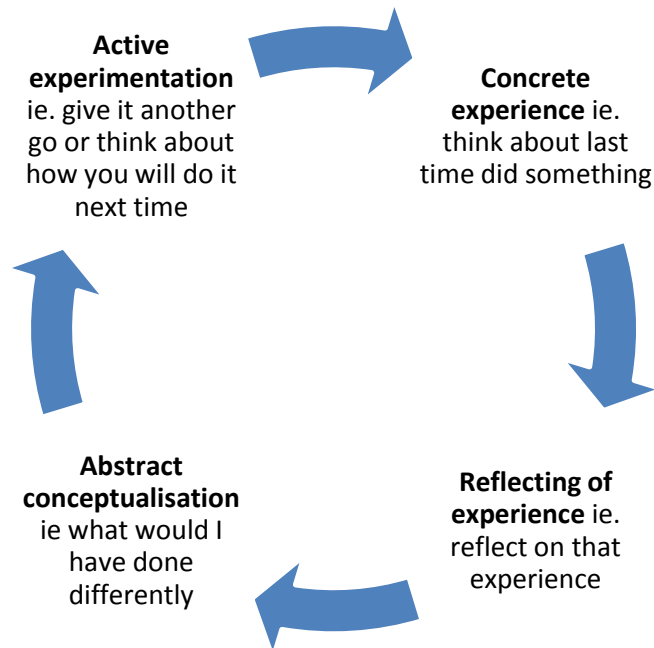
12. It is better to demonstrate resources after students have had a 'go' themselves, so that they can identify their own needs and questions about the resources. Students know how to use technology, so we should not insist on taking them back to basics. Teachers should not intervene in group work, being prepared to let students have a go themselves. However it is important not to let students get frustrated. Demonstration can be a powerful tool used appropriately e.g. Important for students to recognise the process of finding information e.g. drop-in, open sessions where students ask questions regarding their research. Students can then witness the cognitive process as the Librarian works through the process including frustrations, dead-ends, successes etc.

13. Workshop structure principles:

- a. Learning outcomes should reflect what it is possible for students to learn during the session and not what we want to teach them. Statistics show that we attempt to cover 3-5 times more than what students can learn during a workshop, therefore we should be less ambitious and only include material that requires face-to-face interaction, and not that which can be put in a handout or on website
- b. Begin from where your learners are i.e. Establish prior knowledge, expectations, need etc (open or group discussion)
- c. What they learn depends on what they already know, so need to identify the gaps
- d. Discuss how students currently find/use information and focus on how this can become more effective rather than telling them they are doing things wrong
- e. Need to encourage active participation through a variety of activities e.g. Trying things out, thinking/getting feedback, solving problems, peer discussion, speculating, comparing, arguing, formulating questions, reflecting on mistakes, trying again etc

- f. Uninvolved students are less likely to learn
- g. During session, we can learn a lot from student's understanding from the questions they ask
- h. Base lesson plan on what student will be doing and NOT on what we will be doing.

14. Experiential Learning Cycle (workshops should incorporate all these elements):



15. Myth of teaching as transmission: We should not try to clone our own expertise in workshops. Expertise gained over many years cannot be distilled into a one hour session and does not allow students to develop their own skills. In effective sessions the student is the 'learner' rather than the 'taught' i.e. What they do is more important than what we do. Our role in teaching is one of support and facilitation. We need to encourage students to transfer their skills (such as search strategies) and show them how to adapt these skills to specific assignments i.e. deciding which information skill is required for different circumstances. Sessions that encourage self-monitoring and self-regulation will help develop cognitive engagement and help transfer e.g. Use exercises/ questions such as 'When is it best to do a or b?'

16. Digital environment (VLE): Useful place to locate library information and resource, link to LR should be embedded into the area where students seek information on coursework assignments (i.e. OASIS). However VLE should not become an information dump, but as a home for interactive learning materials. These materials should offer alternative routes to information/resources depending on the starting point of the student e.g. Student quiz with outcome summary guiding students to the next stage. Technology is better used for learning rather than teaching.

In conclusion we found the workshop both stimulating and challenging and it has prompted us to review our user education sessions. Our top five points were:-

- We teach 3-5 times too much
- Discussion is powerful
- We should not try to clone our own expertise
- Learning by doing is empowering
- Students should be learners and not the taught

Perhaps we all need to reconsider what we are trying to teach and where and when we teach it.

Sherene King and Vanessa Hill Jan 2011

Information literacy options for S&T students

All students have the opportunity to attend a 20 minute presentation about Library and IT support during Induction Week, providing an overview of resources, services and facilities.

1st Year UG and Foundation: Better than Google

- *Each 30 minute session is based on an activity or game, so students learn by doing. Feedback and discussion is encouraged*
- *Each session builds on the previous session*
- *Sessions can be run independently or as part of a longer workshop*
- *The Library collaborates and liaises with the Learner Development Unit (LDU) to coordinate academic and information skills training*
- *LDU takes responsibility for covering referencing/citation and avoiding plagiarism as well as academic writing, numeracy, group working and presentation skills*

1. Thinking about resources (30 mins)

- Look at the differences between various resources eg. pros and cons of books, websites, journals, trade (popular) journals, newspapers and items from special collections (PDE).
- Importance of using a variety of resources for different academic purposes
- Introduction to Library Subject Guide for CS or PDE
- Group work, card game, feedback and discussion

2. Search strategy (Thinking about keywords) (30 mins)

- Develop ability to identify keywords and understand the importance of defining the scope of their subject using non-subject specific example
- Application of these skills to a real project or essay title
- Enable students to search resources effectively
- Group work, feedback and discussion

3. Searching resources (30 mins)

- What's good and bad with Google?
- Introduction to Library and IT website including Summon
- Use of appropriate keywords
- Hands on exploration of Summon to find material for current project

- Refining search e.g. limiting by type of material, year, subject using database tools, plus search tips such as Boolean Operators and truncation etc
- Group work, peer learning and support

4. Evaluation (30 mins)

- Importance of evaluating information
- Discussion on what students need to consider when using information from the internet and other sources
- Practical group exercise (CS) evaluating information from various sources relevant to subject area eg. Wikipedia, academic journal, trade journal, and newspaper
- Practical group exercise (PDE) evaluating information from various sources incl. Spoof video, URLs and spoof websites
- Understand relevance, currency, authority, objectivity and intent
- Discussion and feedback

2nd Year UG: Information skills for project (120 mins)

- *1st year session(s) is a pre-requisite*
- *Direct entrants will receive adapted 1st year session as part of the School induction programme*
- *Session needs to be linked to a project*

1. Establishing prior learning

- Group exercise to establish skills level and understanding plus opportunity to discuss successes, problems, question, needs etc through questions:
 - Who attended library workshop last year?
 - One thing about the library that you would tell a 1st year
 - One thing that irritates you about the library
 - One [library] thing you would like to know more about

2. Thinking about keywords

- Continue to develop ability to identify keywords and understand the importance of defining the scope of their subject
- Application of these skills to a real project or essay title through group work and knowledge sharing
- Enable students to search resources effectively

3. Searching resources

- Use Summon to search for a quality item relevant to current project
- Use of appropriate keywords

- Refining search eg. limiting by type of material, year, subject using database tools, plus search tips such as Boolean Operators and truncation etc
- Group work/presentation, peer learning and support

4. Evaluating information

- Groups feedback on why the items have been chosen
- List of evaluation criteria recorded and discussed

3rd Year UG: Information skills for research (120 mins)

- *1st and 2nd year workshops are a prerequisite*
- *Direct entrants will get adapted 1st and 2nd year sessions as part of induction programme*
- *Need to see students when they are developing their project outline*

1. Establishing need

- Group exercise to establish prior learning.
- Groups discuss and feedback to class on the resources suitable for the linked coursework.

2. Searching Databases

- Keyword exercise (general discussion or brainstorming individual projects)
- Introduction to databases
- Hand's on exploration of these resources
- Discussion

3. Evaluating information

- Group activity (using card game) to consider different evaluation criteria for information
- Feedback and discussion

4. Finding information from other sources

- Using other libraries and library catalogues
- Inter Library Loans

5. Preparing for the future

- Using library resources to find out about companies and organisations in preparation for job interviews
- Overview of MDX resources available to students once graduated using 'Life after Uni' page on LibGuide

Postgraduates: Finding research evidence (120 mins)

1. Information skills

- Looking at different resources and when best to use them in academic work (Group exercise with card game) plus introduction to Library Subject Guides
- Search strategy: thinking about keywords using group exercise and knowledge sharing based on non subject-specific example and own project
- Evaluating information: group exercise to establish own evaluation criteria. Feedback and discussion.

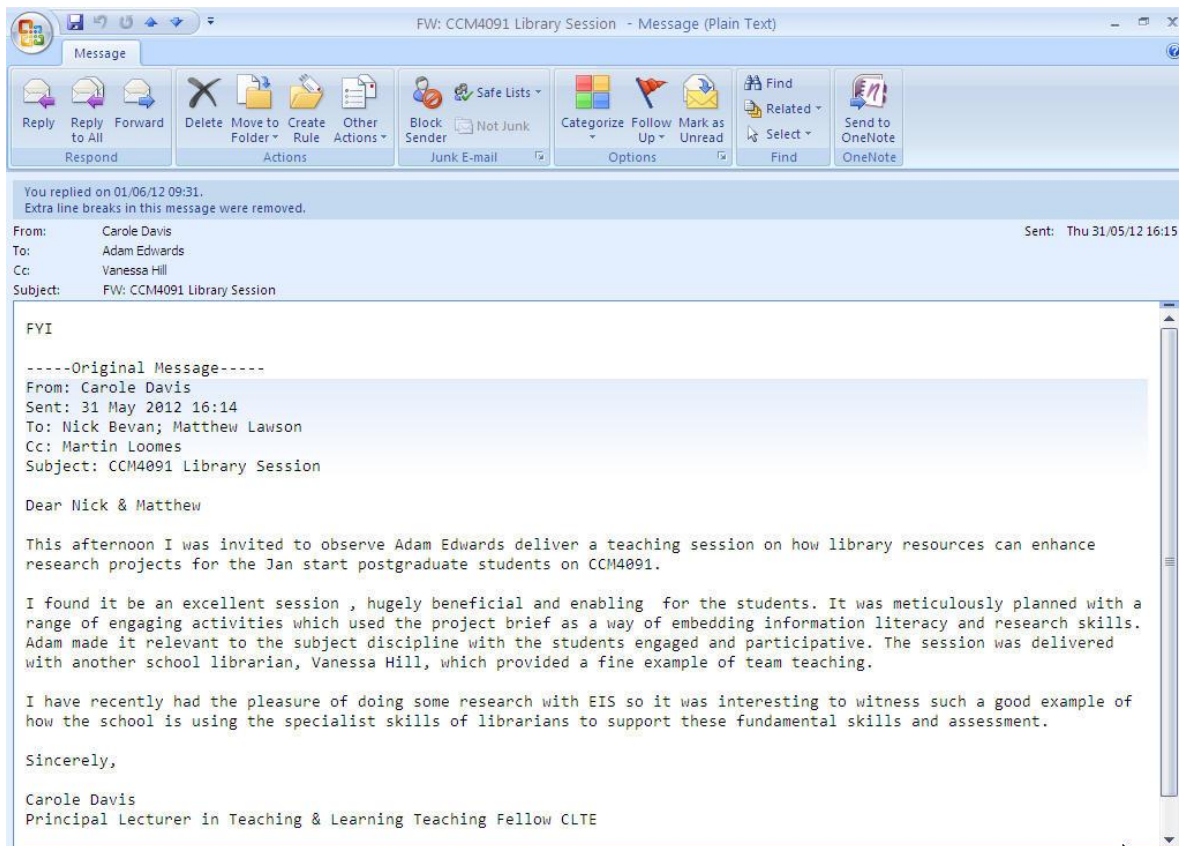
2. Searching resources

- Introduction to journal databases, Summon, citation searching etc
- Hands on exploration of resources
- Feedback and discussion on why journal databases should be used

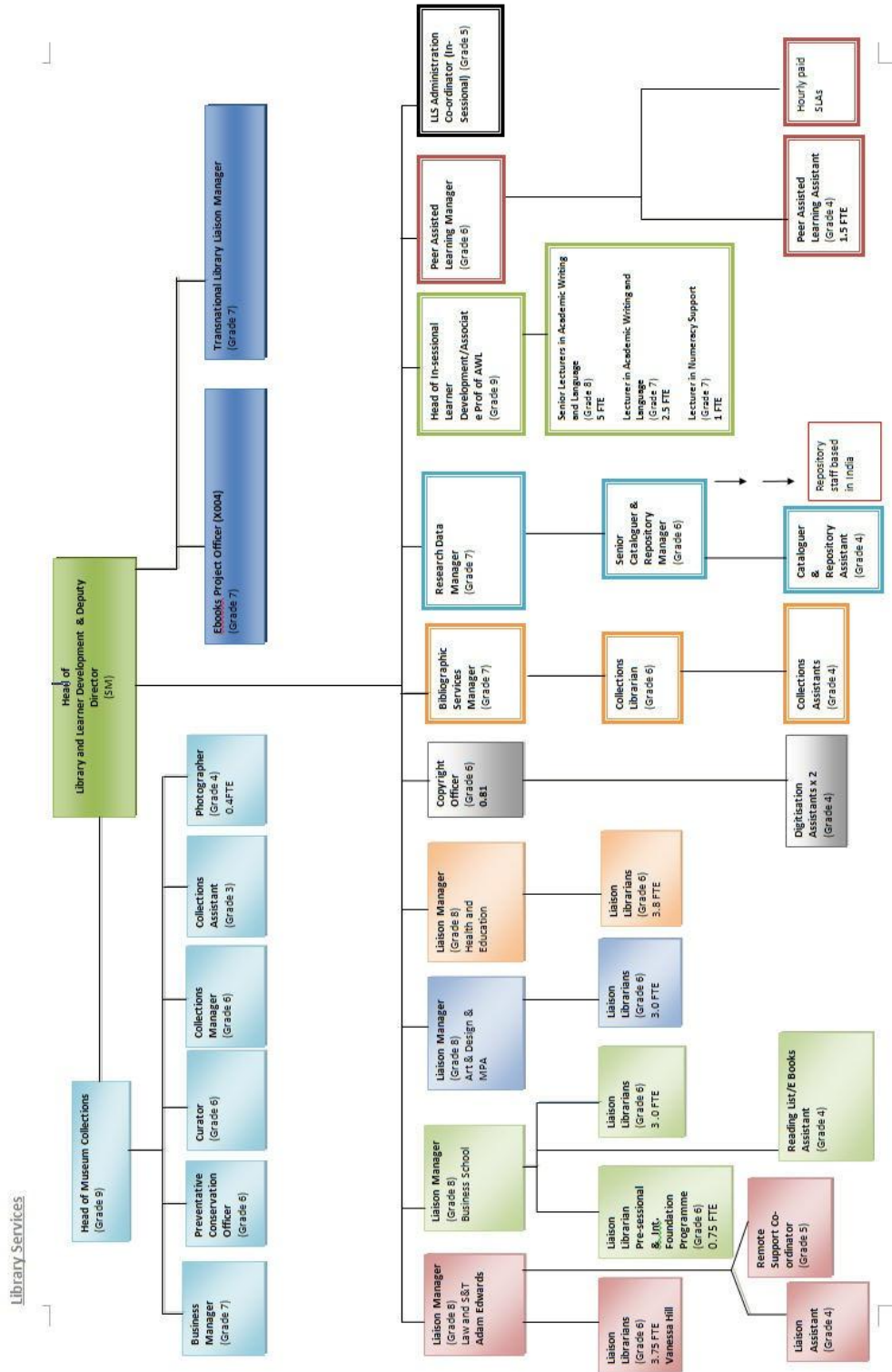
3. Finding information from other sources/keeping current

- Using other libraries and library catalogues
- Inter Library Loans
- RSS feeds, subscription services etc

Appendix 9: Davis, C. (2012) *Email to Nick Bevan and Matthew Lawson, 31st May 2012*



Appendix 10: Library and Learner Development management structure, Middlesex University, August 2012.



December 2014

Appendix 11: Information literacy standards, frameworks and curricula review

Information Literacy Competency Standards for Higher Education: USA

This is the original set of standards created for USA higher education in the late 1990s and published by the ACRL (2000). It builds on information literacy standards created for schools in the USA. There are five standards and twenty two performance indicators covering the need for information, access to information, evaluation, effective use and ethical use. Each performance indicator has a list of generic desired outcomes, eighty seven in total, against which student performance should be assessed. The problem with this approach is evident:

- The indicators and outcomes are very prescriptive and much of the language is riddled with library jargon. For example outcomes for Standard 2, *The information literate student accesses needed information effectively and efficiently*, include “Develops a research plan appropriate to the investigative method” and “Selects controlled vocabulary specific to the discipline or information retrieval source.” For non-librarians this use of professional and precise vocabulary must be unintelligible.
- The focus on specific formats and searching techniques from the 1990s means it is dated, and the standards are therefore not future proof.
- The standards are generally too demanding for the non-library professional to achieve. Would anyone except the most dedicated academic seriously consider learning a new foreign language to meet an information need?
- The standards claim they “provide students with a framework for gaining control over how they interact with information in their environment” yet with no indication of appropriate achievement or level, the standards fail to give a student any means of assessing how well they meet any given standard. Control appears to remain firmly with those who have set the standards.

- The standards relate specifically to the higher education context with no suggestion of how they link from a school environment, despite being a development of earlier information literacy standards designed for schools. Neither do the standards acknowledge that information literacy is a life skill and especially the need to transfer information skills into the world of work.

Many of these problems are acknowledged in the new draft framework discussed below.

Information Literacy Standards: Australia

The standards set out by the Council of Australian University Libraries (2001) are based on the ACRL standards with additional standards on storing and manipulating information (Standard 4) and the need for information literacy as part of lifelong learning (Standard 7). Some language has been simplified but they are still complex and prescriptive. For example Standard 7 expects the information literate person to be able to determine “whether new information has implications for democratic institutions and the individual’s value system and takes steps to reconcile differences.” However, although expressed in complex language, this recognition that information literacy goes beyond formal education is a positive addition to the ACRL standards.

Australian and New Zealand Information Literacy (ANZIL) Framework

These standards are national standards for further and higher education in both Australia and New Zealand (Bundy, 2004) and are again derived from the ACRL standards. In their second edition, these standards show that much work has gone into the simplification of the language and terminology used and the layout of the text is much clearer. For example, the original ACRL Standard 1 includes this outcome:

“Confers with instructors and participates in class discussions, peer workgroups, and electronic discussions to identify a research topic, or other information need.”

ANZIL refines this to:

“May confer with others to identify a research topic or other information need.”

The standards are also less prescriptive. For example the ACRL standard refers to “types and formats” of information sources where as ANZIL and indeed those of the Council of Australian University Libraries (CAUL) refer simply to “information sources”. The focus is on the skill required, not the format of the information.

One surprise is that the explicit standard for lifelong learning seen in the CAUL standards is merged into the previous standard, so is therefore far less visible. This appears a retrograde step.

SCONUL Seven Pillars of Information Literacy: UK

This is an updated and expanded model, the original Seven Pillars model dating from 1999 (SCONUL, 1999). The 2011 version delivers a more comprehensive version of information literacy which takes into account a wider range of literacies:

“Information literacy is an umbrella term which encompasses concepts such as digital, visual, and media literacies, academic literacy, information handling, information skills, data curation and data management” (SCONUL, 2011).

The model states that information literacy is “a key attribute for everyone, irrespective of age or experience”. Gone is the linear approach to information literacy, instead they acknowledge that people will be at different levels on the pillars depending on the particular information landscape in which they operate and on which the pillars stand. Thus the individual is now brought to the fore, it is recognised that they will carry out processes and activities simultaneously and that development of their skills will be continuous.

The Seven Pillars are: Identify, scope, plan, gather, evaluate, manage and present. This is the core model which has been adapted through the use of “lenses” to meet the needs of different groups of learners, for example researchers.

The language is much simpler and clearer than the ACRL standards, it does not prescribe how standards should be met, sees information literacy as skills for life and is focused on what the individual understands and is able to do as a result of that understanding. The Seven Pillars are about human beings and the abilities they need to function in the modern world for example the ability to “know when to stop” under evaluation. However, these are still given as statements with no reference as to how they might be taught.

Framework for Information Literacy in Higher Education: USA

This is the new USA information literacy framework, adopted in 2015 (ACRL, 2015). This replaces the standards published in 2000 (Association of College and Research Libraries, 2000). In 2012 the ACLR Board of Directors agreed that the original standards were not fit for purpose and needed to be significantly revised. A Review Task Force was established to make recommendations for the revision of the existing competency standards issued in 2000. Their recommendations for improvement were:

- 1 Simplification to make them useable by a wider audience as exemplified by the SCONUL Seven Pillars, which “allows for greater flexibility in tailoring the core competencies of information literacy”.
- 2 Making the language comprehensible outside of the library profession which then will aid wider adoption of the standards.
- 3 Including affective, emotional learning outcomes so as to “address self-efficacy, student confidence, attitudes, motivation and valuing what is being learned.”
- 4 Acknowledging complementary literacies such as digital, visual and media, and redefining information literacy as a metaliteracy which unifies and informs other literacies under a common framework.
- 5 Moving beyond formats and a hierarchical approach to information, thus developing the concept of transliteracy where an understanding of how “formats interact and the social meaning of literacy” can be developed.

- 6 Recognition of the student as content creator in a world where use of the Internet and social media is commonplace.
- 7 The need to consider the student as a content curator, able to utilise the online environment to create, manage and organise personal collections of information.
- 8 Development a continuum between school information literacy standards (American Association of School Librarians, 2007) and those to be used in higher education.(ACRL Information Literacy Competency Standards Review Task Force, 2012)

The ACRL subsequently released a draft framework for comment. As part of this process, the task force critiqued their previous standards and mapped them against existing models (Martin, 2013) including ANCIL (Coonan and Secker, 2011a), the National Information Literacy Framework Scotland (Scottish Information Literacy Project, 2013), the Information Literacy Framework for Wales (Welsh Information Literacy Project, 2011) and the SCONUL Seven Pillars model (SCONUL, 2011).

These recommendations have resulted in a radically different document informed by a wide range of library professionals, educationalists and other relevant bodies. Significantly ACRL now refer to a 'framework for information literacy' rather than a set of unachievable prescriptive 'standards'. The Framework is based on *threshold concepts* i.e. "...those ideas in any discipline that are passageways or portals to enlarged understanding or ways of thinking and practicing within that discipline." [ACRL, 2015]. The five criteria for threshold concepts are:

- Transformative: Once understood they "occasion a significant shift in the perception of a subject" (Meyer and Land, 2003, p.4).
- Irreversible: The concept cannot be unlearned or forgotten.
- Integrative: It exposes "previously hidden interrelatedness" (Meyer and Land, 2003, p.4), shades of constructivism and scaffolding of prior knowledge.
- Bounded: There are "terminal frontiers", beyond which a student needs further thresholds in to new areas (Meyer and Land, 2003, p.5).

- Troublesome: The concepts are often difficult ideas which challenge student's learning and may leave them in "a state of liminality (Latin limen – 'threshold'), a suspended state in which understanding approximates to a kind of mimicry or lack of authenticity (Meyer and Land, 2003, p.10).

The Framework consists of six frames:

1. Authority is contextual and constructed
2. Information creation as a process
3. Information has value.
4. Research as inquiry
5. Scholarship is a conversation
6. Searching as strategic exploration

Each 'Frame' is accompanied by related 'Knowledge Practices' and 'Dispositions', which clearly outline what abilities the 'Learner', seen as a 2.1 level graduate will have acquired (Foster 2014), and what inclinations and habits they will subsequently display. For example under 'Research as inquiry' a learner will know how to "Formulate questions for research based on information gaps or on reexamination of existing, possibly conflicting, information" and will "Value persistence, adaptability, and flexibility and recognize that ambiguity can benefit the research process" [ACRL, 2015]. For the learner this clearly provides an overview of acquired skills and demonstrates how these can be of further benefit.

These frames are also described as "lenses" showing the influence of SCONUL (SCONUL, 2011) on the ACRL's thinking. Much effort has gone into making the Framework flexible, adaptable and easily usable in a wide range of environments. There is an expectation that students are on a journey through the frames and will be at different levels of understanding at different points in their travels. It also recognises that collaboration between librarians and the rest of the institution is vital for successful adoption of the Framework and the embedding of information literacy as an intrinsic and core concept across the entire student experience, which shows the influence of ANCIL on ACLR:

“...envision information literacy as extending the arc of learning throughout students’ academic careers and as converging with other academic and social learning goals.” [ACRL, 2015].

Appendix 12: Middlesex University. Graduate Skills Framework, 2014-2015

Skills at Level 4

Personal and Career Development

At the end of Level 4 a student should be able to:

Explore current skills and motivations

Evidence: Student can identify individual strengths, areas for improvement and ways of working, through devices like SWOT and time-line

Plan for personal development as a student in light of career interests

Evidence: Student has investigated career options related to specific degrees, through considering consequences of specific career choices, consideration of forces affecting choices, decision making.

Identify career interests and possible routes

Evidence: Student has planned time map for next two years, five years, ten years and survival strategies.

Effective Learning

At the end of Level 4 a student should be able to:

Consider how learning can develop

Evidence: Student can paraphrase and produce outline summaries of two pieces of assigned reading, comparing the views of different authors.

Use library resources and identify information needs and suitable sources for obtaining information

Evidence: Student has produced written work and/or presentations supported by reference to appropriate information sources.

Manage time effectively, take responsibility for their learning, and plan targets, taking into account their own learning styles and opportunities.

Evidence: Student has successfully managed their coursework for the year, drawn up plans and reviewed them with relevant University staff.

Adapt their approaches to learning to meet the requirements of different assessment methods.

Evidence: Student has successfully completed at least two different pieces of work assessed by different methods.

Seek and use feedback

Evidence: Student has recorded in learning journal how feedback from staff and peers has influenced improvement in their learning

Have started to develop critical thinking skills of analysing, challenging received views, and asking good questions

Evidence: Student has shown, in written work, diaries or seminars, examples of testing accepted views.

Communication

At the end of Level 4 a student should be able to:

Demonstrate ability to formulate and propose relevant questions and comments in contributing to class or group discussion.

Evidence: Student has actively taken part in class/group discussion asking constructive questions and responding to the views and questions of others, documenting this through self, peer and tutor evaluation of discussions.

Select, analyse and compare a range of printed information sources on a selected topic.

Evidence: Student has constructed a relevant bibliography showing use of range of sources and use of criteria for selection.

Recognise and construct an argument, taking account of other views

Evidence: Student has drawn a concept map or diagram to reflect the structure of written or verbal argument

Reference written materials appropriately, using established referencing conventions

Evidence: Student has produced written work containing correct text referencing and bibliography formatted appropriately.

Use standard English appropriately

Evidence: Student's participation in class, presentations and written work are readily understood by staff and peers.

Understand and use effective note making and paraphrasing of lectures, reading, thinking and discussion

Evidence: Student has produced examples of effective précis or note-taking.

Teamwork

At the end of Level 4 a student should be able to:

Identify the skills necessary for successful teams

Evidence: Student has completed a team analysis exercise reflecting on the preferred roles of team members, with written discussion of the implications of these for the success of the team.

Show that they have successfully worked in a team

Evidence: Student has produced work showing group targets and agreed ground rules in a piece of team work; student has recorded reflection (e.g. in learning journal) on how the variety of roles have been explored and that mutual support has been given and received.

Effectively assess their own contribution to the team as well as that of others and the achievements of the team as a whole.

Evidence: Student has reflected on their own performance (e.g. in learning journal) and compared this with the feedback received from the rest of the team.

Information Technology

At the end of Level 4 a student should be able to:

Manipulate information and convey ideas in a Windows environment by:

Using Word to convey basic information, demonstrating selectivity in use of toolbar and ability to use formatting tools effectively.

Evidence: Student has produced document(s) which effectively convey information, in a variety of formats.

Using presentation (e.g. Power Point) or word processing packages to produce slide layouts for economic and effective delivery of a presentation

Evidence: Student has produced and given a presentation (e.g. as an individual or part of a group project)

Using email appropriately for academic discussion with peers and tutors

Evidence: Student can produce print-out of threaded email discussion/feedback

Get information electronically by:

Locating, selecting and retrieving Internet information for specific purposes.

Evidence: Student demonstrates use of relevant internet use in project work

Using digital bibliographic tools

Evidence: Student has critically evaluated a list of online bibliographic sources

Handle electronic learning resources by:

Using general educational packages to enhance learning and skills development

Evidence: Student has engaged effectively with materials and activities on OASISplus

Using subject specific learning tools e.g. Excel, Illustrator, HTML, programming languages, etc where appropriate

Evidence: Student has demonstrated capability of using specific package (where relevant) as part of a project or assignment

Numeracy

At the end of Level 4 a student should be able to:

Use numbers confidently in everyday life and studies

Evidence: Student has recorded their reflection (e.g. in learning journal) on the relevance and use of numbers in their studies

Interpret numerical data represented in a variety of ways e.g. charts, bar charts, graphs, newspaper articles, advertisements, research reports.

Evidence: Student has shown interpretation of a variety of numerical tables, charts and diagrams through coursework, learning journal, annotated collections of numerical information

Represent numerical information in a variety of ways e.g. graphs, bar charts, pi-charts.

Evidence: Student has effectively presented numerical information in a variety of appropriate ways, e.g. in project work

Demonstrate an understanding of a range of numerical concepts---- fractions, decimals, and percentages.

Evidence: Student has demonstrated understanding through conversion exercises as part of project or assignment work

Skills at Level 6

Career and Personal Development

By the end of Level 6, a graduate should be able to:

- Reflect on and articulate in depth their own personal attributes including graduate skills, achievements, experience, motivation and personality, based on both studies and wider life experience, relating to their career choice and job seeking goals
- Show knowledge of major career opportunities of interest open to him/her and of interest as a graduate and be able to analyse critically such information and use further sources to find out more about such opportunities
- Analyse and reflect on the match between their own attributes and those needed for the career options of interest, formulating career and job seeking goals both in the short and longer term and planning appropriate actions to achieve them
- Communicate and promote their own appropriate attributes and experience in an effective and relevant way to potential employers and other opportunity providers through varied formats such as cv, letters, application forms and in interviews and other practical exercises.
- Review continually their own need for personal and professional development such as acquiring new skills or experience
- Enhance their own career management skills

Effective Learning

By the end of Level 6, a graduate should be able to:

- Reflect on learning processes and experience, evaluating and adapting own learning approaches to subject context(s).
- Challenge received views, formulate complex questions in the context of the subject, relating to other concepts and exploring alternatives

- Take responsibility for planning and organising appropriate study tasks, identifying their progress against stated learning outcomes.
- Use practised research and problem solving skills independently and flexibly, appropriate to subject requirements.
- Use wide range of sources selectively, (e.g. producing annotated bibliography).
- Address a wide range of tutor, peer and self assessment approaches, negotiating learning agreements where appropriate.
- Monitor and evaluate academic performance, identifying means of improvements.

Communication

By the end of Level 6, a graduate will be able to:

- Communicate effectively and confidently, both orally and in writing, showing a grasp of subject vocabulary and range of expressive skills.
- Construct their writing, verbal presentation and discussion on reasoned argument, considering the implications of conclusions.
- Accurately summarise and evaluate the views of others, showing awareness of academic and practical debates appropriate to subject context(s)
- Show confident use of standard English and subject-specific vocabulary to explain complex ideas, actively participate in, and sum up and lead discussions.
- Deliver confidently and effectively a structured presentation, using relevant images as appropriate and considering the audience response.
- Assess the quality of their own communication and that of others, identifying needs for improvements

Teamwork

By the end of Level 6, a graduate should be able to:

- Identify their own strengths and flexibilities in adapting to different roles required in teams.
- Contribute effectively and flexibly to group work and presentation.

- Explain and document the process and dynamic of effective team working, identifying different functions and purposes, and setting realistic targets.
- Give and receive constructive feedback to develop, encourage and motivate team members.
- Evaluate team effectiveness in both process and end result, considering their own and others' contributions.

Information Technology

By the end of Level 6, a graduate should be able to:

- Search for, process, integrate and evaluate complex information from a range of electronic and printed sources, using referencing tools appropriately according to needs of subject context(s)
- Justify the choice and use of on-line information, using an appropriately wide range of resources according to subject requirements.
- Demonstrate selective and critical judgement in evaluating usefulness of resources, considering ethical issues in adaptation on-line information (e.g. plagiarism and referencing).
- Participate effectively in electronic communication and discussion groups.
- Use web resources effectively, ethically and in an academically sound way (e.g. avoiding plagiarism; using appropriate referencing)
- Understand and explain the criteria for effective and usefully designed web-sites

Numeracy

By the end of Level 6, a graduate should be able to:

- Collect, analyse, compare and interpret data independently, identifying the type of data suitable to task and subject context(s).
- Explain and demonstrate the meaning and use of quantitative information in specific situations appropriate to the subject context.

- Show confident use of calculation, formulae, approximation and estimation in order to evaluate electronically produced results or findings of others, as appropriate to subject requirements.
- Work with and present quantitative data clearly, choosing appropriate formats and explaining significance of findings.

Appendix 13: Letter to interviewees

INVITATION TO PARTICIPATE

10/2/15

Adam Edwards: Liaison Manager

a.edwards@mdx.ac.uk

Tel. 020 8411 4418

Vanessa Hill: Liaison Librarian

v.hill@mdx.ac.uk

tel. 0208 411 2191

Working title: Anticipating the Librarian's role in the future

Part of the requirements for the award of DProf by Public Works, Institute for Work Based Learning, Middlesex University.

Dear XXXX,

We are carrying out a piece of research as part of our Doctoral studies through the IWBL. This research will focus on the role of librarian of the future to best serve the strategies and goals of the university in which we work.

We would like to invite you to be a participant in this research because we believe your position and experience will be of value to us in exploring this issue. We would like to record our conversation with you. Please see your options below.

Please find attached details of our planned research activity and a consent form.

We assure you:

1. That all data will be treated with the upmost confidentiality and will be kept in a secure way,
2. That the data will be anonymised to protect your identity,
3. That the data will only be made public an anonymised version ,
4. That you will be able to choose whether to be recorded or not,
5. That you can withdraw your data at any time,
6. That we will supply collated data at your request.

Thank you for your kind consideration.

Yours sincerely

Adam and Vanessa

CONSENT FORM

Title of Project: Working title; Anticipating the Librarian's role in the future

Name of Researchers: Adam Edwards and Vanessa Hill

1. I confirm that I have read and understand the information sheet dated 10th February 2015 for the above study and will have the opportunity to ask questions.
2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason.
3. I agree that this form that bears my name and signature may be seen by a designated auditor.
4. I agree that my non-identifiable research data may be stored in National Archives and be used anonymously by others for future research. I am assured that the confidentiality of my data will be upheld through the removal of any personal identifiers.
5. I understand that a request will be made for my interview to be recorded and that I will have the option to choose whether it is or not
- 6.. I agree to take part in the above study.

XXXXX

20.2.15

Name of participant

Date

Signature

Adam Edwards

20.2.15

Researcher 1

Date

Signature

Vanessa Hill

20.2.15

Researcher 2

Date

Signature

1 copy for participant; 1 copy for researchers