PUBLIC LIBRARY DIGITAL SERVICES: EMERGENT ISSUES OF ACCESS AND ACCEPTABLE USE

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Declaration

This thesis is the result of the author's original research. The work contained therein has been composed by the author and has not been previously submitted for examination which has led to the award of a degree.

Signed:

Date:

Statement of Contribution

This statement confirms that in the papers selected for this portfolio, seven are single-authored, and eight are co-authored, with all of co-authored papers stemming from projects where I was either the principal investigator (5) or lead author on the publication (3).

My specific contributions to the co-authored papers have been highlighted in the discussion of each output featured.

Signed:

Date:

Acknowledgements

My grateful thanks to Professor Steven Buchanan who was my thesis supervisor and who helped me focus the concept of this thesis and understand my contributions to the subject of library and information science more fully. Putting together a PhD by publication case brings many challenges, and he helped make the whole process more straightforward.

Thanks also to all of my co-authors on several papers in the first 17 years of my academic career, especially Alan Poulter, Gobinda Chowdhury, and Paul Burton.

Thanks to my sister, Andrena, and my twin brother, Steven, for all their support and encouragement through the years. We all did OK, and Mum and Dad would be proud of us.

Thanks to Lainey for those extra pushes I needed to remind me I could get this finished and I had it in me. You're always a positive voice in my ear, and always know what to say.

Finally, I will miss Alan Poulter's wit and wisdom greatly; he was one of the finest men and colleagues I have ever had the pleasure of working with.

This thesis is dedicated to my parents,

Andrew McMenemy (1929-1976)

Mary Ferrier McIntyre McMenemy (1929-2014)

Contents

Abstract

This research programme presented for consideration of the award of PhD by publication, presents a portfolio of 15 papers published between 2004 and 2018, and explores the transformation of public library digital services in a time of significant change. Initially exploring access issues from an organisational (policy) and architectural (design) perspective, ongoing work led to fundamental concerns over acceptable use from a user and ethical (behavioural) perspective. Significant access issues were initially discovered in relation to inconsistent digital service categorisation in architectural design, and restrictive policies and procedures. Further studies identified acceptable use policies that were not fit for purpose, and Internet filtering systems blocking legitimate content. Issues were also identified around the use of third party service providers, and the impact on user privacy that results, as well as what constituted acceptable use from the point of view of library patrons. Issues of public awareness of appropriate ethical behaviours then led to a critical examination of approaches to character education in information literacy education, notably identifying a lack of explicit attention to important aspects of ethical education in information literacy frameworks and models, and establishing a research agenda for further work. A range of research methods are utilised across the 15 papers that make up the submission, including literature reviews, surveys of library users and staff, heuristic evaluation of digital services, unobtrusive testing of access to public library services, content analysis of digital services, and content analysis of information literacy frameworks.

1. Introduction

The collective work presented in this PhD by Publication submission, published 2004-2018, advances our understanding of issues of information access and acceptable use in the UK public library domain during a period of unprecedented technological change. Beginning with examination of information and communication technology driven changes in public library service delivery, and access aspects of digital service design, the research progressively focuses on significant emergent ethical issues related to acceptable use of digital services. The submission consists of this critical review document and the 15 selected published papers constituting the work in its entirety.

1.1. Overview

Initially exploring access issues from an organisational (policy) and information architecture (design) perspective, ongoing work led to fundamental concerns over acceptable use from a user and ethical (behavioural) perspective. Significant access issues were initially discovered in relation to inconsistent digital service categorisation in architectural design, and restrictive policies and procedures. Further studies identified acceptable use policies that were not fit for purpose, and Internet filtering systems blocking legitimate content. Issues were also identified around the use of third party service providers, and the impact on user privacy that results, as well as what constituted acceptable use from the point of view of library patrons. Issues of public awareness of appropriate ethical behaviours then led to a critical examination of approaches to character education in information literacy education, notably identifying a lack of explicit attention to important aspects of ethical education in information literacy frameworks and models, and establishing a research agenda for further work.

A range of research methods are utilised across the 15 papers that make up the submission, including literature reviews, surveys of library users and staff, heuristic evaluation of digital services, unobtrusive testing of access to public library services, content analysis of digital services, and content analysis of information literacy frameworks. The research programme was underpinned by a pragmatic approach to research during a period of rapid

technology and behavioural change and evolution; that sought to inform solutions to emergent challenges and problems. With goals similar to those of action research, pragmatism is understood as, "a worldview [that] arises out of actions, situations, and consequences…There is a concern with applications— what works— and solutions to problems" (Creswell, 2008, p.245).

In utilising a range of methods across the papers, the research programme was able to explore emergent access issues from both practitioner and user perspectives, providing a broad overview of the sector and the significant challenges arising in the time period covered (2004-18).

The research makes several important contributions to knowledge:

- Developed and tested a model for the holistic evaluation of public library digital services
- Developed a conceptual network model for public libraries in the digital age, proposing a new role as an access point for community knowledge
- Advanced our understanding of the impact of ICT on professional ethics and practices in libraries, in particular related to issues of equity of access
- Developed a single National Acceptable Use Policy for Scottish public libraries
- Advanced our understanding of the theoretical and practical challenges of developing acceptable ethical practices in online information behaviours

An important agenda for further research into approaches to acceptable ethical practices is also established. Following critical consideration of existing approaches (from AUP to education), the author positions the development of intellectual character, defined as "the comprehensive set of ethical and intellectual dispositions of a person" (Meyer, 2015), in online information behaviours as an understudied topic of significant societal concern, and encourages further research via the final paper in this portfolio. Specifically:

1. Further theoretical refinement of information literacy education models to explicitly incorporate application of intellectual character virtues.
2. Empirical studies to explore appropriate methods of intellectual character development to inform information literacy education programmes.
3. Analysis of current information literacy education for practitioners to consider how ethical concepts can be introduced into the professional body of knowledge

An overview of the chronological and thematic order of the papers included in the portfolio, and relationships between, is illustrated in Figure 1 (enlarged copy in appendix one). For example, explorations of the challenges in managing access from an organisational perspective (**Paper 2**), raised issues of ethical concern that are explored in later papers (**Papers 9**, **7**, and **12**). This progressive treatment of identified issues, first from an organisational perspective, and then from a theoretical perspective is evident throughout this submission.

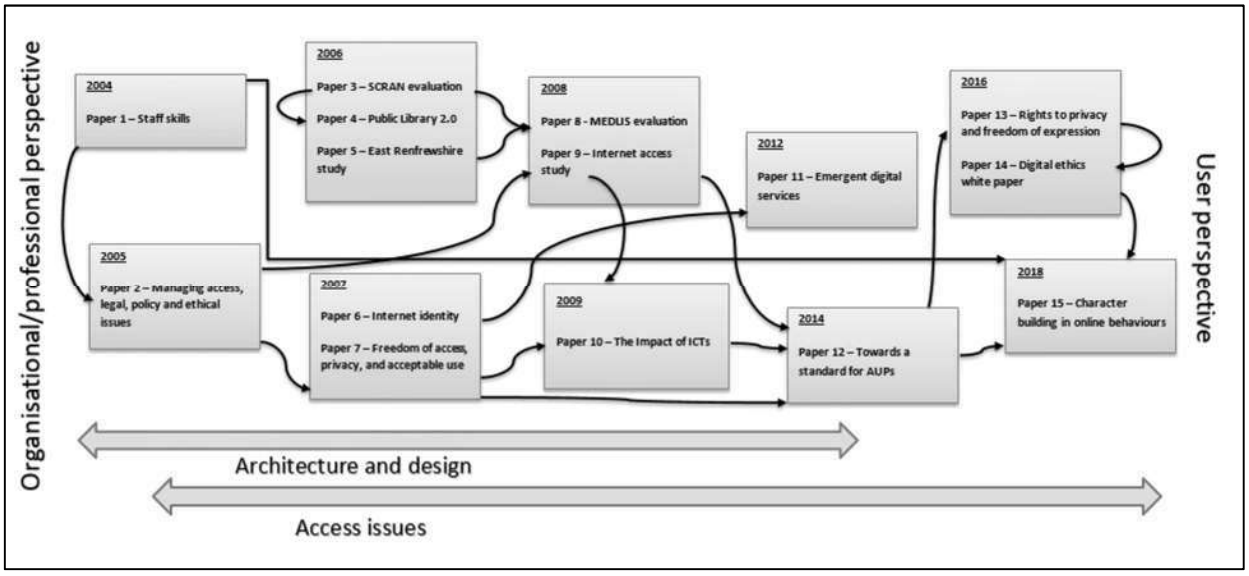

Figure 1 – Chronological and Thematic flow diagram (enlarged copy in appendix one)

1.2. Background

The following section provides background context to the initial stages of this research. As stated above, the professional domain in which I explored these themes was the UK public library sector, at a time when the sector was experiencing "a volatile time in [its] history" (Goulding, 2006, p.3). This period of time offered considerable opportunities for public libraries to develop digital services due to significant UK central government mandate and investment in information and communications technologies (ICTs), digitisation, and training as a result of the People's Network programme (Library and Information Commission, 1997). As well as funding the building of the network infrastructure, and the purchase of the computer hardware

for libraries, the People's Network also emphasised heavily the importance of providing quality digital content for citizens to access, stating that:

> The new and growing range of resources and facilities which networking can deliver, combined with the existing assets of public library system, will form the powerhouse of knowledge, enabling the smallest and most isolated local library to offer the same range, depth and quality of information as a large central library, providing equal access to the global and the local (Library and Information Commission, 1997, p.2).

Presenting a vision of a public library service that was about making content available using the newly funded hardware and network infrastructure was a crucial element of the policy initiative, then:

> Rich multimedia resources provided after school, in a safe, culturally creative environment, will help overcome the inequality of opportunity experienced by those who do not have access to technology at home (Library and Information Commission, 1997, p.2).

A core element of the programme was to equip people with the skills to live a life "in which the computer is a major element in learning, work, and recreation" (Library and Information Commission, 1997, p.2). Important elements of this vision centred on the training of library staff to be able to impart these skills to users, and also create new digital services and resources for citizens to interact with. New staff roles were envisioned by the Library and Information Commission, atop a basic training for all staff that was based on the European Computer Driving Licence (ECDL). These new staff roles were:

- Net navigator
- IT gatekeeper
- Information consultant
- Information manager
- The educator (Library and Information Commission, 1997, p.32)

Within this spread of roles there was an attempt by the Library and Information Commission to map the range of skills that would be needed to (1) find information for users, (2) teach them how to navigate and live in the digital world, (3) manage the infrastructure, and (4) create content, with the report stating that, "Staff at all levels…will need an understanding of the

current and future impact of networked provision, and the skills to apply this understanding" (Library and Information Commission, 1997, p.33). It was in this strategic context, with an unprecedented investment in the public library digital infrastructure, and limited understanding of the impact this revolution would have on the public library service and the people served by it, that my research began.

1.3. The portfolio of papers

The 15 published papers included reflect the approach to research and scholarship I adopted in an academic subject area that also has an important practitioner and societal audience, therefore I placed an emphasis on international peer-reviewed journals and conferences, but also shorter professional pieces, and professional books (and reflective of my pragmatic action oriented approach). The research consists of:

- Four peer-reviewed journal articles
- Five peer-reviewed conference papers
- A white paper commissioned by professional body (CILIP)
- One chapter from a single-authored monograph
- Two chapters from lead author multi-authored monographs
- Two journal editorial articles

Of the papers selected, seven are single-authored, and eight are multi-authored, with all of the multi-authored papers stemming from projects where I was either the principal investigator (5) or lead author on the publication (3).

The chronological list of papers is provided below in Table 1. A more in depth analysis of each paper and contribution is discussed in section two of the critical review.

Table 1- Selected papers. (Listed chronologically)

Paper 1	Poulter, A. & **McMenemy, D**. (2004). Beyond the European Computer Driving Licence: basic and advanced ICT skills for the new library professional. *IFLA Journal*, 30, 37-46. (Peer-reviewed journal article) (50% contribution)
Paper 2	**McMenemy, D**. and Burton, P.F. (2005) Managing access: legal and policy issue of ICT use. In. McMenemy, D & Poulter, A. *Delivering digital services:*

	a handbook for public libraries and learning centres. London: Facet Publishing. pp.19-34. (Book chapter) (66% contribution)
Paper 3	Chowdhury G., **McMenemy D**., Poulter A. (2006) Large-Scale Impact of Digital Library Services: Findings from a Major Evaluation of SCRAN. In: Gonzalo J., Thanos C., Verdejo M.F., Carrasco R.C. (eds) Research and Advanced Technology for Digital Libraries. ECDL 2006. *Lecture Notes in Computer Science*, vol 4172. pp. 256-266. (Peer-reviewed conference) (33% contribution)
Paper 4	Chowdhury G., Poulter A., and **McMenemy D**., (2006) Public Library 2.0: Towards a new mission for public libraries as a "network of community knowledge", *Online Information Review*, 30 (4) pp.454-460 (Peer-reviewed journal article) (33% contribution)
Paper 5	Poulter, A. and **McMenemy, D**. and McGettigan, L. (2006) Justify or die? – using contingent valuation of service provision in a UK public library. *LIANZA Conference*, 2006. https://lianza.org.nz/justify-or-die-%E2%80%93-using-contingent-valuation-service-provision-uk-public-library (Peer-reviewed conference) (40% contribution)
Paper 6	**McMenemy, D.** (2007) Internet identity and public libraries: communicating service values through web presence, *Library Review*, 56 (8), pp.653-657 (Journal editorial article)
Paper 7	**McMenemy, D**, Poulter, A & Burton, P.F. (2007) Freedom of access, privacy and acceptable use. In. McMenemy, D, Poulter, A & Burton, P.F. *A handbook of ethical practice: a practical guide to dealing with ethical issues in information and library work*. Cambridge: Chandos Publishing. pp.85-106 (Book chapter) (50% contribution)
Paper 8	Chowdhury, G., **McMenemy,** D., & Poulter, A. (2008). MEDLIS: model for evaluation of digital libraries and information services. *World Digital Libraries - An international journal*, 1(1), 35-46. (Peer-reviewed journal article) (33% contribution)
Paper 9	**McMenemy, D.** (2008). Internet access in UK public libraries: Notes and queries from a small scale study: Editorial. *Library Review, 57*(7), 485-489. (Journal editorial article)
Paper 10	**McMenemy, D.** (2009). "The Impact of Computer and Information Technologies." *The public library*: London: Facet Publishing. pp.109-124. (Book chapter)
Paper 11	**McMenemy, D.** (2012). Emergent digital services in public libraries: a domain study. *New Library World, 113*(11/12), 507-527. (Peer-reviewed journal article)

Paper 12	**McMenemy, D.** (2014) *Towards a public library standard for acceptable use of computing facilities.* Paper presented at: IFLA WLIC 2014 - Lyon - Libraries, Citizens, Societies: Confluence for Knowledge in Session 72 - Committee on Standards. In: IFLA WLIC 2014, 16-22 August 2014, Lyon, France. (Peer-reviewed conference)
Paper 13	**McMenemy, D.** (2016). Rights to privacy and freedom of expression in public libraries: squaring the circle. Paper presented at: IFLA WLIC 2016 – Columbus, Ohio - – Connections. Collaboration. Community in Session 122 - Who's in control? Privacy, the Internet and libraries - Committee on Freedom of Access to Information and Freedom of Expression (FAIFE). (Peer-reviewed conference)
Paper 14	**McMenemy, D.** (2016) *Digital Ethics: A UKeiG White Paper*. UKeiG White Paper, no. 02, vol. 2016, London, pp. 1-27. (Commissioned white paper)
Paper 15	**McMenemy, D**. and Buchanan, S. (2018) Character building in children's online information behaviours: applying a virtue epistemology perspective to information literacy. *6th European Conference on Information Literacy (ECIL), Oulu, Finland, 24-27 September 2018*. (Peer-reviewed conference) (50% contribution)

1.4. Remaining elements of submission

The organisation of the remaining sections of this critical review document is as follows:

- Section two discusses the specific content and contribution of each paper in more detail.
- Section three will reflect on the research approaches and methods adopted in the papers.
- Section four will conclude by considering my contributions to knowledge, limitations of the research, and discuss my future research development plans.

2. Emergent digital services: from design to acceptable use – the papers

In this section a discussion of the contribution of each paper is presented. In overview, the research programme began by considering the skills necessary to manage emergent services from the point of view of new library graduates, it then proceeded to consider the challenges in managing access to new technologies, how digital services were being designed and delivered, and how access to digital services was potentially being restricted by issues of policy and process. This led to exploration of the rights and responsibilities of patrons when using digital services, and issues of ethical behaviour, guidance and education. Therefore as stated earlier, research that began by considering operational and design aspects of delivering digital services in the public domain, evolved into a focus on the ethical issues of access, and transitioned further into concerns with how positive digital citizenship can be encouraged.

Paper 1 considered the emerging digital skills required by library staff for content creation, management and delivery in modern public librarianship. The publication of *New Library: the People's Network* in 1997 heralded a new era for public libraries as gateways for their communities to the ICT revolution. A key plank of this new initiative was significant funding through the New Opportunities Fund (NOF) to put in place the infrastructure necessary in all UK public libraries to enable high speed Internet access. This revolution raised many challenges for public libraries, from the logistical problems in implementation, to training staff, to new service paradigms, to new risks that would open up that needed to be managed, such as computer misuse, and access to inappropriate materials by minors. The inspiration for this paper was the consideration of how the default levels of training specified for public librarians through the People's Network initiative (ECDL) could be built upon. Arriving from public library practice in 2001 into academia fresh from a role that involved staff and public ICT training, I was aware of the nature of the new skills necessary for new graduates in library and information science to provide the kinds of services the government was wishing to be delivered via the People's Network, including advanced search skills, desktop applications, content creation, and digitisation. The paper contributes to our understanding of how the skills

demanded of new public librarians were being addressed in one specific school of librarianship, and the response of the new students to these expectations. The paper is an expanded version of a presentation given at the *69th International Federation of Library Associations (IFLA) Conference* in Berlin in 2003. My contribution to **Paper 1** as co-author was topic proposal, and equal contribution to fieldwork, analysis, and presentation of the results. The paper informed thinking explored further in **Paper 2**, which considered how these new digital services were being managed. **Papers 1 and 2**, then, set the scene for much of the discussions to come in other papers: new digital skills were needed to deliver new digital services, and these new digital services were also raising important service design issues around architecture and access for the modern library and information professional.

Paper 2 focuses on the challenges in managing ICTs in public libraries from the point of view of issues such as equitable access, freedom of expression, and privacy. The paper explores some of the new technologies and procedures that were being installed in public libraries as a result of the new technologies being introduced, and the impact these were having on practice from the point of view of having to manage access. The paper contributes to understanding of how ICT services were changing the practice of public librarianship and potentially challenging ideals of the profession with regards to issues such as freedom of expression and privacy. For instance, one of the last incidents that occurred in my own professional practice in public libraries was an Internet filtering scandal in the library service I worked for, where a tabloid journalist arrived in a branch library and questioned why young children had been accessing pornography in the library on the computers. This case is cited in the chapter, and has had a large influence on my research themes since, as it highlighted to me the real dangers public libraries faced and made me question in my mind whether they had been given due enough prominence in professional discourse. The complexities of managing Internet access in a public environment pose significant challenges that must be balanced, between the ethos of equity, and the protection of the reputation of the organisation through preventing access to inappropriate, illegal or offensive materials. We emphasise in

the chapter the importance of understanding good acceptable use policy development and ensuring all staff are aware of their duty in imparting this policy to library users. The chapter also deals with issues around illegal downloading and the potential liabilities public libraries may face as a result of bad management in this area. These were important emergent themes that I would further explore in later research (**Papers 7, 9, 10, and 14)**. The original book where the chapter features is cited as a recommended resource by IFLA in their 2010 *Public Library Service Guidelines* (Koontz and Gubbin, 2010) and was also selected as one of a few Facet publications to be translated into Russian and published there for that professional market. My contribution to **Paper 2** as lead author was topic proposition, literature review, analysis, and main recommendations. Second author provided editorial support.

Paper 3 reports findings of a commissioned research study for which I was principal investigator (PI), examining the provision of a Scottish Government-funded access to a commercial digital service (SCRAN) for public libraries in Scotland (McMenemy et al, 2005). The Scottish Government had funded access for every public library in Scotland to the SCRAN service, at the cost of just under £124,000. The SCRAN service provided access to a range of digital materials on Scottish culture and history. I was commissioned with colleagues to undertake this evaluation by the Scottish Library and Information Council and led on the development of the methodology to undertake the evaluation. The methodology developed was multi-stage, and included staff and user surveys, analysis of web logs and access data, and interviews. This paper raised important questions around digital service provision in public libraries, including issues around value for money for commercial services, user authentication to third party services, and acceptable access to digital services provided by public libraries due to limited opening hours in some regions. This issue was compounded in several instances by restrictive authentication systems that compelled users to be on library premises when accessing a digital service. The paper contributes to our understanding of how public libraries were challenged in vital areas of service provision when delivering third-party digital services, such as ability of users to access remotely, and opening hours of branches providing

a barrier to access digital services where licenses restricted use to library premises only. My contribution as co-author and principal investigator on the reported project was topic proposal, co-development of the field methodology, and co-analysis and presentation of the results. The paper informed thinking regarding community access and engagement explored further in paper 4.

Paper 4 built on the work undertaken for the SCRAN project (paper 3) and took it into more theoretical space by proposing public libraries take on the role of services like SCRAN directly by becoming networks of community knowledge, a concept dubbed *Public Library 2.0*. Using Ranganathan's five values of library science as a framework for the theory, the paper proposed five values of community knowledge building,

(1) Community knowledge is for use.
(2) Every user should have access to his or her community knowledge.
(3) All community knowledge should be made available to its users.
(4) Save the time of the user in creating and finding community knowledge.
(5) Community knowledge grows continually.

Public Library 2.0 supported the goals of the People's Network content creation rubric, emphasising "the capability for communication within and between communities, whether they be local or global, founded on geography or on a common purpose" (Library and Information Commission, 1997). It also reinforced one of the key aims of the People's Network that the ICTs being funded should succeed in "nurturing social cohesion through fostering a politically and culturally informed society" (Library and Information Commission, 1997). My contribution as co-author was to place the proposed five theoretical values (i.e. Ranganathan) in the practical public library context (i.e. bridging theory and practice). The paper informed thinking explored further in **Paper 8**, which formalised the theoretical and practical aspects of the SCRAN evaluation to create a holistic evaluation system for digital services.

Paper 5 investigates issues of public awareness and use of library services via a case study. One specific library service in central Scotland is examined, involving an extensive survey of users related to an evaluation methodology called contingent valuation. Contingent

valuation aims not only to survey users, but also non users. Aabø and Audunson define contingent valuation as a method that, “draws upon economic theory and the methods of survey research to elicit directly from citizens the value they place upon goods not traded in private markets” (Aabø and Audunson, 2002). Contingent valuation utilises rational choice theory in which people are held to calculate the likely costs and benefits of any action before deciding what to do. In rational choice theory, individuals are seen as motivated by the wants or goals that express their 'preferences'. Rational choice theory holds that individuals must anticipate the outcomes of alternative courses of action and calculate that which will be best for them. The theory is that rational individuals choose the alternative that is likely to give them the greatest satisfaction. This methodology focuses on non-use values, and returns a monetary figure for the cost a user would be willing to pay for a service if it was no longer free. My interest in this methodology stemmed from its increasing use in the UK library sector in mid 00s, with services such as Bolton Libraries, as well as the British Library, using the method to prove that for every pound invested, a much higher value was found by users, who would be willing to pay much more. This study cast doubt on the efficacy of the method, suggesting survey users were unable to accurately comprehend how much a library service costs to run, and therefore unable to estimate how much membership would cost outside of a publically-funded set up. The particular contribution of this paper to the thesis were the findings related to use of ICTs and digital services in the local authority in question, showing that of the 249 people surveyed, usage of the new digital services was low. While 62% of the surveyed users were aware of the computers available to use for learning, only 15% availed themselves of the service. Digital services created by the library service were even lower in both recognition and use with only 2% of the respondents’ users of the local digital portal developed by the library service. This suggested that even 7 years into the People’s Network programme, in one local authority at least, digital services were still something libraries were struggling to make a core component of service. My contribution as co-author and principal investigator for the reported project was topic proposition, fieldwork design, and equal contribution to

fieldwork, analysis, and presentation of the results. Issues of low use of digital services attributed to awareness in this paper are further explored in **Papers 6** and **11**.

In **Paper 6** my focus was to examine the virtual identity of library websites. An emerging element of library website provision was that library websites were most often parts of larger municipal websites, and this study sought to gauge the extent of this across Scottish libraries. I hypothesised that this was a challenge to the identity of the library service (services being potentially 'hidden' within parent local authority websites). The issue of identity was an important one for public library websites, since a library website serves more than the function of just providing information on the services a library provided. Simply put, the library website needs to be an information gateway also, since its role is not just to promote the library, but also to operate as a virtual library for users, providing access to subscribed content and other digital services. This places it in a different place from local authority websites, which largely exist as information points about local authority services, or as form filling sites for citizens seeking an online service provided by the local authority. The study highlighted how the placement of a library website within a larger local authority parent page risked confusing users about purpose, and also potentially corrupting the public library's role as an impartial information provider. The paper contributes to our understanding of information architecture issues in local authorities from the point of view of public library websites and how they are presented. The paper also seeded a larger study of all Scottish public library websites presented in **Paper 11**.

Paper 7 examines freedom of access, filtering, privacy, and acceptable use of library services and continues the themes seen in **Paper 2** in analysing how these issues are developing in terms of library practice. As my research on emergent digital services proceeded, I increasingly found myself reflecting on the ethics of the profession more widely, and how ICTs and digital services specifically were challenging professional ethics in some key areas. As an excerpt from a professional textbook that was focused on library ethics, this chapter approaches the topic analytically, while also providing a series of case studies and

scenarios for the reader to better understand the issues at stake. This chapter reflected more deeply on the challenges posed to the librarian in the modern era as they related to ensuring equity of access. It began by discussing notions of equity of access as posited by major library ethicists such as Gorman (2000) and Ranganathan (1963), and reflects on the modern barriers to access that exist, not only related to ICTs but also other factors including disability and location. As such it offers a much wider consideration of the role of the public library as a social equaliser. In its consideration of acceptable use it discusses the controversies around Internet filtering, a machine-driven procedure that rather than provide access to information, limits and censors information based on set parameters. It reflects on the nature of filtering as censorship, and once again revisits the role of the library staff in ensuring understanding of the policy regime in libraries. It includes case studies to highlight the clashes inherent when using technologies that restrict access to information in a public library where the purpose should be to provide access. The contribution of this paper, then, was to provide an ethical lens for librarians through which they could understand and consider the ethical implications of managing ICTs via analysis and case studies that highlighted key issues around equity of access to services. The issues are explored further in **Paper 12** (acceptable use) and **Paper 13** (privacy). My contribution as lead author was topic proposition, theoretical framework design, literature review, analysis, and my recommendations. Second and third authors provided editorial support.

Paper 8 emanates from the same study that informed **Papers 3 and 4**, and in this paper the methodology developed in the SCRAN Project was further expanded to propose a new evaluation methodology for measuring digital library services. In undertaking the SCRAN Project, a robust methodology had to be constructed that incorporated a multi-faceted approach to the research, involving users, staff, and digital service provider. MEDLIS (Method for Evaluating Digital Library and Information Services) was heavily informed by the methodology developed to evaluate the SCRAN project, incorporating a multi-stage and wide-ranging approach. Of particular note was the importance of expert evaluation alongside more

traditional evaluation techniques such as user and staff feedback, and heuristic analysis. The model was proposed as novel because it measured digital services holistically, focusing on user experience, staff experience, value for money, and the nature and quality of the digital services being offered. Given the significant expense digital library services presented to libraries, the importance of evaluation methodologies that focused on all aspects of the product was important. The paper provided an evaluation model that could be utilised for anyone seeking to evaluate a digital service holistically, based on previous fieldwork (i.e. **Papers 3 and 4**). My contribution as co-author was co-development of the MEDLIS model under the guidance of the main author, and obviously the overseeing of the original research project (SCRAN) that informed the development of the methodology.

Paper 9 explored consistency of public digital access in UK public libraries. The study presents findings from a mystery shopper exercise that examined access to digital services in a sample of public library services from the perspective of a user. While in professional practice I had observed what I believed to be a potential "postcode lottery" of access to ICTs in public libraries, and aimed to test access in a broad range of services across the country. 14 library services across the UK were visited (8 in England, 4 in Scotland, and 2 in Wales). The paper highlights issues such as the frequency of Internet filtering on library computers, as well as differing acceptable use policies for facilitating access across all 14 services, and inconsistent front-ends on library computer home screens, as well as differing policies regarding acceptable content that could be accessed. The paper evidences and contributes to our understanding of access restrictions then in place across a range of UK public library services, both from the point of view of physical access to ICT infrastructure, and also the technologies used to limit access on the computers themselves. These topics are explored in further papers I authored, with **Paper 12** presenting findings proposing a universal acceptable use policy for public libraries, as well as the aforementioned **Papers 6 and 11** on library websites.

Paper 10 provides a contextual overview of key policy developments in ICT and digital services in UK public libraries, and highlights the challenges and issues facing the sector. It describes the kinds of ICT-based services libraries were delivering, before going on to discuss the issues around managing access to ICTs, further discussing themes identified in **Papers 2 and 7** previously. It also discusses the strategic issues that were also at play in terms of digital service development in the time period, especially around the People's Network programme. The chapter contribution is to provide an analysis of how ICTs had impacted on public libraries from a policy and practices perspective in the modern era, and the entire book was designed to provide an up to date analysis of public libraries in a holistic fashion, covering all aspects of their provision, from policy to practice. The book this chapter features in was extensively cited in a recent House of Lords Library briefing paper which was supplied to members of the House of Lords to inform them on a debate on public libraries in the UK (House of Lords Library, 2016). It has also been cited highly according to Google Scholar, with 78 citations as of October 2018. The paper informed thinking explored further in **Paper 12**, which specifically examined the use of AUPs in libraries, a key tool used in managing access to the Internet, and presented a pilot study aimed at developing a single AUP document for all Scottish public libraries to use.

Paper 11 presents the findings from a national study examining all 32 Scottish public library websites. The specific design issues being investigated related to the role of the library websites as content provider (library developed content), and access provider (links to external third party content). Analysis included: the role of the library in providing page content (i.e. content provider or access provider); the nature of the pages provided (i.e. were they digital services the user could interact with, or simply online "leaflets"; the intended audience for the pages (i.e. adults, young people, or not specified); and description of the page content, with any usability issues noted. There was found to be good access to subscribed third-party digital services across all services, however significant issues with consistency of terminology across all 32 Scottish authorities were discovered, and inconsistency with regards to guidance for

citizens who wished to use the subscribed digital service content were also found. A key finding in the paper was that the 32 services were essentially all trying to deliver the same digital resources in 32 different ways, highlighting issues around value for money, and unnecessary repetition of labour in developing digital services for the public. The paper is notable for its contribution to the literature on information architecture by providing the first national examination of public library websites from functional and taxonomical structure perspectives. The paper was the recipient of a Highly Commended award in the annual awards for *New Library World* in 2010. The paper was the last in my research to date (and in the portfolio) related to architecture design issues impacting access, and was informed from earlier work in **Papers 3, 6, 4** and **8**.

Paper 12 examined the potential for a single (national) acceptable use policy for managing Internet access in public libraries. The methodology adopted in the paper utilised discourse analysis, examining the content of the AUPs in terms of their terminology and potential difficulty for users. The AUPs examined (20 from a representative sample of UK libraries) evidenced significant issues in terms of complexity and terminology. The paper highlights that such documents are not only a potential barrier for users, but are also problematic if users do not understand the nature of the legal agreement that they are signing and the potential consequences of their actions if not adhering to acceptable use. The findings were presented at the 2014 IFLA Conference in the session for the Committee on Standards. The study was also an integral part of the PAUL project (Policy development for Acceptable Use in Libraries), funded by the Scottish Library and Information Council under its Innovation and Development Fund, and the findings informed the methodology used in the development of a draft national AUP for Scottish public libraries that was the key output of the project. The paper is also notable (within this submission of work) for transitioning from concerns with practical matters of managing access, to considerations of the impact on library users of such processes from an ethical standpoint; and informing later explorations and considerations of ethical conduct and behaviours (i.e. **Paper 15**).

Paper 13 examines freedom of expression and privacy in libraries, and how the expanding use of technologies may be impacting on citizens' rights in these areas. Considering both these rights and how they were supported by our professional values, the paper raised concerns with new service development trends, in particular the use of third-parties to deliver core services such as library management systems via cloud services. The paper also considers the ubiquitous use of Internet filtering in public libraries, and posits that such service developments are challenging fundamental user rights that the library profession should defend robustly. Again, these themes had first been explored in **Papers 2** and **7**, and are also revisited again in **Paper 14** in a broader digital ethics context. This paper critically examines these issues in depth. The paper defines the theoretical space around both privacy and freedom of expression, discusses the stated objectives of library ad information ethics towards these rights, and then highlights specific service developments that contradict these stated values. In highlighting movement of patron data to the cloud, it presents evidence that in at last one library service the acceptance of this by the library patron was the difference between them being allowed a library membership and not, despite library membership being a statutory right. This important paper brings attention to difficult questions in terms of modern library practices in the digital era, and challenges the profession to remain true to its ethical values in spite of pressures to constantly innovate. This conference paper crystallised several of the access issues that had been a major plank of my research to this point (privacy and filtering), and also expanded into more global considerations such as use of the cloud for hosting and managing digital services, and freedom of expression broadly in the digital space. Findings encourage a broader perspective with my research interests now beginning to look beyond libraries into the digital space more broadly, and considering issues of access on an Internet-wide basis rather than just in a library context. This consideration fed into the final two papers in this portfolio.

Paper 14 examines how ethical principles guide our approach to facilitating digital services, and how provision of services needs to consider the privacy and access issues that

are presented more from an ethical standpoint. This paper, which was a commissioned white paper from CILIP's UKeIG special interest group, examines how our ethical beliefs as information professionals are often challenged by the services we provide in the digital sphere, and provides a key contribution to the literature on ethical issues in ICT use for library and information professionals. Key areas covered include privacy, filtering, net neutrality, as well as the ethical principles that inform them. The paper provides an overview of a range of digital ethics issues, including an additional theoretical approach considering issues such as Lawrence Lessig's (1999) four modalities of control, as well as providing an overview of the three main ethical branches that informed library and information science ethical practice. This paper also saw me further pursue my interests around privacy and freedom of expression rights and how the profession should support them, again continuations of the concepts I had begun exploring in **Papers 2 and 7** especially. These global concerns re access issues in the digital realm that had been building in **Papers 13** and **14**, led directly to the approach of **Paper 15**, which considered online behaviours of digital citizens.

Paper 15 begins to explore identified issues of acceptable use reported above (i.e. **papers 2, 7, 10, 12, 13)** from a human behavioural perspective, drawing on classical concepts of intellectual character and associated virtuous traits, and considering in the information literacy context. As stated above in my discussion of **Paper 12**, I had increasingly been aware of the public library service being prescriptive in how users should behave online through the use of AUPs and filtering, for very practical and important reasons. However such emphasis on preventative enforcement as opposed to enlightened education led me to begin to consider how we might foster better digital citizenship in society? Public libraries do not exist in a vacuum, therefore in imparting skills to library patrons (re the use of digital services), libraries could have a more positive role in instilling good digital citizenship skills from an educational perspective? While **Paper 1** considered staff skills as being fundamentally about the applications of using a computer, and basic search skills, **Paper 15** posits that a deeper

approach is necessary, and that information literacy education has an important role. This paper sought to explore these questions further.

Specifically, the paper advances our understanding of the theoretical and practical challenges of developing intellectual character in online information behaviours, and from a novel virtue epistemology stance. The paper argues that widely reported issues of unacceptable behaviours extend information literacy education beyond considerations of ability to considerations of disposition, and identifies this as an understudied topic within information literacy education. Applying Baehr's (2011) nine intellectual virtues to two commonly cited information literacy models, the paper evidences limited presence of virtues in information literacy models, and proposes an agenda for future research. In terms of contribution as lead author, I provided the novel epistemological framework for the evaluation of the information literacy framework models, and undertook the subsequent analysis of the information literacy models from an ethical perspective. This final paper brought my research journey full circle: I began in **Paper 1** considering how to impart skills in new librarians that allowed them to help users navigate the digital realm, and I arrived at a position in **Paper 15** whereby these skills needed to be imparted from the position of creating good digital citizens. My research journey took me from the pragmatic operational considerations of how to solve an immediate professional need, to the theoretical considerations of how deeply skills needed to be embedded within society if the digital realm is to be a safe, positive place for people to inhabit and interact. **Paper 15** reiterates the important role librarians have in helping aid this, and establishes a research agenda to further progress.

This section discussed the various contributions of the 15 papers submitted as a collective work, and relationships between. In the next section I will discuss the research approach and methods adopted within the papers.

3. Research methods

This section discusses the motivations for the research programme, and the specific research methods adopted for the outputs. It also provides a reflective commentary on the theoretical approaches taken, and provides a critique of the research aims, methods, and analysis undertaken within the portfolio of papers.

3.1. Research motivations and approach

At the outset of the research, my initial motivation was to better understand the transformation of public libraries occurring due to national ICT investment programmes such as the People's Network programme; and explore the opportunities afforded from the transformation in terms of developing new, innovative, digital services for patrons. In addition, my time in practice had also made me aware that the expansion of ICTs in libraries had also raised some controversial elements. For example, during my time in practice in Glasgow City Libraries some children had accessed pornography via newly installed public library computers, and this had led to negative press coverage for the service, as well as questions raised in the Scottish Parliament (Left, 2001; Nicoll, 2001). Thus my research motivations at the outset of my research were influenced by developmental and organisational aspects of new service provision and staff skills, later evolving into interests of ethical behaviour and library ethics and values around issues of equity of access.

As an entire thesis the research undertaken could be said to be based on a pragmatic approach to research: "pragmatism as a worldview arises out of actions, situations, and consequences…There is a concern with applications— what works— and solutions to problems" (Creswell, 2008, p.245). This approach was partly due to the early career academic status of the researcher as the research programme began, but also the differing nature of the real world problems being investigated. Beginning my academic career directly from professional practice, and with limited previous experience of library research programmes, I have some sympathy with Connaway and Radford's premise that, "Many people in the Library and Information Science field may have naïve ideas or even misconceptions about the

research process" (Connaway and Radford, 2017, p.1). Whilst not considering myself as naïve, I certainly did find the research elements of work as a lecturer to be a learning curve that I was greatly aided in navigating by my colleagues with previous academic research experience. In addition, while the gamekeeper turned poacher metaphor can be over-used, moving into academia from public library practice presented both opportunities and challenges. Opportunities from the point of view of awareness from my practice of genuine challenges the profession was facing with the expansion of digital services, but also challenges from the point of view of how my researching on the sector might be perceived by practitioners. I reflected on some of the tensions between academia and practice in an article in 2010, in particular instilling a research culture in library practice (McMenemy, 2010). I firmly believe that academia and practice should aid each other in their missions, with academic research informing practice, but also practitioners being open and transparent about the challenges they face, and allowing academics to help in understanding and solving them; and in turn, academics conducting applied research grounded in the problematic context. In the domain I explored, public libraries, there was certainly a sense in my view that research was something done by others coming in from outside to do, rather than being done by the library professionals themselves, and an embrace of the research role of a professional was a significant gap in public librarians that was proving to be problematic. I concur with Feather's analysis that:

> Information professionals are working in an environment which has, directly or indirectly, been created by research-based innovation. Researchers are investigating and helping to develop that environment, the services which it provides and the techniques and technologies which it needs to serve its users. It is in the mutual interest of all the parties involved that they are all successful, and that a community of interest becomes a community of partnership (Feather, 2009, p. 180).

Thus throughout my research I was motivated to conduct research of both theoretical and practical significance. My theoretical approach at the beginning of the research programme was characteristically open, and action oriented; with initial theories and concepts drawn upon

during analysis specific to the problem being investigated. For example, in **Paper 2** I primarily drew on Sturges' (2002) work related to AUPs and managing Internet access in libraries. In the outputs related to SCRAN (**Papers 3, 4, and 8**) the papers drew on the work related to digital library design by authors working in the digital library evaluation space (e.g. Borgman (2004), Blandford et al (2003: 2004), and Saracevic (2004: 2004: 2005), including standards developed by projects such as DELOS. The papers that utilised the work on ethics in librarianship, drew most notably on the work of Hauptman (beginning 1976), Ranganathan (1963), and Gorman (2000). The theoretical concerns over-arching my work related to the role and purpose of the public library in the digital age, and how new digital service developments were impacting on this role, and the traditional values of librarianship from the point of view of equity of access to information. It was within this theoretical space that I believe my work began, and that my developing interests in the ethics of librarianship inspired a deeper, more focused and formal engagement with the theoretical discipline of philosophy, culminating in my undertaking an MA in Philosophy in 2014-2017. This latter theoretical influence can be seen clearly in the latter publications in the portfolio, most specifically **Papers 14** and **15**. The end point (in this submission) for me theoretically stems directly from this area, specifically the theories related to virtue epistemology as they apply to online behaviours and digital citizenship. This has also provided me with a strong and novel theoretical framework for further research.

In summary, my theoretical journey has taken me from applying social science research methods I was familiar with from practice, such as surveys and interviews, and with a focus on data gathering to understand a professional or societal problem or challenge and to seek to influence it, and transition more into a theoretical space informed from theories of philosophy. For example, in my examination of ethical access issues in **Papers 13 and 14** I applied research approaches from philosophy. Firstly, considering in what way restrictions on access might be said to be breaching both the rights of individuals (an approach from a deontological ethical standpoint), and the ethos of the library profession (an approach from

the point of view of mission, or philosophically speaking, *purpose*, which is an important facet of Aristotelian virtue ethics philosophy). In addition, in other research I am publishing in 2019, I have examined public library policy from a political philosophy standpoint, considering how library advocacy can be approached from an understanding of the three main branches of ethics I discussed in **Paper 14**, namely deontological, consequentialist, and virtue ethics (McMenemy, 2019).

My research approach is now primarily that of a philosopher applying philosophy techniques within the information science domain. To that end, as well as utilising ethical theories as highlighted above for future research, I will also be considering philosophical approaches from epistemology in my future work around online behaviours, especially around concepts such as inference, reason, and skepticism (Audi, 2011). In addition, future work in online behaviour and intellectual character will also be informed from the position of moral psychology, an emerging area of knowledge, which combines theories of philosophy as applied within the psychology of behaviour. In this space, I will consider issues such as emotions, virtue, and agency (Tiberius, 2015).

3.2. Methods used

In the research undertaken for the different outputs in this portfolio, no one-size-fits-all approach to research design could possibly work. The methodologies, then, were pragmatically selected and developed as appropriate to the research goals and circumstances. As Taylor et al state, “When stripped to their essentials, debates about methodologies are debates over assumptions and purposes, over theory and perspective” (Taylor et al, 2016, p.14). As the initial focus for my research programme was considerations informed from practice, I had to select the most effective research tools for each specific aspect of research I undertook in this period and beyond. This ranged from analysis of the literature and policy in specific areas, surveys and interviews, analysis of service usage logs, unobtrusive testing, heuristic evaluation, and content analysis. Table 2 below illustrates the papers presented in the portfolio, and the research method(s) adopted to produce the work:

Table 2 - Research methods that contributed to each output

Methodology used	Papers
Literature review	• **Paper 2** • **Paper 7** • **Paper 10** • **Paper 13** • **Paper 14**
Questionnaires and interviews	• **Paper 1** • **Paper 3** • **Paper 4** • **Paper 5** • **Paper 8**
Analysis of web and usage logs	• **Paper 3** • **Paper 4** • **Paper 8**
Unobtrusive testing	• **Paper 9**
Heuristic evaluation	• **Paper 6** • **Paper 11**
Content analysis	• **Paper 12** • **Paper 15**

The outputs for the thesis, then, are based on a mixture of research approaches, combining both qualitative and quantitative methods. A discussion of each approach can be found below in overview with detailed design aspects specific to individual studies discussed within the respective papers

3.2.1. Literature review

Several of the outputs for the thesis consist of critical reviews of literature on the appropriate topic. This method is utilised to arrive at a position where the key questions/challenges faced in the topic can be aired for better understanding. As Bell has observed, “The main point to

bear in mind is that a review should provide the reader with a picture…. of the state of knowledge and of major questions in the subject" (Bell, 2005, p.100). Therefore in several studies reviews of the literature were conducted to elicit the important questions facing the sector, and to identify gaps in knowledge/analysis that needed to be undertaken. In **Paper 2** the emphasis was to explore the literature around managing access to ICTs, therefore a more practical rather than theoretical literature was utilised. In **Paper 7** the literature on library ethics and values was explored to support the goals of the paper to discuss equity of access from an ethical standpoint. **Paper 10** once again focused on the practical elements of the impact of ICTs on managing public libraries, but also covered policy aspects that were relevant to the topic. **Paper 13** continued explored some of the practical dilemmas in ensuring privacy and equity of access was not impacted by new service developments, but with a focus on theoretical aspects. **Paper 14** explored a range of digital ethics issues, mixing a theoretical discussion around ethics with a practical analysis of how these issues challenged modern information professional practice.

In seeking out documents to analyse, several of the studies have also utilised library webpages as bona fide documents to analyse as data (**Papers 6, 9,** and **11**). This follows from what Denscombe has observed that websites, "can be treated as documents in their own right [they] can be treated as a form of document, and their content analysed in terms of the text and images they contain. In effect, they can be treated like online documents" (Denscombe, 2007, p.230). In reviewing the literature and analysing documents, the role of the researcher was informed not only from the literature itself, but from previous professional expertise gained as a practising librarian. In essence gaps in knowledge and areas to be identified for analysis could be partly identified from professional experience and knowledge of the sector.

3.2.2. Analysis of web and usage logs

The SCRAN evaluation study was a major project which led to three outputs and a model for qualitative evaluation of digital library services (**Papers 4, 5, and 8**). In doing so it investigated

user and staff views, and usage logs of said services. Analysis of the logs helped to develop a picture of the volume of use, and types of use. It was also useful in identifying libraries that were frequent users and those that were not. This data was crucial in providing an effective analysis of the situation.

3.2.3. Questionnaires and interviews

Both questionnaires and interviews form tried and tested methods of the survey approach to data gathering, and both were used with success as part of the research for this submission, specifically in **Paper 1**, the SCRAN evaluation study (McMenemy et al, 2005) which led to three outputs in the portfolio (**Papers 4, 5, and 8**) and the contingent valuation study (**Paper 3**). Questionnaires are admittedly one of the commonest forms of data gathering, and allow collection of both demographic facts and opinion on specific elements of a service, making them ideal for the evaluation study (Matthews and Ross, 2010, p.204). While questionnaires allowed the views of large numbers of library users and staff members to be sought, interviews with key staff offered a crucial element to the survey strategy in terms of quality responses. As Denscombe states, “Face-to-face contact also allows researchers to select carefully their potential respondents” (Denscombe, 2007, p.11).

3.2.4. Unobtrusive testing

Unobtrusive testing is a potentially controversial research method, however it has several advantages in terms of assessing service quality, and “is used to describe a form of research whereby a researcher can measure any type of customer service process by acting as actual or potential customers and in some way report back on their experiences in a detailed and, as far as possible, objective way” (Turner, 2007, p.333). The method is sometimes referred to as “Mystery Shopping”, however unobtrusive testing in library and information science is often less focused on customer expectations than mystery shopping (Hernon et al, 2015, p.58) and relates as much to procedures and service systems as it does on the qualities of personal interactions. In addition, it has been a useful tool that has previously been used effectively in the measurement of library services (Hernon and McClure, 1986: Johannsen, 2015) and was

extremely effective at allowing the same interaction to occur at each service point visited in the Internet access study (**Paper 9**).

3.2.5. Heuristic evaluation

Heuristic evaluation is method for testing the fitness for purpose of websites or other interfaces based on set criteria. In terms of the web studies undertaken that are included in the portfolio (**Papers 6, and 9**) the focus was primarily on issues of terminology, navigation, and aesthetic appearance of Scottish public library websites. As has been suggested in another study of public library websites, "Heuristic evaluation gives a good starting point for evaluation as part of the process of constructing internet services, and may also point out the most urgent needs for further evaluation" (Aitta et al, 2008, p.26). In approaching the evaluation of the library websites from the point of view of public library purpose, I was able to consider the range of digital services offered in terms of best fit for a public library service ethos, and consider how they delivered both traditional public library services, but also innovated in new areas that fit the mission of the library services.

3.3. Ability to formulate and carry out a research plan

The work undertaken and presented in this portfolio demonstrates the ability of the author to scope, plan, and undertake research projects successfully. Seven of the fifteen papers originate directly from five funded and successfully completed projects, all with the author as principal investigator. Two of the projects were funded by the Scottish Library and Information Council (reported in **Papers 3, 4, 8,** and **12**), one by CILIP's Library and Information Research Group (reported in **Paper 9**), one by CILIP's UKeIG Group (reported in paper 13), and one by the Strathclyde University Researcher Development Fund (**Paper 5**).

As Bickam and Rog posit, assessing "the feasibility of conducting [a] study within the requisite time frame and with available resources involves analyzing a series of trade-offs in the type of design that can be employed, the data collection methods that can be implemented, the size and nature of the sample that can be considered, and other planning decisions"

(Bickman and Rog, 2009) and this is a key consideration of good research design. In undertaking multiple research studies for clients such as national advisory and professional bodies, I believe that I have demonstrated my ability to successfully formulate and carry out a research plan, and demonstrated at further scale by the collective work in this submission.

3.4. Critique of research programme undertaken

In this section, I will consider the research undertaken and how it was presented in some of the papers featured in the portfolio from a reflective standpoint. I will consider the critique under three headings: research aims and objectives, research methods adopted, and data analysis and presentation.

3.4.1. Research aims and objectives

Several of the papers in the portfolio emanated from studies undertaken as part of a research or evaluation project, and as such the parameters placed on the aims and objectives were more rigid than they could have been. For instance, while the SCRAN evaluation project led to some strong outputs (**Papers 3, 4** and **8**), the initial output (**Paper 3**) was constrained by the methodology adapted for the study, which sought to measure the value for money of the SCRAN public library contract. However, by measuring the services holistically, we were able to revisit the data gathered to consider deeper theoretical approaches, and this was evident in **Paper 4** where we considered a new role for public libraries as a network of community knowledge, and **Paper 8**, where we presented a new methodology for evaluating digital libraries. This project was important in informing me that even restricted aims and objectives at the outset of a project do not necessarily restrict what you can do with the data at a later data once the needs of the client have been met.

Conversely, in **Paper 5** we see a research project where a single-minded research focus regarding an evaluation framework (namely the viability of contingent valuation) potentially limited the consideration of what could be done with the rich seam of data gathered for the purpose. With a significant survey response related to library use from almost 250

respondents, much more could perhaps have been asked about regarding how public library users benefitted from their services. While the research aims of investigating how good a fit contingent valuation was for measuring public libraries were certainly met, the ability to elicit feedback from such a high number of users was, in hindsight, a wasted opportunity. The buy-in for the research, and the support offered by the local authority concerned, meant that much more perhaps could have been asked related to satisfaction with and usage of modern public library services.

In **Papers 7**, **9**, and **11** the desk-based approach related to evaluating library websites also restricted the potential of the research, and while all papers added knowledge to our understanding of the issue, a focus on users and their experiences and expectation of the digital services might have added an entirely new way of looking at public library digital services. The aims here, then, of considering the services solely from a professional standpoint, limited the potential impact.

3.4.2. Research methods adopted

As discussed earlier in this section, my initial research methods of choice were informed from practice, and were predominantly built around the social science approaches of surveys and interviews. These methods provided significant quantities of data for the papers featured in the portfolio; however, they also limited the data in several areas.

For instance, in **Paper 1**, we surveyed library students related to their experiences of a new module we had developed to instil more advanced ICT skills. While this did produce some interesting results that helped us understand if we were being successful, it also limited the feedback we received. If undertaking similar research now, I would seek to include focus groups, to allow multiple students to discuss their experiences together, and perhaps allow us to understand better the needs of a mixed cohort. Similarly, for **Paper 5**, focus groups could have proved a richer set of data for us in understanding library use, and a similar methodological approach could have worked with library staff and users for **Paper 12**, which developed a model AUP for use in public libraries. Clearly financial and time issues would

come into play for any such expansion of methods in this way, but I am much more aware now of the potential of these methods, and would be more confident about arguing for the resources to include them in any future similar research studies I undertook. In a similar vein, for **Papers 7, 9,** and **11** usability testing of library websites could have provided a more holistic understanding of both the pros and cons of the websites I examined.

3.4.3. Data analysis, and presentation

The analysis of data in earlier papers presented in the portfolio could have been rethought to offer more insight into issues. For instance, the use of closed questions in **Paper 1** led to a limited set of data, and presentation of the data in this paper does not attempt to cross-reference data to produce more insightful findings. An example of this can be found in Figures 5-10, where we explored student difficulty with the learning materials, but do not seek to drill further into demographic data such as age, which could have provided insight into whether challenges faced by students were age related. Again, in hindsight, I would seek to provide a deeper analysis of such data for any such future studies.

In **Papers 4** and **8**, where conceptual models were presented, we could have sought to make the models clearer and perhaps have broken down each element in visual form in more detail. This is especially an issue in **Paper 8**, where Figure 1 presents a holistic methodology for evaluating digital libraries, but individual elements are hard to decipher due to image size, and over-use of arrows emanating from each model element. If undertaking such a paper now, I would break down each element in a separate diagram, and provide a commentary on each element. I would also seek to provide an interactive diagram, technology and funding permitting.

In hindsight, I would also reconsider how I presented the qualitative data in **Papers 5**, and to a lesser extent, **Paper 12**. In both I listed large quotations gathered from survey respondents (**Paper 5**) as well as AUP documents (**Paper 12**), however more insight could have been gleaned from a deeper analysis of this content, perhaps a more sophisticated form of content or discourse analysis to elicit themes. I attempted this in **Paper 12**, and with some

success, as the discourse analysis suggested issues of power in the language. However, concerning the comments from library users in **Paper 5**, we could have categorised the qualitative comments under meaningful headings rather than just present the data as a list of points with little commentary.

3.5. Conclusion

This section has provided an overview of the research approach taken within the featured papers, and provided an account of my theoretical journey as a researcher. It has also provided a reflective critique of the research undertaken and what I might have done differently if the same research programme was being undertaken now.

4. Contribution to knowledge, future research direction, and concluding remarks

This section discusses the specific contributions to knowledge the research programme makes, reflects on my future research plans, and concludes with a summary of the portfolio and my research journey to date.

4.1. Contributions to knowledge

The research presented in the portfolio makes several important contributions to knowledge. In summary:

1. Developed and tested a model for the holistic evaluation of public library digital services
2. Developed a conceptual network model for public libraries in the digital age, proposing a new role as an access point for community knowledge
3. Advanced our understanding of the impact of ICT on professional ethics and practices in libraries, in particular related to issues of equity of access
4. Developed a single National Acceptable Use Policy for Scottish public libraries
5. Advanced our understanding of the theoretical and practical challenges of developing acceptable ethical practices in online information behaviours

Each is discussed below.

4.1.1. Developed and tested a model for the holistic evaluation of public library digital services

A key output from the SCRAN project was the production of a holistic evaluation methodology for digital library services. This is first presented in **Paper 4**, and further refined in **Paper 8**. In presenting the adapted methodology for SCRAN as an evaluation model, the paper expanded the potential beneficiaries of our original research, enabling the model to be applicable across different kinds of digital library services. A key innovation in the generic model is the focus on value for money and business model within the digital library itself, something that up until MEDLIS had not been an element of other evaluation models. Given the enormous expense of digital library services to the budgets of buyers, this was a crucial element of whether the digital library served its purpose or not. We also felt that given we measured the SCRAN value for money effectively, this lesson could also be imparted onto other digital library evaluation programmes.

4.1.2. Developed a conceptual network model for public libraries in the digital age, proposing a new role as an access point for community knowledge

Another output that emerged from the SCRAN study, after further analysis and development, was a conceptual model for public libraries in the digital age dubbed *Public Library 2.0*. Inspired by Ranganathan (1963) in the first instance, and aware that gaps existed in terms of the gathering of community knowledge, it was obvious from the SCRAN study that the commercialisation of access to this kind of information posed access barriers for patrons to their own community knowledge and heritage. The SCRAN study recommended that a:

> …distributed environment incorporating the forthcoming Creative Commons license for Scotland will offer an opportunity to present digital material outwith a centralised database structure. The improvements in ICT processing power, connectivity, and skills development mean that ownership of digital media can be harnessed more effectively locally (McMenemy et al, 2005, p.45).

Public Library 2.0 was a conceptual model of how this could be achieved based on the traditional values of librarianship. To date (October 2018) the paper has been cited over 100 times according to Google Scholar.

4.1.3. Advanced our understanding of the impact of ICT on professional ethics and practices in libraries, in particular related to issues of equity of access

At the starting point of this research programme, ICTs had been introduced into public libraries on an unprecedented scale in the previous 5 years. The challenges this presented to library services were inevitably far greater than the significant logistical and service issues related to the installing of computers, training of staff, ensuring sufficient bandwidth, and the like. More fundamental were the challenges to professional ethics that managing access to ICTs presented to libraries. Issues such as Internet filtering, and barriers to access from restrictive policies, challenged fundamental tenets of librarianship, and I explored these issues in several of the papers presented in this portfolio (**Papers 2, 7, 9, 10, 11, 13, and 14**). In analysing

these impacts, uncomfortable issues were raised that challenged how we might deliver these services while remaining true to our values.

Specifically, my outputs related to ethical issues have been generally well received, with **Paper 2** forming part of a book that is utilised in the *IFLA public library guidelines* (Koontz and Gubbin, 2010), while the book that **Paper 7** is selected from has been dubbed "seminal" by Robert Hauptman (Buchanan and Henderson, 2008, p.2) whose work was the main catalyst in the rise of library and information ethics as an important area of LIS research in the 1970s (Hauptman, 1976).

4.1.4. Developed a single National Acceptable Use Policy for Scottish public libraries

The development of a single, national AUP can be directly traced to the pilot study reported in **Paper 12**. Research had identified the issues with the Acceptable Use Policies (AUPs) of Scottish public libraries in several areas (Gallagher and McMenemy, 2015). For instance, the length of documents was anything from 1 page to 17, with an average of 3.8 pages. In addition many policies fell down in informing users about what acceptable use of facilities entailed, preferring instead to focus on what not to do and the punishments that would result. Other issues included vagueness around informing users about content filtering taking place, with 6 of the 32 not mentioning filtering in the AUP at all, despite 31 of 32 using filtering to manage access. In **Paper 12**, the pilot study helped develop the methodology used in the PAUL project[1], and this was further expanded to include surveys of public libraries related to their design of AUPs and the potential of adopting a single AUP, as well as piloting of drafts of the model AUP to librarians across public libraries in Scotland.

To date, the AUP has yet to be adopted by any Scottish public libraries, and the lack of engagement with the research content from public library services mirrored earlier reticence experienced by myself and other research on the FRILLS Project when investigating forensic readiness in public libraries for any abuse of ICTs (Poulter et al, 2009). However, it is hoped

[1] Policy development for Acceptable Use in Libraries. http://www.publiclibraryresearch.com/paul/index.html

by making the materials freely available that libraries can adopt the AUPs at the appropriate time for them.

4.1.5. Advanced our understanding of the theoretical and practical challenges of developing acceptable ethical practices in online information behaviours

Paper 15 provides the first critique of information literacy models from a virtue epistemology standpoint, and it raises potential questions for information literacy from the point of view of pedagogy, as well as contributing to the broader literature on character education. This research is at an early stage, and as such, an expanded research programme is necessary to understand fully the implications of virtue epistemology and intellectual character development within information literacy, and to maximise the contribution to knowledge further. A virtue epistemology approach to information literacy focuses on intellectual character, and in this theoretical space, this entails critical thinking skills being conceived more as an epistemological issue rather than a practice. **Paper 15** poses a challenge within information literacy education by arguing that cultivation of character in children to foster virtuous citizenship must now consider behaviours in both the physical and digital space, as well as the concept of digital citizenship more fully from a virtue epistemology perspective.

The key concern addressed in the research was the prevalence of dysfunctional online behaviours in children and how these behaviours could potentially be influenced through a virtue epistemology approach to information literacy pedagogy and instruction. The paper introduced virtue epistemology into information science literature for the first time, and as such provides a potentially significant theoretical turn in proposing a more fundamental approach to information literacy instruction through the imparting of intellectual character into children. The contribution to knowledge, then, has both potential practical and theoretical dimensions. Practical contributions include the challenge to amend information literacy programmes to encompass a focus on intellectual character from an epistemological standpoint rather than a skill based one, with the resulting challenges this presents in terms of new programmes and skills needed by information literacy practitioners. Theoretical challenges potentially move

information literacy instruction into a potentially deeper pedagogical domain, the field of character education, with its focus on the classical concept of virtue. Much more work needs to be done to unpack these concepts, and a fuller analysis of the information literacy research and practice base is necessary to see how and where a virtue epistemology approach may fit in.

4.2. Future research development and plans

The research programme began with consideration of the skills needed by librarians to best serve patrons in the digital age, as well as how librarians could design and deliver a range of innovative new digital services effectively. It then considered how these new innovations were impacting on the ethical practice of librarianship and what these impacts might mean for our ethos in terms of equity of access to digital services, before finally focusing on how we can best impart the right skills in young people for navigating the digital world. It is this latter concern that formulates the key strand of my five year research plan going forward. The potential of librarianship, and information literacy instruction in particular, is significant in relation to user instruction. In a world of ongoing concerns with information behaviour online, I have now argued that new approaches to information literacy education could be developed to instil deeper critical thinking dispositions in the population. As Mattson has pointed out, "Today we are citizens of digital communities as well-communities that may include people we've never met face to face" (2017, p.3). Public libraries serving their communities now need to embrace this important element of modernity by going beyond the idea of instilling merely skills, and instead consider how they might help to formulate dispositions in users. Therefore, no longer can managing access to digital services simply be about telling users what *not* to do via the tools of AUPs and filters, but must include taking a stance on what dispositions are necessary to *cultivate* good online behaviours.

Fundamentally, "thinking critically when faced with digital dilemmas" is a vital aspect of digital citizenship and that the challenge presented is not "just about rules and procedures; it's about character" (Common Sense Education, 2017, p.iii). Crucially, Sockett argues that

what is needed in modern society “are not people with ‘critical thinking’ skills but people who are critical thinkers” (Sockett, 2012, p.xi). The difference between the former and the latter is epistemological and the “[u]nderstanding such epistemological puzzles through content in which dispositions can develop, not the trivia of memorizing the oft-forgotten right answer, must therefore be education’s central target” (Sockett, 2012, p.xi). This cultivation of virtuous intellectual dispositions in children, and the building of character that results, are the cornerstones of a virtue epistemology approach to education, and it is in this space that I wish to pursue the next stage of my academic research. Theoretically, my parallel studies (to the final stages of this PhD work) in obtaining an MA in Philosophy between 2014 and 2017 have given me a strong conceptual background in philosophy and ethics that I can now apply in my future research.

4.3. Concluding remarks

The research presented in this portfolio maps the initial stage of my academic career, from first entering academia from practice in public libraries, and charts my development as a researcher with initial open organisational and professional concerns over service delivery and design, through to more theoretical work around professional ethics, and acceptable use of digital services by patrons. In essence, my research journey came full circle: it began by considering the skills needed by librarians to help patrons navigate the challenges of the digital realm, and it ended in a similar space, but emphasising the importance of cultivating dispositions, and not merely rote-learned skills. Crucially, also, the theoretical concerns expanded and deepened significantly on my research journey. In the first paper of this portfolio the intention was to take library staff “beyond ECDL” in terms of their training in ICTs from a mere applications-based skillset. In the final paper the goal is to take patrons’ knowledge beyond mere applications and search skills and into more values-based and guided online behaviours that result from a dispositions-based approach to information literacy instruction and digital citizenship.

At the outset, my research goals were exploring access issues from an organisational (policy) and information architecture (design) perspective, ongoing work led to fundamental concerns over acceptable use from a user and ethical (behavioural) perspective. Significant access issues were initially discovered in relation to inconsistent digital service categorisation in architectural design, and restrictive policies and procedures. Further studies identified acceptable use policies that were not fit for purpose, and Internet filtering systems blocking legitimate content. Issues were also identified around the use of third party service providers, and the impact on user privacy that results, as well as what constituted acceptable use from the point of view of library patrons. Issues of public awareness of appropriate ethical behaviours then led to a critical examination of approaches to character education in information literacy education, notably identifying a lack of explicit attention to important aspects of ethical education in some information literacy frameworks and models, and establishing a research agenda for further work. The program of work presents a connected record of research, illustrating my research journey from new academic appointed directly from practice, into an experienced researcher able to work within deep theoretical disciplines.

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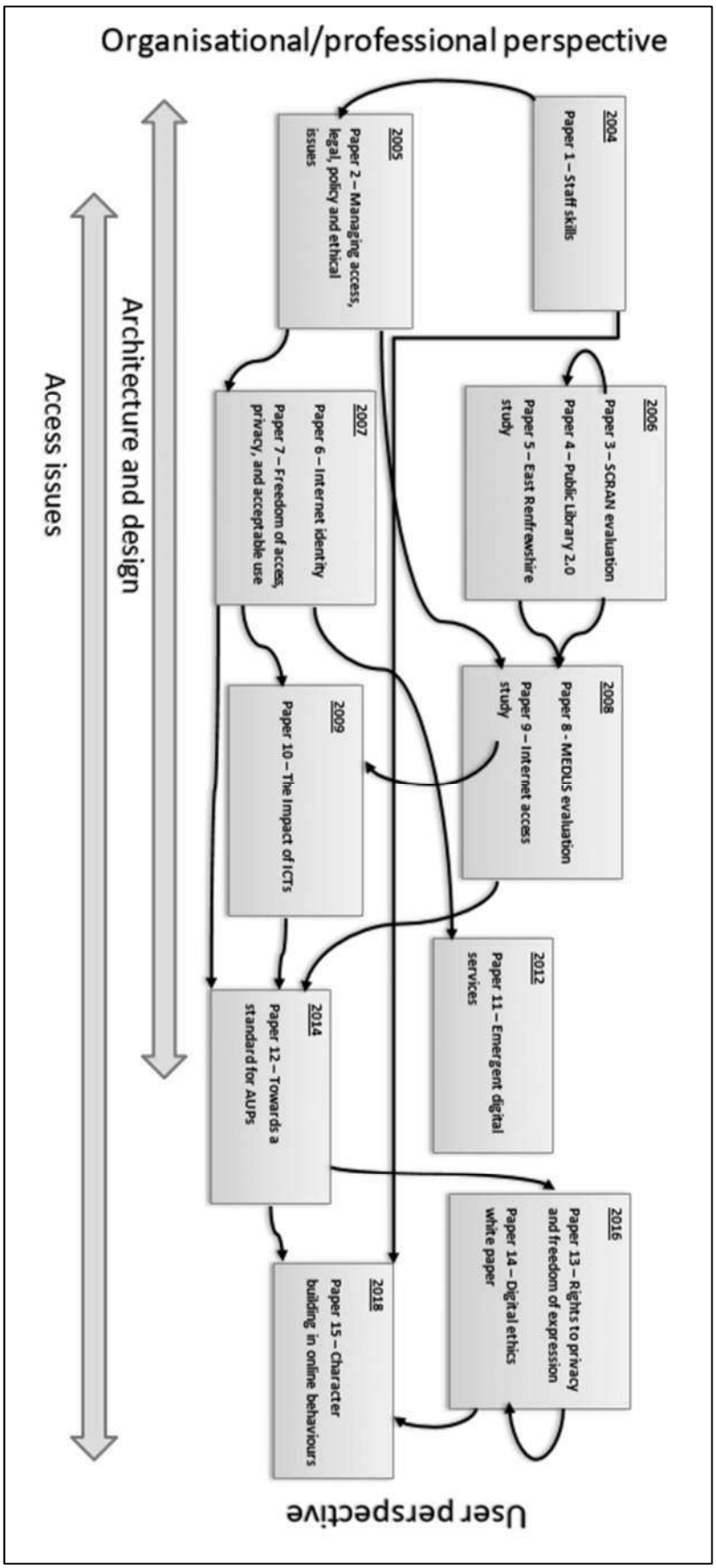
Appendix one - thematic timeline of papers with links



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Paper 1

Poulter, A. & McMenemy, D. (2004). Beyond the European Computer Driving Licence: basic and advanced ICT skills for the new library professional. *IFLA Journal*, 30, pp.37-46.

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Beyond the European Computer Driving Licence: basic and advanced ICT skills for the new library professional

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Alan Poulter, whose previous career includes working at the British Library and the Science Museum, has been a university lecturer in library and information science for over twelve years. He has published books and numerous academic and conference papers on IT-related topics (including the first paper on teaching multimedia in LIS at the United Kingdom 'Multimedia in Libraries' conference in 1993). E-mail: alan.poulter@cis.strath.ac.uk

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Introduction

At the Graduate School of Informatics at Strathclyde University (in Glasgow, Scotland), the Postgraduate Master's courses in Information and Library Studies (ILS) and in Information Management (IM) were recently redesigned. One major objective in their redesign was to position ICT (information and communications technology) in general, and multimedia in particular, at the core of the curriculum for students on both courses, one with a library/information service focus, the other with a business focus.

As part of the core component of each course, modules were added to address the issue of ICT skills. Fundamentals of Information and Communications Technology (FICT) was introduced for the ILS course, and Fundamentals of Business Information Technology (FBIT) was introduced for the IM course. The teaching for both modules was identical, the only variation was in the assessment; for the ILS course an assignment related to spreadsheets and databases focusing on user numbers and issue statistics was provided, whereas for the IM course the assignment was based around hotel occupancy rates.

The rationale for this sharing of ICT content was that student and employer needs in both areas were seen to be nearly identical. The European Computer Driving Licence (ECDL), the standard measure of basic ICT competence, was seen as a baseline for the new modules and was incorporated as an adjunct to their academic nature.

The ECDL is an internationally recognized computer skills certification programme spanning some 60 countries. It is also known as the International Computer Driving Licence (ICDL) for countries outside Europe. It was launched in 1996. Its objective is to:

> raise the level of core knowledge about Information Technology (IT) and computer skills competency on a global basis and provide an internationally recognized certification. (http://www.ecdl.com/main/about.php)

The ECDL/ICDL consists of seven modules:

- Basic Concepts of IT
- Using a Computer and Managing Files
- Word Processing
- Spreadsheets
- Databases
- Presentation
- Information and Communication.

When all seven modules are completed a candidate receives the European/International Computer Driving Licence. While the ECDL is an accepted basic ICT qualification in libraries in the United Kingdom, the FICT module was intended to take ILS students beyond ECDL, into deeper skill sets that would be vital to their future professional careers.

Aims of the FICT module

The main aim of FICT was to position multimedia as the core of ICT, rather than merely the latest component. It was hypothesized that students think of ICT and multimedia as near synonyms. The web and CDs/DVDs are intrinsically multimedia in nature, so students should have recognized this. All popular operating systems also come with software to display, and give basic editing control over, multimedia. Hardware devices to create and manipulate multimedia (scanners, digital cameras and digital audio players) are replacing their analogue counterparts.

A related aim was to use the web and HTML as the delivery medium for multimedia, to keep multimedia integrated with mainstream IT. Previous to the web, multimedia required special software applications to create and deliver multimedia shows (e.g. Hypercard, Toolbook, Director, etc). The output files from these specialized multimedia packages could only be viewed through player versions of the producing packages and would not integrate with any applications. These packages were inherently complex as they used metaphors like books (Toolbook) or timelines (Director) to organize multimedia. They inevitably involved a certain amount of programming to synchronize displays and create effects. Because of this multimedia had to be taught in a separate module only to students with the necessary technical skills to cope. This always ran against the grain as all students felt they wanted to create multimedia, but what seemed simple to appreciate was too difficult in practice to produce.

It was hypothesized that these problems would not affect multimedia delivered via web pages. First, delivery was usually just a matter of having a link to a file containing audio, video, etc., and the appropriate plug-in or helper installed for that file type. Secondly, navigation between pages was handled by simple hypertext links. Obviously, professional, 'filmic' type multimedia presentations are impossible, but at least the web democratizes multimedia.

On the theme of democratizing ICT skills, of making them accessible to all, the module was intended to accommodate students beginning with different skill levels but attaining a common high skill level by module end. There is an assumption that has been around for as long as ICT skills have existed and that is that one cohort of students 'in the future' will arrive not needing ICT skills! This has always proved to be fallacious, for a number of reasons. ICT skills are a moving target and expertise, say, in the use of MS-DOS commands, is now of historical interest only. People tend to pick up skills with particular popular applications (e.g. web browsers, word processors) but lack the need to do the same for applications that are of less immediate interest to them (e.g. web page creation tools, databases) and which typically have much steeper learning curves. Also it is ironic that most people have no idea of the range of applications and functions that come with their computers, let along the vast range of applications available for download or purchase!

Thus student cohorts continue to arrive with a mixed range of skills, from no skills to expert. The approach taken on this module was to deal with this range by aiming learning materials and delivery at the students with basic or non-existent skills. The pragmatic reason was that this was where the greatest need for improvement lies. Students with existing skills were to be accommodated by adding 'advanced' material to each content 'chunk' on the module. Thus those who progressed quickly through the basics were given something to engage with.

A related aim was to start the module with basic content (e.g. file formats, saving and retrieving files), but to progress through to advanced levels of skill in vital topics (e.g. troubleshooting, installing/removing software) later. The FICT module at its heart consisted of nine successive two-hour computer laboratory class sessions:

> Week 1: Essential ICT Skills – using a web browser, introduction to ECDL, copying/deleting and naming files, using an emailer, netiquette, using a newsreader.
>
> Week 2: Searching the web – basic search engine use, basic query construction, judging information quality on the Internet, advanced searching (reference engines, meta engines, directory engines, robot engines, specialized engines, searching discussions).

Week 3: Introduction to online databases – searching Lexis-Nexis, finding UK/European legal information.

Week 4: Introduction to HTML and JavaScript – creating HTML with a text editor, basic page formatting, images, links, tables, frames, basic scripting in JavaScript.

Week 5: Multimedia – image formats and basic editing, sound and video formats, embedding, streaming media, file compression, downloading and installing software.

Week 6: Security and troubleshooting – desktop management, shortcuts, installing/uninstalling hardware and software, backups, encryption, anti-virus software, troubleshooting.

Week 7: Spreadsheets – designing worksheets, entering data, addressing, constants and formulae.

Week 8: Databases – viewing/adding/editing/sorting data, data queries, producing reports, linking tables.

Week 9: Introduction to Dreamweaver – basic page formatting, images, links, tables, frames.

A sequence of lectures accompanied most of the above sessions, delivering an overview of theory and concepts and examples of use. Some lectures contextualized ICT in future work situations in which an information professional would need guidance. For example, the case for and against Internet filtering was explored, along with technical options available.

It is proposed that the above sequence of computer laboratory class sessions offers a logical progression from simple to complex skills. From previous student cohorts it was noted that basic file management skills in terms of being able to locate named files in particular directories on particular devices were problematic. For example, with previous cohorts, tutors had found on a later module that students could not copy all the data files for a set of web pages constructed for an assignment from a directory on a hard disk to a floppy disk. Another problem noted from past cohorts related to web searching. Web searching is a skill students think they possess, but merely searching using their favourite search engine must be shown to be woefully insufficient for a would-be information professional. Equally, being able to search online databases is a core skill of an information professional and these need to be contrasted to web search engines which are free, easier to use, but much less reliable in terms of quality.

One exception, in terms of following an easy to hard progression, is the teaching of HTML by hand coding before using a page creation tool. Hand-coding first was decided upon so that students would fully appreciate the underlying nature of web pages, that is as content marked up for display by tags. Understanding how tags work would mean that students could ascertain how any web page displays by viewing the HTML source of that page. When a web page creation tool (in this case Dreamweaver) was introduced, students hopefully would see how much time it saved them but also that it had disadvantages in taking away some level of 'micro' control, which they could regain by simply adjusting tags themselves.

The approach of starting with simple web pages, and then adding features, meant that the freedom and creativity engendered by the web would be exploited to the full, by following up the inclusion of images on web pages with more complex media items. This has already been stated as the most fundamental aim of the module, and would be achieved by giving students enough HTML capabilities and access to plentiful multimedia resources to allow them to draw themselves into the joy of multimedia creation.

This typically is where many ICT skills modules stop, but it was decided to take this one to a new high level. It is not necessary to be able to fix or solve every computer problem but some knowledge of how to determine the nature of the problem and the basic steps one should take to apply 'first aid' are critical skills. Fundamental to good computer 'housekeeping' is being able to manage the desktop and add and remove hardware and software. Mastering this forms a sound platform on which to build basic troubleshooting skills. These involve using information from internal Help files and external sources on the Internet to diagnose a problem and possibly to try simple remedial measures. If a fault cannot be solved it is more professional to be able to say what it might be than simply leave everything to someone else. Many computer problems are of a sufficiently trivial level to be solvable by even basic troubleshooting skills (e.g. cables not properly connected, etc.).

Linked with this topic it was noted that most students from previous cohorts had shown very low levels of security awareness. Student excuses in the past for missing assignment deadlines had related to losing files because of a disk failure or a virus. Backup routines and the use of virus scanners were thus included. Students also had not known that 'deleted' files could be recovered or how to password encrypt sensitive information.

Coverage of applications was left to last, so that skills relating to understanding computers as complex systems would serve to contextualize them. Spreadsheets and databases are essential information-handling applications and both were covered. Word processing and presentation software would be covered by the ECDL materials and students were to be expected to attain competent skill levels in the use of these packages by using a self-tutoring package.

Another important aim was to focus on problem solving and conceptual model building in computer laboratory class sessions. Based on past experience it was felt very wrong to teach ICT by rote learning of functions, for example, by describing to the student in detail every action and mouse click necessary to do a particular task on a computer. This approach was very bad for 'deep learning', as the student was drilled in the actions needed to do a particular task in one way. While effective in terms of training, if the task or the system used was only slightly different, then following through a set sequence of actions would hit an unexpected junction at some point. When using the 'deep learning' approach, active learning materials like worksheets should encourage the students to consider what to do at vital stages. If the student succeeds then they would have 'deep learned' a vital concept. If the student failed then a tutor would be the next level of 'teaching resource' to help in deep learning.

Another aim was to develop teaching materials that were independent of special, dedicated computer laboratory facilities, to universalize their use. All ICT skills modules have the problem of having to be delivered in a computer laboratory. The problem with computer laboratories, ironically enough, is that they are primarily set up not solely for meeting teaching needs but for security and ease of maintenance within a technician and resources budget. The same computer laboratory might have to support a diversity of modules, which means that some of those modules might find that the platform and applications presented in the computer laboratory were optimized for other modules.

Thus it was decided to develop teaching materials that were as universalized as possible, in that they were not tailored for a particular version of Windows and could accommodate certain problems with the underlying systems. For example, students might be warned about possible installation problems in a protected environment.

Another aim, which is linked to the preceding one, is that universalized learning materials could be used at other times and locations by students. There are sound didactic reasons for expecting students to work in their own time. Students must not take the view that timetabled teaching time, even in a computer laboratory, is all they must put in to master a topic. All modules expect that students should put in extra time and just because students are not in a computer laboratory should not mean that they are unable to further their ICT skills via learning materials. It should not be forgotten that students should be using ECDL materials to pick up the basic skills they impart and that students would be encouraged to self-assess themselves on these skills using a self-teaching ECDL package, available on and off campus to students.

The last aim must relate to assessment of skills learned, in that the module must formally assess student learning and skills with a comprehensive range of methods. It was hypothesized that different types of assessments would be needed on this module. A multiple-choice test would test breadth of comprehension of technical terms and problems. Short answer unseen examination questions would test overall comprehension of the range of concepts. Seen long examination questions would probe the depth of student's knowledge in a crucial area. Finally, student application skills would be revealed by an assignment involving solving a realistic case study with real data.

Evaluating the FICT module

Since this module was a radical departure from previous modules a comprehensive evaluation system was implemented. Online questionnaires were designed for the students to complete before each computer laboratory session. The questionnaires were designed to gauge the students' views on the previous week's computer laboratory session, the rationale being that with a week to prac-

tice and enhance the skills covered, the student should be able to make a more reflective analysis of the content. Note that feedback was also obtained from the IM students following the FBIT module, the identical twin of FICT.

In addition to this weekly feedback, a final questionnaire was conducted in early 2003, two months after teaching on the module had ceased and all assessment had been undertaken. Again, this timescale was adopted to facilitate reflection on the parts of the students and also to take into account any skills used by ILS students while on the compulsory placements associated with the course.

Weekly Feedback

While analyzing each individual lab session one week after students had participated seemed a good idea, it was found that as the weeks passed a 'questionnaire fatigue' set in. This was something that was not expected, as the questionnaire was designed to be quick and easy to complete. However, there also seemed to be a correlation between the difficulty of the content in the laboratories and the willingness of students to complete feedback on them. Coupled with the added pressures of assignment deadlines later in the semester, all led to the feedback in the first few weeks being relatively across the board in terms of student numbers, while late in the semester, the response was low. Figure 1 illustrates this point clearly.

While attendance at computer laboratory classes remained relatively constant, the survey responses dwindled as the semester went on. In terms of evaluation for next year, the tutors have decided to limit the questionnaires to one or two in the first semester to try and achieve as large a response as possible.

In terms of the specific computer laboratory sessions, the one on web searching reflected a sense of confidence amongst most students, although the majority of students rated it as either useful or very useful, based on a response rate of two-thirds of the combined cohorts (Figure 2).

In stark contrast with this was the feedback on the multimedia laboratory class, albeit on a much smaller response rate of around a third of the total class. The overwhelming feedback from students was that they did not find this laboratory class as useful as the web-searching laboratory class, even though the multimedia laboratory

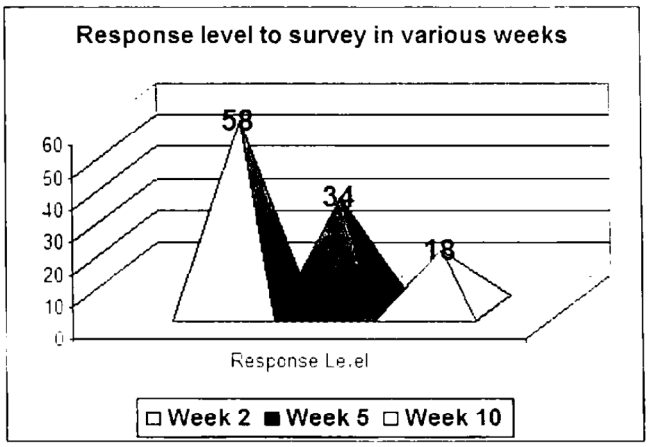

Figure 1. Response rates to lab feedback.

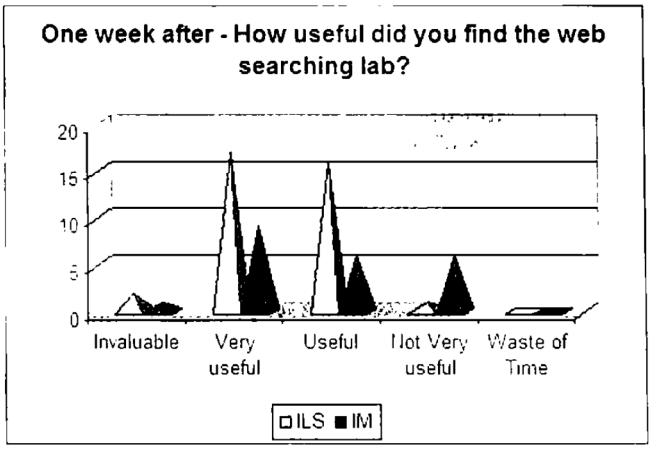

Figure 2. One week after. How useful was the web-searching lab?

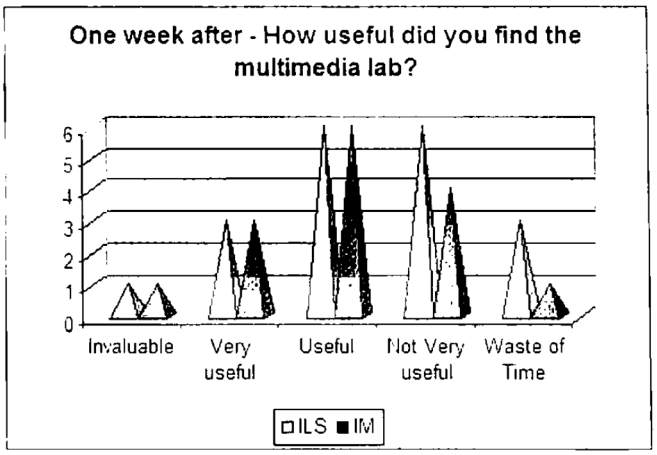

Figure 3. One week after. How useful was the multimedia lab?

class was imparting to them vital skills in understanding the delivery and use of multimedia information (Figure 3).

The response does seem to indicate something the tutors felt during the sessions, that there is a general sense of confidence in students based around the use of web browsers generally, but a

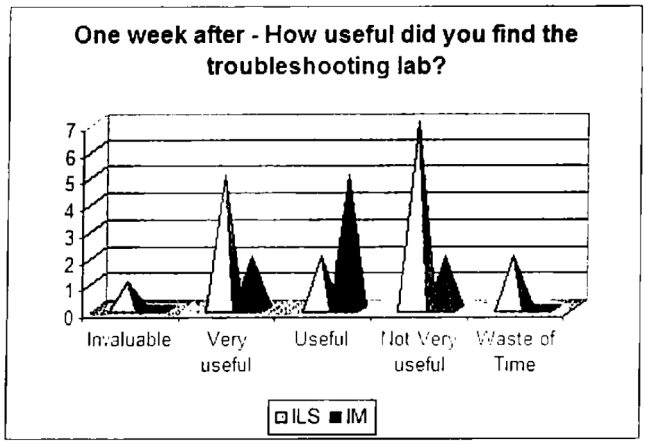

Figure 4. One week after. How useful was the troubleshooting lab?

distinct lack of understanding of the importance of multimedia in this area. It has to be noted that part of the difficulty relating to this laboratory class was technical in nature; the laboratory used was a general purpose university computer laboratory and as such was locked down extremely tightly for security purposes, not allowing plug-ins, for instance, to be downloaded or used appropriately. This led the tutors to suggest that students attempt some activities either at home, or in the local public library or cyber centre, and this suggestion was not warmly received by the students, and may reflect some of the frustrations they felt. Some of the general comments on the multimedia lab are given below:

> Most of the things in the lab didn't work due to the computer configuration although I'm sure they'd have been good to see.
>
> Very frustrating when you could not download the plug-ins. This prevented us from seeing how the multimedia functions actually worked and wasted a lot of time.
>
> I suppose it was quite useful, but with so many things not seeming to work properly in the lab, it just became frustrating.
>
> I think the topics covered are important and there were too many things that could go wrong with the exercises that we were unable to do in the lab. What is the point of having a two hour session with staff on hand to help if the most complex part of the labs has to be done unsupervised, I have a computer but many of my pals on the course don't what are they supposed to do with the continual message: (NB NOT POSSIBLE IN LABS)!

This is a difficult problem to overcome, as the content is believed to be vital, yet how that content is taught becomes problematic since the tutors do not have control over settings and configurations in laboratories across campus. It is felt that the approach next year will be to more strongly encourage students from the start to attempt the laboratory classes outside of the university facilities as well as inside.

Exactly the same problem was encountered in the laboratory class dealing with ICT troubleshooting and security, as ironically the security in the laboratory caused much of what was intended for the content to be unworkable, even though the information being communicated was absolutely vital. More than half of the ILS students who responded rated the laboratory class as either not very useful or a waste of time, and again this is believed to reflect frustration at the technology rather than frustration at the content. Given that the ethos of the particular laboratory class was to encourage students to troubleshoot on their own and not panic, the responses to the questionnaire were disappointing, as they tended to reflect a tendency on the part of the students to do the opposite (Figure 4).

One of the more disappointing components of teaching modules based so much around multimedia and troubleshooting is that it is sometimes difficult for the students to interpret the linkages tutors attempt to make because they do not have the practical experience in the front line to understand just why the skills taught are important. As mentioned earlier, while many feel comfortable surfing the web or using applications, many still fail to grasp that the role of the information professional must extend beyond this into the realms of supporting users in understanding and manipulating the technology. The tutors feel that from the beginning of the modules next year a strong message to students is needed that being an information professional is not solely about finding information, it is also about managing access, and understanding the technology used to manage access.

Final Questionnaire

The final post module questionnaire was undertaken two months after teaching and assessment on the modules had been completed, and after students on the ILS course had completed their compulsory placement in libraries and information services in Central Scotland. In terms of response to this questionnaire, 31 of the 54 ILS

students responded, and 12 of the 28 IM students responded. This equated to just over half of all students on the combined courses.

The first question asked related to how successful the students felt FICT and FBIT had been in developing their ICT skills generally. Figure 5 indicates the responses to this question cross-referenced with the skills the students believed they had before beginning the modules:

As can be seen, the biggest improvements seen were in those students who were already comfortable with ICT generally; those students who joined the modules with average skills or who knew a little seemed to gain most from the modules. Encouragingly for the tutors involved in the modules, no one who responded indicated that they felt the modules had no effect on their skills. One student's comments on the modules did seem to contradict the findings above, however:

> I think the course was more useful for those students with less ICT experience and the labs were good in terms of allowing these students extra support. I understand that it was necessary to ensure we were all at the same level but felt personally that I was covering a lot of old ground with the sessions.

The next question related to how useful FICT and FBIT had been across the curricula of both the ILS and IM courses. It was always the intention that the content of the modules would support other modules taught in the Graduate School, and this does seem to have been borne out in the results of the questionnaire (Figure 6).

Moving on to the specific lab components of the modules, the students were asked to rate each lab in terms of difficulty. There were three options to choose for each lab:

1. straightforward
2. managed with practice
3. extremely difficult.

Relating this to specific topics, the first session faced by the students was related to essential ICT skills, which involved understanding the desktop, manipulating files and filenames. This session was deemed to be predominantly straightforward by most respondents (Figure 7).

The subsequent sessions on web searching and using online hosts were similarly received by students and reflect the fact that students do come to the modules with a basic grounding in web technologies and a perception that they can surf the web well.

The feedback on the sessions where students were asked to either create, or understand the creation of multimedia content proved to be more

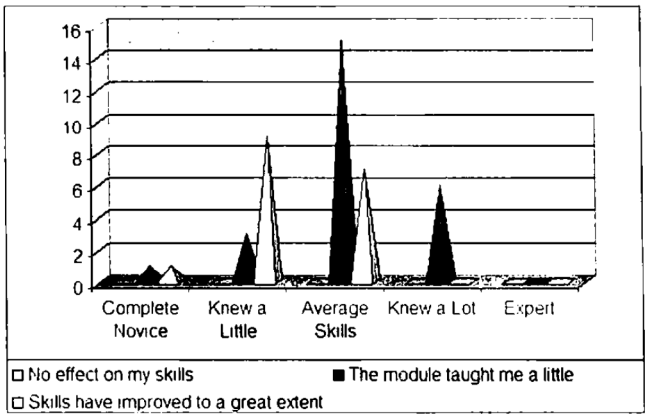

Figure 5. Have FICT/FBIT improved your ICT skills?

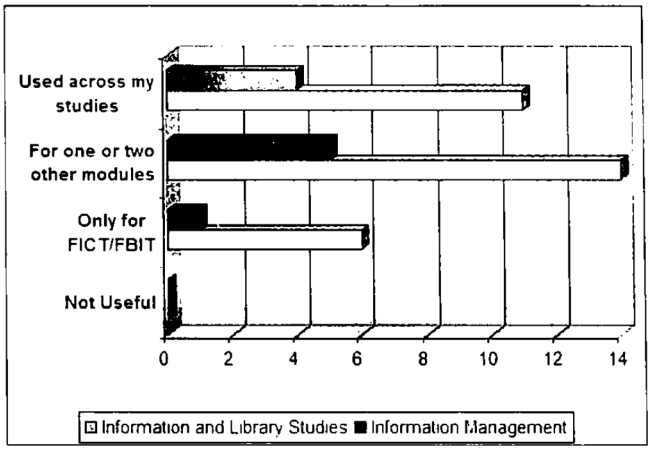

Figure 6. How useful have FICT/FBIT been across your other studies?

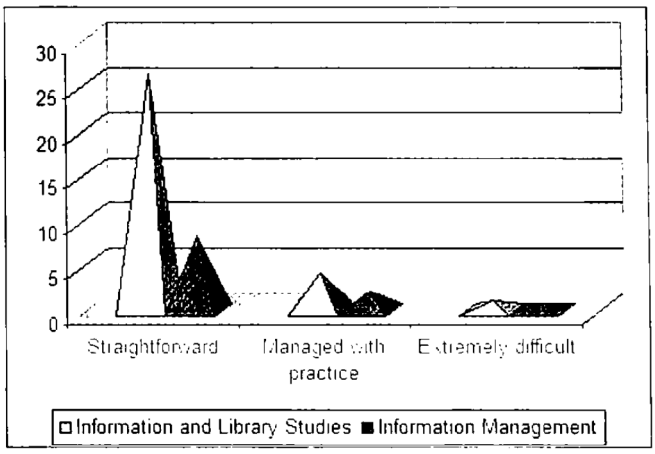

Figure 7. Difficulty with session on essential ICT skills.

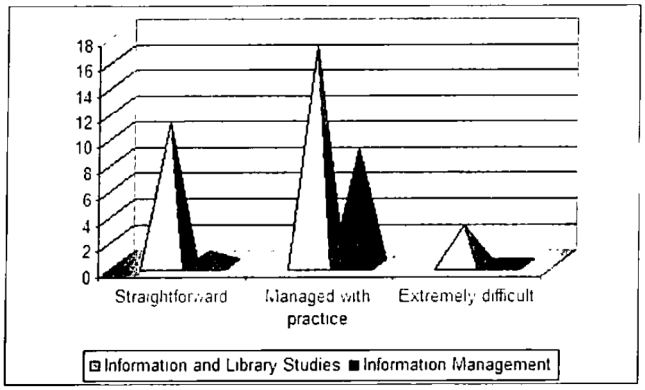

Figure 8. Difficulty with session on basic HTML.

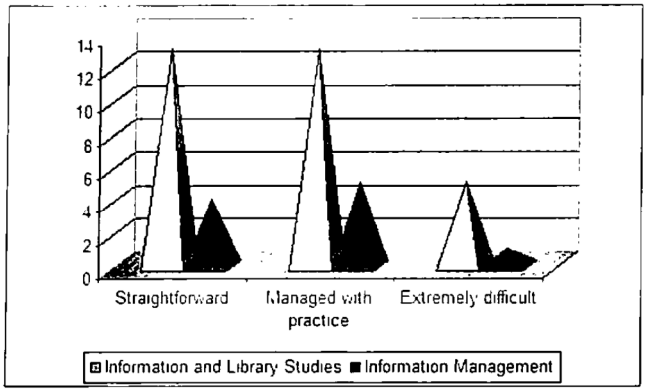

Figure 9. Difficulty with session on multimedia.

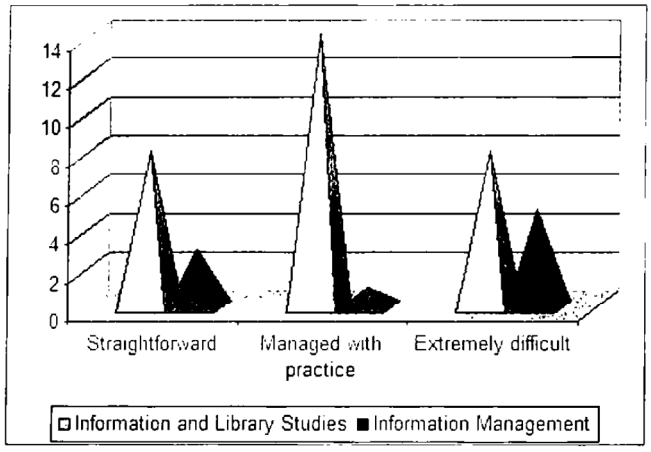

Figure 10. Difficulty with session on ICT troubleshooting.

problematic. A session on basic HTML was rated in the following way (Figure 8).

A session on multimedia, which involved students gaining experience in using streaming media, graphical file formats, audio and video formats, proved also to be challenging for many students, suggesting that while students may feel confident using web technologies and generally surfing, more emphasis needs to be placed on their ability to manipulate and understand the importance of these formats for future information delivery (Figure 9).

Another challenge presented by the computer laboratory session on multimedia was the technical infrastructure of the computer laboratories themselves. The security levels on the computers in the campus laboratories made certain activities impossible, such as installing and configuring plug-ins such as Real Player, and while these activities were written into the laboratories for the students to attempt, many could not undertake the tasks and subsequently became frustrated. The same result led to an even more problematic situation for the lab on ICT troubleshooting, and the results from the questionnaire reflect the difficulty with this issue. One student commented that:

> The Troubleshooting module needs more one-to-one tutoring, although in a job situation an IT support system would be available, hopefully!

Notwithstanding the ever-optimistic outlook of the new generation of information professionals, there did seem a tendency among many students to fail to realize that the management of ICT was becoming much more part of their role in an organization, and that the ICT support may not be there when necessary. The skill set is no longer one solely of an applications-based focus but the ability to understand the new modes of delivery, and troubleshoot them where necessary. Figure 10 indicates how difficult students found the session related to ICT Troubleshooting:

The vast majority of students across both the ILS and IM courses found that this session needed extra work, which again reflects the need to concentrate on this most crucial of skill sets. The ability to support the user in the use of ICT extends beyond mere support of application packages and web browsers.

Library placements

A crucial aspect to examine for the module tutors was how much of what was taught on the modules was relatable to real world scenarios, and to this end, questions were also asked related to ICT use while on placement. Figure 11 indicates how much time each student estimated they spent using ICT while on placement.

The results reflect an extensive use of ICT across sectors, and reinforce the need for the modules to be at the core of the ILS course. Students on placement were also asked how useful the lab sessions had been to them while on placement. With regards to the lab on essential ICT skills,

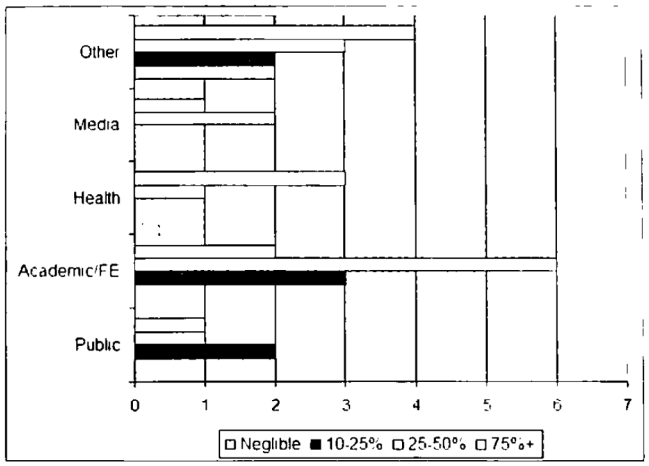

Figure 11. Time using ICT on placement by sector.

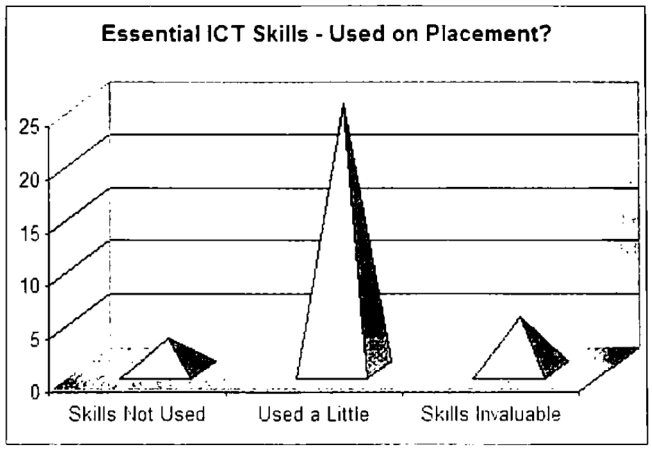

Figure 12. Skills used on placement. Essential ICT skills.

there seemed to be a very real demand for the skills taught in this session (Figure 12).

This data is certainly encouraging for the tutors, as it reinforces the need to go beyond applications and understand the technology in a more holistic fashion.

One of the more unusual aspects of the placements for this cohort of students was that the vast majority of them did not involve the student supporting the public in using ICT, as Figure 13 illustrates.

This is obviously not reflective of the vast majority of information professionals and indicates that much of the data in this part of the survey, while useful, needs to be treated with caution. For instance, in response to the question whether or not the skills learned in the multimedia lab were used on placement, the following results were returned (Figure 14).

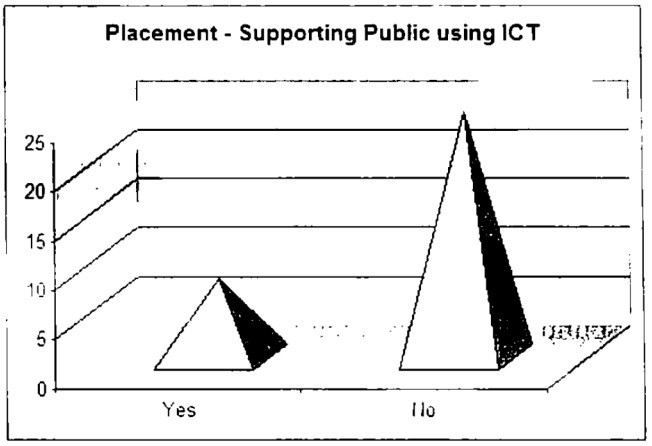

Figure 13. Did your placement involve supporting the public using ICT?

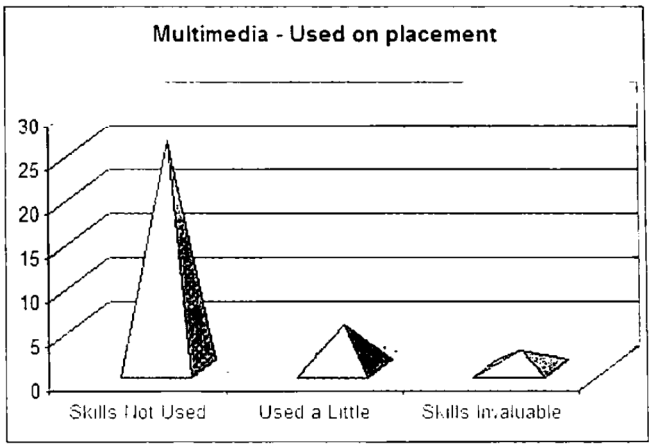

Figure 14. Placement. Skills from multimedia lab used?

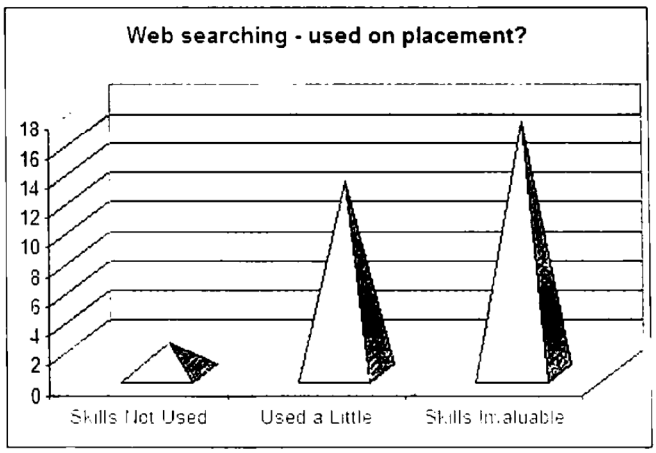

Figure 15. Skills from web searching lab used?

While the response to the same question related to web searching was as follows (Figure 15).

One important point that this may indicate is that the students have still yet to grasp that in their web searching they will be by default using multimedia skills when they load a piece of audio

or streaming media, or download an image for later use, and the module tutors have taken this on board to reflect a further emphasis for next year that the linkage needs to be better made between the use of the applications and the understanding of the content. One student commented:

> Until you showed us Encarta with its text, sound and images, I didn't get it.

That the students do tend to take multimedia for granted is not a problem initially, and certainly did not seem to be so on the placements undertaken by the students from Strathclyde. However as they go into the workplace for real, and need to manage the multitude of resources that are currently engulfing libraries and information services, the movement away from a straightforward applications-based knowledge of ICT needs to develop into a holistic skill set that reflects how multimedia makes up a vital strand of the information loading onto desktops across sectors.

Conclusions

The main aims of the FICT module were to put across the importance of multimedia and to give students experience of building multimedia with web tools, and these were to a large extent fulfilled. Interestingly, ILS students were perhaps not as aware of multimedia as a technology as had been assumed and the unsuitability of the computer laboratory disappointed the exploratory and creative expectations of some students. The module did seem to accommodate students will different skills levels and students certainly recognized the progression built into its content.

The concept of learning materials for use anywhere was not well received, and neither was the onus on students to learn in their own time. For a later delivery a more radical strategy might be to set a 'laboratory task' but not use a laboratory, thus forcing students to find an alternative venue. Since this might be more kill than cure it will be approached with caution. The Graduate School of Informatics is currently reviewing its own computer laboratory provision and a more amenable computer laboratory environment would be very beneficial.

The ILS student cohort achieved a standard distribution of marks for their assessments for the module, thus showing that they had engaged with the content reasonably successfully. It is certainly heartening to see that their feelings about the module afterwards, and their perceptions of the importance of its content, seen after work placement, are positive. Examples of deep learning are apparent, in for example the self-realization of lack of web search skills and of ignorance of non-web sources like commercial hosts. It is hoped that in the second semester of the ILS course, where core ICT skills are built on with specific elective modules, for instance Digital Archiving, Planning and Managing an Internet Service, and Web Design and Architecture, that ILS students will recognize this module as preparing them for the movement beyond ECDL.

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Paper 2

McMenemy, D. and Burton, P.F. (2005) Managing access: legal and policy issue of ICT use. In. McMenemy, D & Poulter, A. *Delivering digital services: a handbook for public libraries and learning centres*. London: Facet Publishing. pp.19-34.

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2. Managing Access: Legal and Policy Issues of ICT Use

David McMenemy and Paul F. Burton

Introduction

One of the challenges of managing library services in the digital era is the ever-changing nature of the legal and regulatory system. When dealing with the Internet, there continues to be such a fundamental lack of understanding of its impact on wider society that it tends to be treated with equal doses of joyous wonder and rabid fear by many commentators. Each prominent incident of the negative aspects of the Internet that reaches the public consciousness could lead to public authorities throughout the country panicking at the dangers they face in terms of liability as one of the main providers of access to the general public. Such challenges are regrettable, but unfortunately will continue to be part of the daily life of local authorities for the foreseeable future until society becomes comfortable with the nature of the Internet and the inherent dangers that lie therein.

Yet managing ICTs is about more than merely the Internet. Traditional concerns such as copyright, something librarians have been charged with protecting for decades, are even more of a concern in the digital age. The ability to digitise content and share it via email across the world makes it a direct threat to the integrity of intellectual property rights. Considering libraries are in the rather unique position of storehouses of intellectual property and offer the facilities to copy such materials makes them potentially liable if abuses are found to have taken place within libraries.

It is crucial then that public library staff are aware of all the issues involved when providing ICT access to the public. From acceptable use policies, to Internet filtering, assistive technologies, to protection of intellectual property, to data protection, the public librarian needs to have a thorough grounding in

issues that may be relatively new to them. This chapter, then, has the following aims:

- To provide a theoretical background to the legal and regulatory issues involved in managing ICTs.
- To provide definitions of the main legal issues and solutions to these challenges.

The supporting website for the book points to further resources where information can be found on the topics discussed.

Why access to ICTs need to be managed

Notwithstanding the logistical problems of managing access to PCs in public libraries, which pose many headaches for library staff with challenges such as booking systems ands long queues, there are many reasons why access to ICT services need to be managed appropriately. Resources are not infinite, as evidenced by the challenges presented to local authorities who are faced with the sustainability issues in replacing the infrastructure that was put in place from People's Network funding. In addition the risk of someone using a library computer to undertake a search for material that is illegal or inappropriate is quite high. There have been high profile cases where access to such material has caused a political scandal, an incident in Glasgow Libraries in 2001 being just one example where a reporter from a local newspaper turned up to a library asking why children could access pornographic sites on the Internet. (ADD A REF)

Libraries have tried to address such controversy via two main methods. Firstly attempting to place the responsibility for the material accessed on the customer, via an acceptable use policy, and secondly introducing filtering software to attempt to block the inappropriate sites. Both methods have their critics and could be deemed controversial.

Acceptable Use Policies

An acceptable use policy (AUP) is a document that a customer must sign and agree to before they are provided with access to the computer facilities. These agreements normally include a list of activities that are not permitted whilst using the computers, usually related to accessing pornography or chat rooms, and illegal materials such as copying copyright protected materials. Such documents tend to be used by organisations to pass some element of liability onto the customer when accessing Internet services. The theory is that by signing an AUP you accept that any breach of the policy is your own responsibility and not that of the organisation. Breaching the conditions of an AUP can have the following results:

- In an employment context breach of such polices can be used to discipline a staff member or to terminate employment.
- In a university/college/public library breaching an AUP can lead to withdrawal of the privilege of using the facilities.

In all cases of breach of a code the laws of the land may well take precedence over any sanction imposed by the organisation. Accessing illegal materials could result in being charged by the Police, especially if the materials involve child pornography.

It is very important that you are confident in your knowledge of what your organisation's AUP contains. It may be the case that you do not agree with such a policy, and it is also the case that you may feel that many customers glibly sign such policies without reading them. Try to ensure that you make customers fully aware of what the policy contains and what they are agreeing to. It is the case for instance that some organisations may prohibit such use as Internet shopping; not all policies are the same and you should ensure your customers are aware of this. In addition the responsibility to children in this area is of paramount importance. Many organisations demand that children are prohibited from accessing Internet services unless the AUP is signed by a parent or guardian. Some libraries insist that the parent must

come to the library with the child to complete the form, while others do not. There is, again, no overall policy in this regard that all adhere to. Ultimately parental responsibility needs to be stressed, and some kind of marketing needs to be undertaken in this context. Many parents are particularly ignorant about what the Internet contains, but do not wish their children to miss out. Public libraries are well placed in this area to provide information, or perhaps even taster sessions on what parents need to know. The policy of using AUPs should be backed up with a robust Internet skills approach to ensure customers know just what the Internet does and what is out there for them and their children. The notion of Reader Development is a strong professional domain aimed at enhancing the confidence and knowledge of customers in their reading choices; what is essentially needed for Internet users is some kind of Web-User Development programme which does likewise.

While it may seem to be the safe attitude to take that once you have a signed AUP for each customer then any breach is ultimately their responsibility, the role of a public library should encompass the promotion of Internet literacy in users. Vigilance continues to be important, as accessing of inappropriate material may well offend other users who are visiting the library while it is being downloaded. The AUP is not a panacea for all problems, but it must be used robustly with confidence and full knowledge of its contents by all staff.

For those readers interested in a fuller discussion of the ethical issues relating to AUPs, Paul Sturges' *Public Internet Access in Libraries and Information Services* discusses the themes, and gives excellent advice on how to develop and implement an AUP. (Sturges, 2002)

Internet Filtering

Filtering of Internet content is quite simply a form of censorship. It is an acceptable form of censorship for many organisations, but it is in the raw definition of the word, censorship. Indeed filtering is perhaps the most

controversial of all management decisions that are made when it comes to providing Internet access.

The basic dilemma faced by libraries that filter is the argument that it is one of the core responsibilities of the librarian to provide free and uncensored access to information. This is certainly true and neither the American Library Association (ALA) or the Chartered Institute of Library and Information Professionals (CILIP) can be described as supporters of filtering. They do take a pragmatic approach, however, suggesting that in an ideal world we should never censor information we supply to customers, but acknowledge the unique dimension the Internet offers for providing easy access to inappropriate material. This reflects the real world in that librarians may not wish to block access to information, but have to due to local authority policies at a central level.

The most common forms of filtering software use one or two approaches in blocking access:

- Site blocking
- Keyword blocking

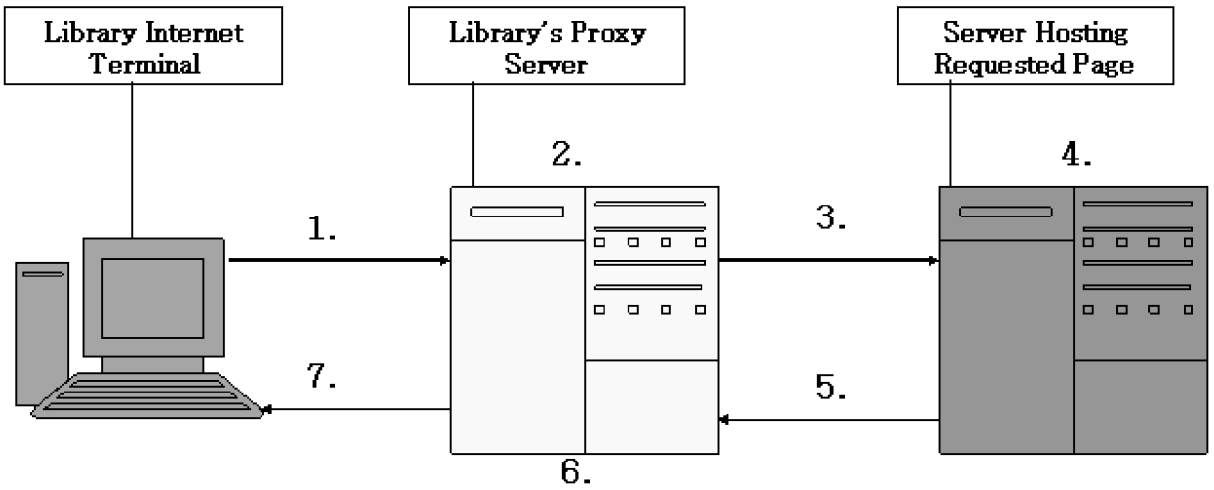
Some software programs use a combination of these approaches. Site blocking works on the basis that the software checks each Internet transaction against a list of banned sites. If the software recognises a site on the banned list it will not allow a computer to load up the pages from that site. This software needs constant updating, and it is normally the case that when buying the software the organisation subscribes to a database of banned sites with their purchase. It is also possible with this software to add your own sites to the banned list, therefore there is an element of control from the organisation itself.

Keyword blocking simply looks for offensive words in either the web address or the contents of the requested pages. If the software recognises any offensive words it refuses access to the pages containing the words. The

organisation itself can specify the level of filtering necessary for both types of software.

The diagram below is a simple illustration of what happens when a customer accesses the Internet in a public library with filtering installed. This model assumes that filtering is installed on the proxy server and not individual library computers, therefore the model may not be a representation that reflects the process in all library authorities:

A Typical Model for Accessing a Web Page in a Public Library



1. Customer requests a Web page via Library Computer →	**2.** Library computer is authenticated by Library's Proxy Server. If filtering software is installed it may block known inappropriate URLs at this point. →	**3.** Access is granted and request is made to the Host Server for stored page ↓
7. Page is delivered to Library Computer for viewing by Customer ←	**6.** Library's Proxy Server receives Page and may analyse text of page for suitability using filtering software ↖	**4.** Host Server searches it's files for page ↓
		5. Host Server sends page if available, returns error if not ↓

When the computer requests a page, the request is only granted after the computer has been authenticated by the library's proxy server. This server may block access to the requested web page at this point if the URL requested is a known (and banned) inappropriate site. If the site is not known then the request will be made to the server hosting the web page. When the page is returned it will then undergo checking by the filtering software installed

on the proxy server, although this time rather than the web address being assessed, it is the content of the page itself that is being checked for inappropriate words.

The main problems with Internet filtering software are two-fold:

- Installation of the software can lull an organisation into a false sense of security.
- It can block access to legitimate content

It is possible that there are many senior managers in organisations who may not quite understand the limitations of filtering software. For instance, it is quite possible that despite having filtering software in place that inappropriate sites could still load onto a protected computer. Filtering software is very much like virus checking software in that no matter how up to date it may be, it will not be up to date enough to present 100% protection. Therefore the organisation that assumes that it is protected against any inappropriate material being accessed is making a very dangerous assumption

Blocking of legitimate content is more of a day to day concern for the public librarian. It is highly unlikely that all customers will ask staff for assistance when searching the Internet, more so if the search they are conducting is of a personal nature. The following is a scenario that illustrates the potential dilemma:

- A young person may be seeking information on sexually-transmitted diseases. They may be too frightened to tell a parent, too embarrassed to visit a doctor without conducting some research on their own. They see the public library as an independent and safe place to look for such information. They run a search on the Internet for information on sexual diseases, and the filtering software blocks the results.

It is highly unlikely in this scenario that the young person would ask a staff member to unblock such a site in order for them to access the material,

despite the legitimacy of the content blocked. Other potential scenarios include the blocking of information on breast cancer, and information on sexual preferences. These are all obviously worst-case scenarios in terms of poor service to the customer, and with proper tweaking filtering software can get round them. It has to be said however that due to its role filtering software will always be designed to restrict rather than allow access. This core role, then, could be argued to be an anathema to the role of the public librarian. The ethical debate surrounding these matters threatens to roll on.

Disability Discrimination Act

The 1995 Disability Discrimination Act transformed the rights of disabled people in the UK. At the heart of the Act was the need for organisations to examine how they operated with regards disabled people in three specific areas:

> For public libraries, the DDA has meant an examination of policies and procedures in a number of key areas including recruitment and selection, staff development and access to services, goods and facilities. (McCaskill and Goulding, 2001, p.192)

Part III of the Act is the part that applies specifically to access to goods and services. Organisations were allowed a staged approach to making their services accessible. The milestones were:

- December 1996 – Since this date it has been unlawful to treat a disabled person less favourably than an abled person
- October 1999 – Since this dat service providers have had to ensure that they make any reasonable adjustmenes necessary to make their services accessible to disabled cusotmers
- Since 2004 organisations have been compelled to cinsider maijung any permanent changes necessary to make their services and premises accessible..

While making buildings physically accessible is an area that the majority of staff may not be involved in, providing access to ICTs is one where everyone can contribute through expanding their knowledge in the area. Using ICTs can be immensely problematic for people with disabilities. Computer keyboards and mice require a high level of dexterity, therefore anyone with

motor impairment will find using these to be a major hurdle. Individuals with visual impairments may find it impossible to read a monitor and to take part in web communications as a result. Fortunately solutions exist for all of these issues, but the number one priority for library staff is awareness of the potential problems and the potential solutions. The *My Computer My Way* web site is an excellent first port of call for anyone interested in how a computer can be customised for people with disabilities.

Assistive Technologies

Assistive technologies offer the opportunity to make previously inaccessible services accessible to disabled users. There are numerous types of assistive technologies related to several ICT uses which are discussed below:

Pointing Devices: Many disabled users have problems navigating a desktop using a traditional mouse. The most common solution to this problem is a tracker ball, which is a large ball housed in a mechanism that allows the full hand to navigate the cursor on screen. This also means that users who may have arthritis can also use this instead of a mouse to operate the desktop of the computer.

Figure I - Tracker Ball

Alternative keyboards: Similarly to the mouse, many disabled users find real difficulty in using a traditional keyboard. Alternatives exist that provide a real solution to this problem. The key element in most alternative keyboards are larger keys, but some use coloured keys as well as using an alternative to the QWERTY key set up. This is normally achieved by simply putting the keys in

standard alphabetical order, making the keys easier to find for someone not familiar with QWERTY.

Figure II - QWERTY Large Keys

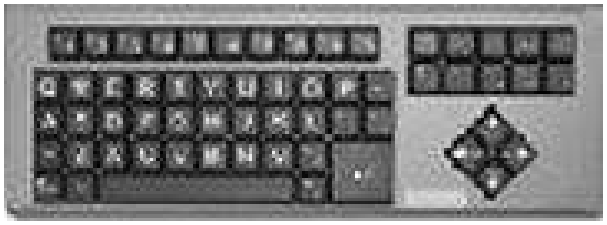
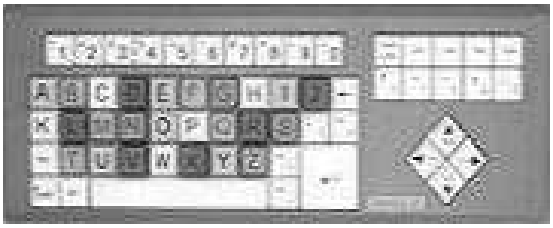


Figure III - ABC Large Keys Coloured



Software Solutions: For visually-impaired users the problem is reading what is on the screen and also typing text on to the screen. Solutions exist for this, the most famous for screen reading software being JAWS. JAWS narrates the contents of the screen to the user, even highlighting where an image appears and where a hyperlink appears on a page. The use of such software makes good web page design (see Chapter 5) all the more vital, as sloppily captioned links or images will mean the software does not recognise the image or link for what it is. Speech recognition software can be used to allow the user to dictate to the computer and allow the dictation to be translated into text on the computer screen.

The challenge in the uptake of assistive technologies is in terms of the costs of the solutions. It is common to find only a handful of machines in a library equipped with the technologies necessary, both software and hardware driven. How provision of such technologies is accomplished is obviously a decision for local authorities to consider themselves, but at the least it seems sensible that at least one tracking ball and large keyboard should be available in every public library in the UK.

Remember too that Windows XP has some simple assistive functions built into the operating system that allows screen magnification, narration of some commands, and an on-screen keyboard. These can be accessed via, **Start, Accessories, Accessibility** from the main menu. These are, it must be stressed, no substitute for the real thing, but they may offer you a pragmatic

and free of charge solution to some accessibility problems you may encounter.

Copyright in the Digital Age

Copyright covers literary, musical, artistic, photographic, cinematographic works, maps and technical drawings and now also computer software and databases. It is often denoted in works by the symbol ©. Copyright is the right conferred by law to enable creators of information works (literary, musical, artistic, software, broadcasts etc.) to benefit from their work. Such copyright material constitutes the main investment and assets of information providers and they will wish to protect their intellectual property, as without such protection there is no incentive to innovate and produce new information products and services. In order to attract copyright protection a work need only be original or not a copy - it does not need to be novel. Copyright protection usually extends for 50 - 70 years beyond the life of the author.

In this increasingly global information based society the issue of copyright protection is one of increasing importance especially in respect of electronic information products and services. The Internet poses particular challenges and is seen by some as one big copying machine. All copyrightable works are able to be digitised as computer technology can handle not just text, but sound, pictures and video in digital form. Once on the Internet copying of these is effortless, costless, widespread and immediate. In the past copying intellectual products has been time consuming and reproduction was poor. That is now changed. With digital copying all copies are as good as the original in terms of quality. Furthermore the Internet does not respect national borders.

The rapid growth of the Internet and the rise in multimedia information processing pose new challenges for copyright protection and exacerbate the tensions between creators of copyright material and users. On the one hand creators of software and information services like databases wish recompense for their effort but users may argue that prices are so high they resort to copying. The counter argument from producers is often that they

need to recoup expensive research and development costs and prices are high because piracy is rife.

The creation of multimedia products is another problematic area. Obtaining copyright permission on a large number of pictures, sounds, video clips etc. may not only be expensive but very time consuming. Some see this as a barrier to the development of new products. Some companies have bought up copyright to libraries of film, pictures and sounds as they recognise these information resources can be licensed for use in the future in a whole host of ways. However tools for the digital manipulation of pictures, sound and video pose a challenge - how much does something need to be altered before it is no longer a copy?

Software is easily available on the web to enable surfers to share their files across the Internet, perhaps the most famous being Napster and increasingly frequently, Kazaa. While the popularity of such services is beyond doubt, they offer major challenges for information professionals both in terms of legal access to information, and in terms of managing the ICT infrastructure of their organisation. It is highly likely that the computers in your library will be tightly controlled and limit such activities, but as customers begin to accept such services as standard, their concept of intellectual property protection can become less than robust. As Rupp and Smith have discussed:

> It has become a norm to download music off the Internet and transfer it onto compact discs (CD) without compensating the artist who created the music or the firms that created, packaged, promoted, and distributed the music materials. Few if any people think twice that they are breaking the law by making a copy of material to which they do not own the copyrights. Piracy…is rampant and routinely practiced throughout the world. (Rupp and Smith, 2004, p.103)

The new Code of Practice adopted by the Chartered Institute of Library and Information Professionals (CILIP) states that it is the ethical duty of a member to both:

> Defend the legitimate needs and interests of information users, while upholding the moral and legal rights of the creators and distributors of intellectual property. (CILIP, 2004)

And certainly it is difficult to argue that file sharing of copyrighted materials, despite the fashion towards this, should be supported by information professionals in this context.

There are more also more serious issues at stake in the copyright arena as content creators begin to assert their muscle. In March 2004 rights-holders began a high profile campaign in Europe, following on from an earlier equally high-profile campaign in the USA, to bring to court individuals they claimed had offered thousands of copyrighted files free to be downloaded on the Internet. The campaign targeted 247 people across continental Europe in countries where the record industry claimed that CD sales had fallen as a result of illegal sharing of music. Despite a recent study by two American researchers (Oberholzer and Strumpf, 2004) suggesting that music downloading was statistically insignificant in terms of its impact on CD sales, record companies are adamant that file sharing is impacting greatly on their income, and crucially are determined to do what they can about via the legal system.

As an issue this will grow in importance, and there is always the danger that information organisations in the business of providing public access to the Internet could become a target as customers who use public facilities to break copyright laws become a focus for rights-holders. In the context of Internet Service Providers (ISPs) Conradi suggests that rigorous AUPs can shield the organisation for much of the responsibility and pass the liability to the user where it technically should belong. However he acknowledges that there can never be a 100% guarantee that legal claims against the organisation providing Internet access would fail, should a rights holder decide to lodge such an action. (Conradi, 2003, p.289) Conradi also highlights the 2003 ruling against easyinternetcafe where it was ruled to be in breach of copyright law by allowing users to download music and burn the files onto CD on their premises. After a protracted legal dispute easyinternetcafe settled the case by paying the British Phonographic Industry £80,000 pounds plus their legal fees of £130,000. This case potentially highlights the dangers in not being aware of what users are doing when burning material onto CD when using

library computers. Unless you are 100% sure about your security, it can be difficult to know if a user is doing what eventually cost easyinternetcafe £210,000 pounds. The other issue to consider is that public libraries have many more potential service points that are potentially ripe for abuse than easyinternetcafe!

Copyright is essential for the protection of intellectual property and in this electronic age is becoming ever more important both at national and international level. Application of copyright has always imposed restrictions on the services libraries can offer their users. As increasingly electronic products and services comprise a larger part of collections and copyright law has been developed to include these products and services, the rights and obligations of libraries in respect of copyright have become more complicated. Public Libraries are guardians of intellectual property and in that respect will wish to fulfil this role effectively in order to facilitate the continued production of information and knowledge. On the other hand they are access points to information and knowledge and wish to provide their users with high quality services and the appropriate information and knowledge they require. The public library therefore has to balance the rights of users to access information and knowledge with the rights of information and knowledge providers to be recompensed for their intellectual effort.

Yet controversies relating to copyright threaten to grow in the future. As the next generation of users arrive in libraries, equipped with the download and file-share mentality, it is quite possible that their knowledge of and respect for intellectual property rights may not be evident. The role of the public librarian in this context is a vital one, not merely in the dual role of gatekeeper and provider, but also in teacher. Fuller discussions on copyright in libraries are available in either Norman (2004) or Cornish's (2004) works, both by Facet Publishing.

Licensing of Electronic Resources

Intellectual Property also relates to CD-ROMs, and increasingly DVD-ROMs, many of which are available for use in public libraries. CD-ROMs can be anything from titles that support TV shows, such as *Changing Rooms* and *Bob the Builder*, to makeover software that allows you to profile yourself digitally with a new hair design, or reorganise your garden virtually.

One of the issues to guard against with such resources is the specific license requirements. While copyright obviously guards against copying the material, an extra layer of legality is evident in many in terms of the stringency of their license agreements. For instance, many CD-ROMs may allow a site license for us, meaning that the material can be installed on all machines on site for no further charge. Others state that the software can only be installed on single machines; or other state that all machines can have the material installed, but only one user at a time can access.

Cambridge Information are a supplier of CD-ROMs to many libraries and offer advice on licensing issues. On their website they have a list of commonly-asked questions, including:

- Can we upgrade standalone versions to network versions?
- Which titles are suitable for LANs and/or WANs?
- How do we calculate the number of concurrent/simultaneous users?
- Which titles can be cached?
- Which titles are NT network compatible?
- Which titles have paper licences (licence only which needs to be purchased in addition to the standalone software)?
- Which titles have full network versions (includes software and licence)? (Cambridge Information, 2005)

As can be seen, the purchase of CD-ROMs cannot be assumed to be as straightforward as that of traditional resources such as books. It is important when buying such materials that the librarian understands all limitations of use that the license imposes. Suppliers should be able to offer advice on such issues, but if in doubt ask, and even more importantly ensure that all staff are knowledgeable about the licenses of all CD-ROMs available for use in the library. For instance, it may be worth considering putting small advice notes either on each CD-ROM case, on the library management system, or indeed both. Erring on the side of caution would seem the sensible approach given

the litigious nature of many content creators, besides which, as an information professional it is simply the right thing to do. Tempting as it may be, it is important not to be swayed if only one copy of a popular CD-ROM is available in the library and more than one person wishes to use it. The fact is that installing the CD-ROM onto each machine might enable all to use it simultaneously, may not actually allow you to do so. Essentially it is the analogue equivalent of photocopying a book to allow multiple users to borrow it.

Data Protection – Data Privacy and Safety Online

Every day across the world people visit websites that record information about them. It is quite likely that the next time you are on duty in the library, members of the public could be visiting sites that require registration and demand they pass on personal details about themselves before access. It is also very likely that many of these people have little concept of their rights under law, and the uses to which this information may be being put. Thus it is important that public library staff are aware of the issues relating to data protection.

Data protection illustrates the inherent tensions which exist between the right of individuals to keep information about themselves private, and the requirements of companies and government to maintain information about individuals to facilitate commerce and the provision of services or to prevent crime.

Privacy concerns and the Internet

Surveys of net users have often shown privacy on the Internet to be a matter of great concern. Fears for the misuse of their personal information are an issue for Net users and there is evident support for privacy laws to be enacted in the US. In particular the use of “cookie” technology which can potentially disclose personal information of unsuspecting Web users is subject to criticism (Electronic Privacy Information Center, 1997).

While it is impossible, and undesirable, to be standing over customers' shoulders when they access websites, it is a good idea to have some kind of instructions for them on what to do if websites request information on them before they access. It is certainly true that not all sites who request information on their visitors are up to no good, but it is important that customers understand exactly what does happen when you pass on your details online. Very few of them will read the lengthy information provided by websites to state what they will do with your data, and even sites as straightforward as official football club sites require visitors to register with the site before they are allowed to view material.

A good idea may be to have posters strategically placed around the computer area of the library highlighting some of the issues. Some key points you may want to get over to your customers might be:

- Their personal data is potentially valuable; do not pass it on carelessly
- If a site requires detailed information on them before they can access it, why is this?
- If they feel the request is unreasonable, complain to the site provider

Conclusion

As can be seen in the discussion above, there are many legal and policy issues that impact on the use of ICTs in libraries and learning centres. Staff need to be made aware of these issues even before they assist their first customer, as ignorance in these areas is not only a recipe for poor service, it can also be potentially costly for a library where they are liable for any policy or legal breach.

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Paper 3

Chowdhury G., McMenemy D., Poulter A. (2006) Large-Scale Impact of Digital Library Services: Findings from a Major Evaluation of SCRAN. In: Gonzalo J., Thanos C., Verdejo M.F., Carrasco R.C. (eds) Research and Advanced Technology for Digital Libraries. ECDL 2006. *Lecture Notes in Computer Science*, vol 4172. pp.256-266.

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LargeScale Impact of Digital Library Services: Findings from a Major Evaluation of SCRAN

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Abstract. This paper reports on an evaluation carried out on behalf of the Scottish Library and Information Council (SLIC) of a Scottish Executive initiative to fund a year's use of a major commercial digital library service called SCRAN throughout public libraries in Scotland. The methodology used for investigating value for money aspects, content and nature of the service, users and usage patterns, the effects of intermediaries (staff in public libraries), the training of those intermediaries and project rollout is given. Conclusions are presented about SCRAN usage and user and public library staff reactions.

1 Introduction

Even after a decade of intensive research and development activity, evaluation of large-scale digital library application and use still remains problematic. The ultimate goal of a digital library evaluation is to study how digital libraries are impacting on, and hopefully transforming, information seeking and use, research, education, learning and indeed the very lives of users. Several online bibliographies on digital library evaluation are now available (see for example, DELOS WP7 [1]; Neuhaus [2]; Giersch, Butcher and Reeves [3]; and Zhang [4]). Regular international workshops on digital library evaluation take place under the DELOS programme, and evaluation is a regular topic at all other digital library conferences. Several evaluation guidelines and methods have been proposed in course of evaluation projects like ADEPT [5], DELOS [6], eValued [7], JUBILEE [8], etc. Projects like eValued and HyLife [9] have developed toolkits and guidelines for evaluation of digital libraries. Many other researchers and institutions have also produced guidelines and toolkits for digital library evaluation. See for example: Reeves, Apedoe, and Woo [10]; Nicholson [11]; Borgman [12]; Blandford [13]; Blandford and Buchanan [14]; Blandford et al, [15]; Choudhury, Hobs and Lorie [16]; Chowdhury [17]; Borgman and Larsen [18]; Jeng [19] and Saracevic [20, 21, 22].

This paper reports on a recently completed large-scale evaluation of a major commercial digital library service called SCRAN (http://www.scran.ac.uk). This evaluation is unique for a number of reasons. First, it is an evaluation study of a large, nationwide, commercial digital library service, which was funded by the Scottish Executive to provide a specific range of services for all Scottish public libraries for one year, with the

total cost of the project amounting to £123,900. Second, the outcome of the evaluation would determine whether Scottish Executive funding continued, thus it was necessary to ascertain the success or failure of the initial funding in value for money terms. Third, the evaluation was large-scale in that there are 557 public libraries in Scotland which attract over 31 million visits per annum. We would argue that the funding of access to a commercial digital library service by a national government for all citizens is hitherto a unique event in the development of very large-scale digital library services and needed to be evaluated extremely carefully, bearing in mind the complex social, economic and political aspects of the project. The evaluation however could not follow previously tried and tested well-trodden routes, for example by looking in detail at features like usability of individual pages in controlled conditions using a selected group of volunteers acting as users. It had to survey a large and diverse clientele of public library users to whom a large-scale digital library service was but one of a competing portfolio of services. Users could not be expected to recognize the uniqueness of the digital library service nor would its novelty alone give it any extra weight in their opinions. Public library staff, although being library professionals with an understanding of digital library services, would see it simply as yet another new service they had to support and deliver and would not give it any special treatment, apart from marketing it in the standard way as a new service. Finally, funders would not be looking for the meeting of research aims or achievement of good design but rather on visible take up and usage by the public vis a vis existing services and the reaction expressed by professional public library staff involved in its delivery.

A specific methodology was developed that addressed a number of issues including value for money aspects, content and nature of the service, users and usage patterns, the effects of intermediaries (staff in public libraries), the training of those intermediaries and project rollout. The paper briefly discusses the nature of the SCRAN service followed by the detailed methods used in the evaluation; major findings of the evaluation are then discussed with some critical comments that may be useful for the future design and management of large-scale digital libraries.

2 Background to SCRAN

SCRAN began in 1996. Its name came from an abbreviation of its initial purpose (Scottish Cultural Resources Access Network) but was also a reference to the Scottish word ‘scran’, which meant ‘food’ and ‘gather together’, very appropriate for a digital cultural portal. Resources were acquired through different stages of growth. The first batch came from Millennium funding in conjunction with the National Museums Service/National Library of Scotland. The actual digitisation of resources was outsourced. The second batch of resources came from NOF (National Opportunities Fund) funding for Resources for Learning in Scotland (http://www.rls.org.uk/). Other organisations provided resources, which SCRAN digitised and mounted and stored for fast access. SCRAN is essentially a federated database of resources from a variety of sources, some of which are commercial organizations, for example The Scotsman and Herald newspapers.

Over its history, SCRAN has accumulated a unique set of skills in digitisation and digital preservation. All of SCRAN's resources have copyright clearance for general use but with specific privileges for subscribers. SCRAN is currently working with the British Museum and the Scottish Motor Museum to acquire more resources.

Individual resource records are in Dublin Core format. Place names are provided by contributing institutions and can be variable as different institutions use different rules. SCRAN have tagged about 170,000 records in the past year with Ordnance Survey [the UK's national grid location system] co-ordinates. Geographic search allows linkages between areas and their sub-areas. There is no generic vocabulary or taxonomy for the vast range of subjects in SCRAN and contributing institutions themselves have no agreed system, which has the potential to influence the ability to efficiently search the resource. SCRAN are working with the Royal Commission on the Ancient and Historical Monuments (RCAHMS) and the National Museums of Scotland on a joint thesaurus for Scottish cultural institutions. SCRAN employ the UK Learning Object Metadata (LOM) with Pathfinder packs and they have a full hierarchy of curriculum terms for the English and Scottish curricula. SCRAN have three staff working full time on metadata – two checking, correcting and adding to records, and a data officer managing quality and carrying out global updates. SCRAN's three educational officers look after LOM information.

At the time of the evaluation, SCRAN offered an extensive range of materials consisting of over 1.3 million records, with over 300,000 multimedia resources, to schools, libraries and higher education institutions. Although SCRAN has created many 'Pathfinder' packs of resources by topic, SCRAN's interface has been extended over time to allow users to develop a range of resource applications for themselves by means of personalization or customisation. Such user-created information is stored on SCRAN's servers so it will work anywhere and not just on a local machine. 'My Stuff' offers a basic level of personalisation, like bookmarking. 'Albums' are more sophisticated, allowing user editing features (e.g. the addition of captions).

The Scottish Executive funding for access to SCRAN had several agreed objectives, viz.:

- To provide licensed access to SCRAN for all Scottish local authority libraries
- To provide user names and passwords to all participating libraries, and authentication system including IP authentication where required.
- To deliver a programme of training information professionals in developing their own use of the resources and in assembling learning objects
- To provide multi user rights to SCRAN 'Albums', CD-ROMs and resources to all libraries
- To provide 'Albums' functionality with captioning and local output to personal mini-website for use by public library staff to create their own 'Collections' for users
- To provide unrestricted 24/7 access, free at the point of use, to multimedia resources
- To handle IPR management of all resources.

Project management was provided by SCRAN, in conjunction with representatives from public libraries and from the Scottish Library and Information Council (SLIC), which is an independent advisory body to the Scottish Executive on library matters (http://www.slainte.org.uk/slic/).

3 Evaluation Objectives, Methods and Tools

The main objective of the evaluation of SCRAN was to assess the value for money of the year-long public library license. Outcomes could either be recommending continued access at the same (or higher or lower) cost or to devolve responsibility for funding to library authorities or to recommend an alternative to SCRAN.

In order to find answers to these questions the following multi-stage methodology was adopted involving the following tasks:

1. A detailed and critical study of the SCRAN website
2. Visits to SCRAN headquarters to interview key personnel and to study useful documents
3. Extensive analysis of web logs and other usage statistics supplied by SCRAN
4. A survey of selected public library staff to understand how the service is used by the end-users with the perceived benefits, level of difficulties, and various issues
5. A survey of end-users to understand the usage patterns and level of satisfaction
6. An analysis of the case study materials promoted by SCRAN as examples of best practice
7. Analysis of minutes from Steering group and Project Group and relevant documentation from SLIC.

Each stage of the methodology aimed to find specific information about SCRAN that would answer specific questions relating to the evaluation of the service:

1. How much was SCRAN used? What factors affected usage?
2. What did users think of SCRAN?
3. What did public library staff think of SCRAN?

3.1 Factors Affecting Usage of SCRAN

In theory virtually anyone can be a SCRAN user – school children doing homework, students at all levels, community groups in public libraries and any individual. SCRAN has local resources for everywhere in Scotland; and these resources can have personal resonance for individuals, a service SCRAN label quite succinctly as 'reminiscence'. Originally SCRAN was a unique service, with no competitors. However this is no longer the case. There are a plethora of alternative channels for obtaining information that is available through SCRAN. For example public library services maintain local gateways giving alternative free access to Scottish digital resources. The Resources for Learning for Scotland Project (RLS) used the UK's New Opportunities Fund (NOF) funding to draw together contributors from across the public sector with the intention of the digital assets being freely available. Material held on RLS is a combination of SCRAN and RLS data, but while text-based information can be accessed freely, access to the full image requires SCRAN subscription. Other Scottish projects such as Am-Baile (http://www.ambaile.org.uk/en/highlights.jsp), Springburn Museum (http://gdl.cdlr.strath.ac.uk/springburn/), and Virtual Mitchell (http://www.mitchelllibrary.org/vm/) provide full access to all images and not just thumbnails. For general educational resources not related to Scotland, websites like the BBC's Learning Homepage (http://www.bbc.co.uk/learning/) provide stiff competition.

Transaction log data maintained by SCRAN for the months of January to May 2005 was made available. Over the five month period, the average number of sessions (defined as at least one access in a half-hour period) per branch on SCRAN for all Scottish public library authorities was 15. This equates to an average of 3 sessions per month for each branch in Scotland over the period. There were occasional peaks but these were found to correspond with periods of staff training on SCRAN. Thus SCRAN usage generally was very low.

One of the main objectives of the project funding was 24/7 access to SCRAN. However, the nature of library opening hours varies considerably across Scotland, meaning that 24/7 access may in fact equate to only a handful of hours of access per day for many members of the public. This should have been raised when negotiations on the funding of SCRAN were taking place and should have been a consideration from the point of view of pricing.

Low in-branch usage could potentially have been offset by high at-home usage. The ATHENS Access Management system (http://www.athens.ac.uk/) was SCRAN's preferred access model, whereby unique IP addresses were recognised and tied to authorised users. Because of the licensing requirements on SCRAN from contributors, each user must be identifiable so that should a resource be discovered being used illegally, SCRAN can tell the user to desist. A number of SCRAN's commercial and non-commercial contributors regularly trawl Google to see if their resources are being used illegally and let SCRAN know of any illegal uses they find. Whilst this is important for contributing commercial organisations like The Scotsman and Herald newspapers, it is not that important for public sector bodies like museums who are trying to increase access to their digital content.

However the implementation cost for this type of authentication approach outside of academia had made it prohibitive for local authorities to implement. Remote access to SCRAN (i.e. by a public library user from home) would be possible with a different type of authentication system. As an example, access for public library members to other databases such as NewsUK and Encyclopaedia Britannica has been set up, allowing library card holders to access the databases 24/7 from their home computers using only their library card number. This is true universal access and allows members of the public to access library services even when the building is closed.

Even within public libraries, the differing usage of IP addresses in different library authorities posed problems for accessing SCRAN, as while some used fixed IPs, some did not use them at all (North Ayrshire, Argyle and Bute plus parts of Highlands, are examples). A subsequent problem was that several IT departments within councils changed the IP addresses of the computers in their authority, causing authentication issues beyond the control of SCRAN. Access, then, in public libraries was by mainly menu and password authentication. Choosing the default authority level rather than a particular public library would hide access from that library and served to obfuscate usage logging.

The original focus of SCRAN was and continues to be aimed at schools, and there is certainly an argument for suggesting that its interface displays an age profile bias towards children. Some of the terminology used could be confusing to adults who have not undertaken training, and there may be issues for the casual adult browser who is drawn to the service via marketing material only to be faced with terminology

such as: “Homework”, “My Stuff”, “Lucky Dip”, “Monkeying Around”, “Fun and Games” and “Sticky Pics”.

Each of these features in its own right is creative and greatly enhances the user experience of the site. However their use in a database aimed at a wider market than schools does need to be rethought. A more intuitive homepage for public libraries could have been developed, aimed at the wider range of ages and interests that this client market represents. Certainly, doubts about SCRAN’s interface were born out through the user questionnaire: 41% of users had difficulty in finding material on SCRAN using the simple search.

3.2 Public Library User Perceptions of SCRAN

A questionnaire survey was conducted with the users of SCRAN services in public libraries throughout Scotland. The main objective of the user survey was to ascertain public library users’ views on the service, problems encountered, and the users’ overall reactions to the service. A total of 351 responses to the user survey were received. The public library user survey indicated that 51% of respondents had never used the SCRAN service. This was not because of a lack of interest in computer-based services as such: 71% of respondents said they would use online services and only 8% said they would not. The remainder would use them but would prefer printed materials. There was no obvious bias against online services by facets like age or gender. Those who used the service were interested in many types of material available via SCRAN: materials that are unique to their locality, their country, or their family were the most popular choices.

Awareness of the SCRAN service within the library was high, despite less than 50% of respondents had actually used it. Comments received on using SCRAN included the following:

- “I find retrieval of results most problematic on SCRAN, there seems to be no consistency in what terms, names or subjects are used for indexing and retrieval”
- “In the past I have noted inaccuracies of information stored”
- “Sometimes filtering of results could be better. I tend to get lots of irrelevant material along with my search results”
- “I used SCRAN for the first time today and found it very easy to use and full of interesting information”

Some of the comments from users suggest that retrieval of results is an issue for many, and this reinforces the need for a richer metadata scheme.

In order to gauge value for money and willingness to pay, a question was asked that requested users to give a cost per session they would be willing to pay to access a service providing the types of material available on SCRAN. Over 58% of respondents indicated they felt such a service should be free, with a further 15% not wishing to put a figure on it. This suggests that public libraries would struggle if they wished to recoup from their users some of the outlay of a SCRAN subscription.

3.3 Public Library Staff Perceptions of SCRAN

Another feature that the usage log revealed was a discrepancy between different library authorities. A few (Fife, Borders, Aberdeen) appeared to be heavier users than

the other authorities. It was felt that these differences in usage patterns among the various authorities may have been caused by several factors including effectiveness of staff training and staff attitudes towards new digital library services in general and SCRAN in particular, making some staff more committed to using SCRAN. The web-based questionnaire survey was designed to find out answers to these issues.

The survey was conducted via the Internet; a total of 419 responses were received. Interestingly, a high proportion of responses came from the 'committed' group of library authorities. The responses on initial training were very positive. It was noted that most popular internal method of marketing was word of mouth, making cascading of training to as many staff as possible an absolutely crucial issue for success. A variety of user marketing methods were noted, but none seemed to be predominant.

A number of respondents mentioned that in their experience an aging population might not be computer literate but showed a liking for reminiscence services. There was however a general awareness that SCRAN usage was very low, and lower in some authorities than others. Fife was known to be a high user but then as commented by the respondents "Fife always was keen on online services".

Finally, respondents were asked to indicate how much of an effect losing access to SCRAN would have on the library service. While being broadly warmly receptive to SCRAN the opinion of the largest group (37%) of respondents was that the effect of losing SCRAN would be limited, although a high percentage of respondents felt that the effect would be reasonable (29%), with a smaller number thinking the effect would be significant (21%).

Richer information about the staff attitudes towards the service, problems encountered while using the service on behalf of the users, etc., was ascertained though a series of interviews among library staff. User interviews were undertaken with a range of authorities, both from the group identified by usage statistics, and staff survey responses, as 'committed' users and those not in this group. The intention was to try to elucidate how staff viewed the effectiveness of training, the utility of new services delivered and value for money of the project. Altogether 17 individuals from five authorities were interviewed. Most were experienced library staff, with lengths of services ranging from 15 years up to 40; 11 were in professional grade, 6 para-professional. Their areas of responsibility ranged from managing one or more libraries, to managing a specific facet of service (e.g. ICT, specifically People's Network services, children's services, or local history) or being in customer-facing roles. All the staff had received an initial round of training and then a second round focusing on hands-on use and creating applications. All used links on local portals to promote SCRAN. A general issue was that local computer technical support was often over-stretched. One group commented that just getting bookmarks changed and icons placed on screens was extremely difficult as rights to do these tasks were maintained centrally.

All had engaged with ECDL (European Computer Drivers Licence, http://www.ecdl.co.uk/) and felt that they had the requisite IT skills for the job; although they recognised that they were continually being stretched. They also admitted to being stretched generally, because of shrinking staff numbers and an unchanging set of core tasks which were being added to by new tasks – "Staff are being hit by new initiative after new initiative, with no time to bed one down before the next arrives." However all interviewees appeared well motivated and keen to do the best they could for their users. All the respondents were engaged in making provision of local digitised services, in the areas of Scottish history, local history and family history. All agreed that genealogy and reminiscence especially were popular services. Most were using local portals to point to web resources or locally-mounted CD-ROMs.

Digitisation for local history collections was being attempted by some but costs and other difficulties meant that it was sometimes easier to ask users to go to a central library to consult originals. The drawback to this approach, as mentioned by some professionals, was that "some materials would sit in vaults forever". It was remarked that some popular sites (e.g. Statistical Accounts of Scotland online; http://stat-acc-scot.edina.ac.uk/stat-acc-scot/stat-acc-scot.asp) were moving to 'for pay' access which meant that users could not be directed to them anymore. SAS online still is a free service. It is the value added elements which are moving to a subscription service.

One issue with promotion that was raised suggested that SCRAN's name gave no indication of what it was. Also its name was easy to confuse with those of other services e.g. SCAN, the Scottish Archives Network. No one reported problems in using SCRAN and most praised the suite of tools which enabled customisation to be done. Most interviewees made only light use of SCRAN. The biggest driver of usage was SCRAN's newsletters which prompted a check of SCRAN for new features or materials. Some staff wanted access to SCRAN from home as there they would have had time to explore.

The interviews of staff indicated that they felt stretched, and while being appreciative of the SCRAN service were often not in a position to promote it. One interviewee also stated that she felt the service was only now beginning to be used by more staff as they were finding time to pass on the skills. A selection of the comments received from staff are summarised below:

- "Easy access and detailed information make this an invaluable tool for public use"
- "Excellent service that will grow in usefulness"
- "Money could have been better spent on subscriptions of our choice"
- "If SCRAN is allowed more time to develop (i.e. amass more material) its resources, it will become an increasingly useful tool for public library online services"
- "Not many people have used it. I think that it is a good site but with so many other sites on the Internet it is easy to find the images you're looking for elsewhere"
- "I think advertising of this tool is woefully inadequate, and it's not available on enough of our PCs"

4 Conclusion

When SCRAN began, it had a clear focus as an online archive of Scottish cultural materials. Now SCRAN offers a much wider range of services, and is downplaying its Scottish focus. Rather than being the sole provider in a focused market, SCRAN is trying to push into other markets. While SCRAN's major strength as a service is still in its Scottishness and its collection of Scottish material, by not concentrating on this SCRAN did not impact on the public in Scotland as a strong brand associated with Scottish culture. For marketing purposes in Scottish public libraries it would seem better to have used SCRAN's old full title, Scottish Cultural Resource Network, rather than the more gnomic 'SCRAN'. Marketing could have concentrated on this

message; posters and rolling screen saver demos showing SCRAN resources for a locality, tailored for each public library in that locality, would have much more effectively revealed the depth of SCRAN's Scottish resource base. Behind the marketing should have been a range of new services that would engage users (for example picture 'tours' of a locality as it looked in the past, opportunities for individuals to contribute their personal resources to their public library, etc). Public libraries have been accused recently in the UK of not developing their image beyond being mere lenders of books, and the success of a new online service based around reminiscence would have been a great triumph. It is clear from comments quoted above that SCRAN has been the source of many moments of deep satisfaction for public library users and staff who found its material of local and personal relevance.

That there is value in SCRAN is fully supported by anecdotal evidence but that value is highly personal and transitory and not embedded as an expected feature of public library services. There was also a generally supported wish for a publicly funded archive of freely available digital resources commemorating and celebrating Scottish culture. This creates tension between SCRAN as a commercial entity and the publicly funded library service which supplies it with free content only to be charged later to access that same content. The irony is that SCRAN was formed with Millennium Commission funds initially, and has navigated into being a commercial subscription service, while maintaining some funding from public sources for specific projects from time to time, like the Scottish Executive funding making possible the initiative evaluated here. While there is nothing wrong per se in commercialising successful digital library projects, the commercial rationale ought not to conflict with the public interest, in this case for free public access to materials that are clearly owned by the public. The most negative comment made by public library staff was that “SCRAN is a product whose time has gone”. A counter example of the British Library’s website was cited as a free site which offered much the same facilities as SCRAN.

The issue of transferring ownership of a library’s own materials was of particular concern to public library staff. Without a SCRAN subscription, a library authority, and the public in the local communities it serves, could not view their own contributions to the SCRAN site. This means, in essence, that public library staff in that library authority would have to hand a list of the material they had provided, but members of the public served by that library authority would be blocked from accessing more than mere thumbnails of material that in theory belongs to them through their authority’s ownership of the material. This would happen in non-subscribing library authorities throughout Scotland. The ethos behind the Creative Commons (http://creativecommons.org/worldwide/scotland/) licensing based on Scottish law encourages the sharing of digital resources with the owner retaining IPR but allowing pre-agreed use of the resource. A distributed environment incorporating the Creative Commons license for Scotland would offer an opportunity to access digital material that was owned in the public domain.

There is a much bigger question of what that distributed environment would look like. What needs to be addressed is exactly how the Scottish digital heritage will be developed and accessed, whether that heritage should be held in a centralised commercial database or decentralised in a managed set of collections held by the public sector bodies that accumulate that heritage. We believe that provision of a national

database of cultural materials could easily be provided by public bodies in Scotland if provided with appropriate funding. What is necessary is to ensure that rather than training for a specific service such as SCRAN, staff members in cultural institutions are trained to create and manage their own digital materials under a national umbrella. This would negate the need for the nation's cultural institutions to be reliant on commercial providers for delivering their digital materials, and instead allow the public to access their heritage free of charge.

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http://www.slainte.org.uk/Files/pdf/SLIC/scranevaluation.pdf

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Paper 4

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Public Library 2.0: Towards a New Mission for Public Libraries as a 'Network of Community Knowledge'

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Abstract

Argues that currently there are no proper mechanisms for capturing, preserving and disseminating community knowledge, and proposes that public libraries in the digital age should take on a new role whereby they should act not only as a gateway to knowledge, but also as a platform facilitating the creation of, and access to, local community knowledge. Proposes a model for PL2.0 where public libraries can take on this new role to build a network of community knowledge.

Introduction

Public libraries all over the world, and particularly in the UK, are struggling to find a new, unique and vital source of value. Following the vision of people such as Andrew Carnegie, they started out in the nineteenth century as 'street corner universities'. Now, however, Internet and web technologies provide distance learning at all levels and in all subjects to people in their homes and workplaces. Public library enquiry desk services have seen web search engines take over their role. Subsequently, public libraries moved into lending fiction books and later moved on to lend records, tapes, CDs and DVDs, and most recently they have begun to espouse reader development. However, competition from the private sector has become intense, with bookshops and media rental outlets becoming more customer-friendly, and with web-based postal delivery operations, and local charity shops and supermarkets, offering popular selections at low cost. In response, public libraries have generated an ever-increasing range of services, including mobile libraries, services for ethnic minorities, children and the elderly, homework clubs, e-government portals, cybercafés, newspapers and health advice, in an attempt to be all things to all people. As a result their public image lacks focus, spreading as it now does from the traditional Victorian knowledge storehouse to modern-looking 'Idea Stores' (would-be shops) and various versions in-between. Public libraries are now being attacked from all sides: they are accused of not lending enough books (Coates 2004) as well as offering new services which are not being used. This paper provides a new vision for a public library, parts of which have already been articulated in various forms. We propose that this new vision will give the public library a unique and vital community role, one that cannot be subverted by advances in technology or private sector competition.

PL2.0: What and Why?

ICT and Internet technologies have changed the nature of libraries in all sectors, and they have also changed the perception and expectations of the user community. While

digitisation has become one of the major activities of libraries over the past few years, with the appearance of many digital library services, the state of recent developments is far from ideal, as John Dolan (currently Head of the Museums, Libraries and Archives Council, which is responsible for managing public library development in England) argues in a recent interview in the *Guardian* newspaper, in which he states that much progress to date has been about "translating 19th century and 20th century services to a digital format, rather than creating new services". Now, he says, the challenge is to build library e-content into community-based, interactive resources:

> 'The next opportunity is to create "a different library that is not a copy of the existing library; a parallel library of content, services and facilities that can only be delivered on the web or that are best delivered on the web." That, he says, is a "cultural change".' (Alden 2006)

This type of radical change, creating new services by exploiting new web technologies, is currently a hot topic in librarianship, under the banner title of 'Library 2.0'. Library 2.0 is all about rethinking library services in the light of re-evaluating user needs and the opportunities produced by new technologies. Which currently under-used or unexploited resource do public libraries possess, that, with the application of cutting-edge Internet/web technologies, could give them back a central role in the life of the local communities they serve? How can we realise John Dolan's vision of a 'cultural change' in public library services?

Local community knowledge is extremely valuable for the local community, and local knowledge may be useful both for local and global consumption. Valuable information can be gathered about local expertise in areas such as handicrafts (for example, certain parts of Scotland are famous for their knitting); or the recollections of people who have been involved in certain incidents, such as a war or natural disaster; or interesting memories such as the visit of celebrities or politicians (eg the G8 summit at Gleneagles).

There are of course examples of 'local' directory services on the Internet, such as the chains of city sites run by Craigslist and Gumtree. However, these services are never 'local': they are aimed at large cities and their content is essentially commercial advertisements, not knowledge, tips or advice. Everyone, from individuals to national and international government bodies, is agreed on the value of the community. This is why we are proposing a new model for public libraries which re-focuses them on the vital task of managing the knowledge inherent in their local communities by forming a network of hubs for sharing and disseminating that knowledge.

PL2: The Principles

Looking for inspiration in the most fundamental statement of library and information concepts that we could find, we turned to Ranganathan's famous five principles (Ranganathan, 1963) to underpin our proposal for Public Library 2.0:

1. Community knowledge is for use
2. Every user should have access to his or her community knowledge
3. All community knowledge should be made available to its users

4. Save the time of the user in creating and finding community knowledge
5. Community knowledge grows continually.

We will now examine each one of these principles to determine what it means for a new public library model.

Principle 1. Community knowledge is for use

The value of a community is the knowledge it possesses. People who leave a community will have memories, but those memories will lose value over time. People outside a community will be able to study it through resources visible to outsiders – such as local histories, local newspapers, maybe even web cams - but will lack an essential 'groundedness' in their knowledge of local geography, buildings, events, customs, social groupings, families and individuals.

Local knowledge comes in two forms. Much of it will be in the heads of local people. Some will be in a physical or digital form, most of which will be in personal 'collections' (e.g. an album of family photographs, a video of a school play, an MMS (Multimedia Messaging Service) picture of a wedding service). Public libraries will also have local collections, relating to the communities they serve, typically a mixture of formally published material - newspapers, local government records - and informal ones like newsletters, archival papers and donated items.

Little has been carried out in public libraries to digitise local resources. Most digitisation has been for resources of national and international importance. For example, the National Library of Scotland (NLS) on its Digital Library page (http://www.nls.uk/digitallibrary/index.html) provides a vital collection of digital resources on major figures and events in Scottish history and rare historical documents. There are a host of Scottish digitisation projects with web-accessible resources, for example the Glasgow Digital Library (http://gdl.cdlr.strath.ac.uk/), Scottish Archive Network (http://www.scan.org.uk/), Scottish Poetry Library (http://www.spl.org.uk/) and more. The largest is SCRAN (http://www.scran.ac.uk) which offers access to the same digital resources as those available through the NLS but also incorporates resources from other major institutions like the National Museums of Scotland and from Scottish public libraries. A recent evaluation of a Scottish Executive initiative to fund SCRAN's use in public libraries (Chowdhury, McMenemy and Poulter, 2006; McMenemy et al 2005; McMenemy and Poulter 2005) revealed, amongst other things, that public library users of all ages were keen on resources with which they could identify: on Scotland, on their specific locality and on their family origins. However, they wanted these resources as part of a free service which they could access from home if they wished.

Principle 2. Every user should have access to his or her community knowledge

Knowledge is for sharing; community knowledge becomes valuable only when it can be accessed and used by others, and facilitating the creation and wider use of this knowledge should be the new role of public libraries. If public library staff have a new role, so do people in the local community. The previous mission of the public

library saw local people as recipients of the content that was provided by and through the public library. We regard this passive role for local people as being outdated, primarily through changes in the capacities of personal devices; public library users can now be consumers as well as creators of knowledge.

Principle 3. All community knowledge should be made available to its users

While the second principle states that every user should have access to the community knowledge, thus highlighting the point that public library users are no longer only the consumers but are creators of information as well, the third principle emphasises that no community knowledge should be allowed to be wasted. Rather, public libraries should facilitate the creation of such knowledge so that it is recorded and preserved, and the knowledge that is now in the people's memory and in personal collections, as well as the wealth of experience and expertise of the local community, should not be allowed to be lost. Once such knowledge is created, proper mechanisms should exist to make it available to local as well as remote users, thus completing the knowledge cycle.

Principle 4. Save the time of the user in creating and finding community knowledge

We would agree with Beagrie (2005) that what he calls 'digital memory' is becoming increasingly important as the spread of portable, convenient digitisation devices (for sound, images and video) grows ever wider, with the result that proper provision for 'bottom-up digitisation' by individuals, as opposed to the top down variety from large organisations, is going to become ever more prevalent as time goes on.

Just like the paper records of past lives, the digital records of current lives are accumulating in an *ad hoc* manner but in a much greater quantity and variety. They completely miss formal publication channels and those items that do end up on the Internet/web suffer from its disorganisation as an uncontrolled and unmanaged repository. Internet-based tools have two disadvantages. While commercial sites thriving off user-uploaded ('bottom-up') content are massively popular, e.g. Flickr (http://www.flickr.com/) and Youtube (http://www.youtube.com/), and have vast amounts of content, they are by default 'global': searching for any locality, say a locality in Scotland, will produce only a handful of disparate resources. Second, these sites encourage people not only to contribute digital content but to 'label' it with terms for retrieval later. However this labelling (known as 'tagging' or 'folksonomies') is notoriously bad and lacking in any consistency.

Making local connections via the Internet is difficult. The popularity of sites such as Myspace and FriendsReunited comes from their ability to give their users a means of linking between themselves according to work locations, interests, clubs and hobbies. Yet, as global or national tools, they fail to cover localities in any detail. Finally, there is a need for moderation of content when discussion takes place. Potentially, public library staff are ideally placed to fill the role of advisors on local content creation, management and implementation of controlled description, as well as access schemes and the moderation of content and discussion. As discussed in the groundbreaking document published by the LIC, *New Library: The People's Network*:

> There is a widely held view that librarians will play a significant role in helping users adapt to and embrace ICTs in their daily lives. A European perspective on this role is cited in the European Commission report 'Public Libraries and the Information Society' (Thorhauge *et al*., 1997).

Library staff have already been involved in helping organise local content and in moderating local contacts. The IKnow Gateshead public library portal, run by John Dolan (http://www.asaplive.com/Home/) comes close in offering webmail, blogs and conferencing, a local history emphasis, a database of local societies and digitisation projects like Farne (for local music from the North East of England), but still does not quite push far enough into local digitisation. Another possible exemplar is Bradford's Communigate (http://www.communigate.co.uk/brad/index.phtml) which offers web portal-type services for its local community. There are examples of similar initiatives in Scotland: for example East Renfrewshire Public Libraries produced a local portal featuring many of these ideas (http://www.barrhead-scotland.com) and an award-winning Holocaust Memorial (http://www.eastrenfrewshire.gov.uk/holocaust.htm). A pioneering course in digitisation of local resources for students studying librarianship (Burton and McMenemy 2005) points the way forward in enabling library professionals to digitise resources successfully.

Principle 5. Local community knowledge grows continually

Community knowledge creation is a continual process. It is not a one-off activity, but rather a cumulative process so that, once started, the wealth of knowledge will increase – local community knowledge will be created and used by local people, re-read, re-interpreted and re-deployed – with the result that local knowledge will not only grow over time but will develop in multifaceted ways.

Because of the growth over time in the nature and types of local knowledge, the proposed new model of public libraries acting as local knowledge hubs must use existing standards and technology for digitisation as well as metadata for the management of, and access to, the digitised resources (Chowdhury and Chowdhury 2003). As well as forming a technical underpinning, a set of standards makes staff training easier. There should be no dichotomy between local, national and international standards for information storage and retrieval. We see the possibility of each public library using a standard system (yet to be developed) to enable each one to act as a local knowledge hub but also to allow its resources to be accessible by other local knowledge hubs and by any user on the Internet. It will be vital to obtain the support of national government agencies responsible for library standards (SLIC in Scotland, for example) to create a model system which embodies standards and which is interlinkable between instances of itself and the wider Internet.

PL2.0: Design Overview

A design overview of the PL2.0 is shown in Figure 1 where 'public library 2.0' is a network of community knowledge, which delivers these twin themes of access to, and a repository for, local content, along with connection 'space' for local people. The 'library' would be both a physical place in the local landscape and a busy portal in virtual space, offering local people access to local knowledge.

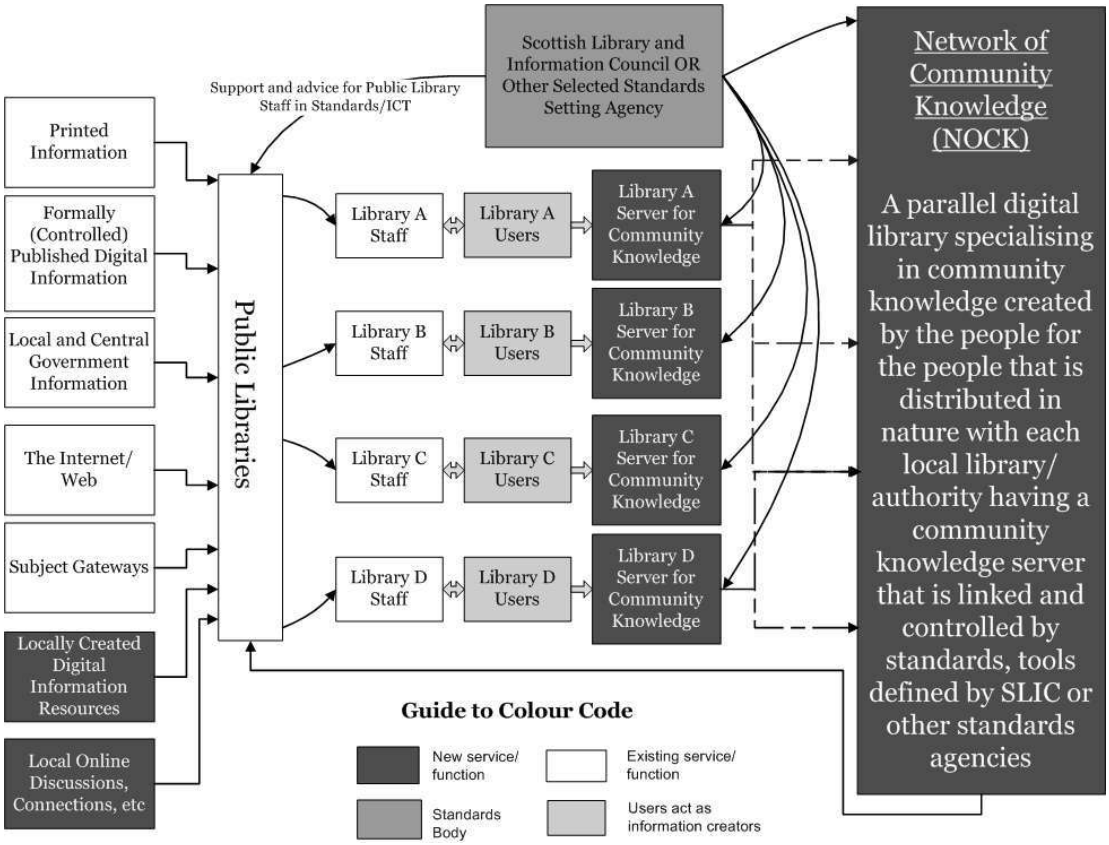

Figure 1. Design Overview of PL2.0

Conclusion

In conclusion, we are at one with Dolan in calling for a 'cultural change' in public library services, and propose that the new role of public libraries will be to move from solely providing access to knowledge to acting as a platform for the storage and dissemination of local community knowledge within the global context created by 21st century digital technologies. So far, public libraries have acted primarily as a mediator between knowledge creators (authors, publishers, websites, online information providers) and local people. We are now working on a specification for, and a trial implementation of, a common platform using open source technologies and standard metadata description and subject access schemes. A public library could use this common platform to enable their local community (with the help and guidance of library staff) to create both a local repository of digital resources and tools such as

personal pages, blogs and conferences to enable local people to share expertise and knowledge. It would be possible to integrate the common platform with traditional external sources of information, and the platform would also join seamlessly with examples in other public libraries, to form a globally unique and valuable resource.

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Paper 5

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https://lianza.org.nz/justify-or-die-%E2%80%93-using-contingent-valuation-service-provision-uk-public-library

http://eprints.cdlr.strath.ac.uk/2782/

Justify or Die? – Using Contingent Valuation of Service Provision in a UK Public Library.

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Abstract:

The public library service in the UK is currently under pressure to justify its existence. An Audit Commission report suggested that if current borrowing rates for libraries continue into the future, libraries would be effectively issuing no books by 2020. Recently the Coates Report asserted about book loans that, "in simple terms, if a service is without separate charge and the public decides not to use it, then the service is de facto without any value to these individuals". Yet Coates' simplistic notions of the services public libraries provide lies at the heart of the problem. Performance indicators based on book loans are unable to assess 'the totality of library effectiveness'. Conversely, qualitative analysis, interviewing users about service impact, shows that libraries 'promote social cohesion and community confidence'. However qualitative findings are by nature not quantitative and not comparable. To try to produce a measure for service quality, contingent valuation was chosen. It elicits economic value judgements from users on both services they use and services they do not use.

A major independent study using contingent valuation was conducted by the Department of Computer and Information Sciences at the University of Strathclyde on East Renfrewshire Library Services, near Glasgow, which is recognised as an exemplary public library service. The study revealed the inability of contingent valuation to adequately assess the complex mix of services provided. The study concludes that an urgent rethink is required regarding measures for public library service evaluation.

The Public Library Service in the UK

Public libraries have long served as a leading public service institution in UK. However, the public library service in the UK is now a domain that is under pressure to justify its existence. A 2002 Audit Commission report for England suggested that if current borrowing rates for libraries continue into the future, libraries would be effectively issuing no books by 2020. (Audit Commission, 2002) This issue was taken up in 2004 by the contentious Coates Report, which asserted that, “in simple terms, if a service is without separate charge and the public decides not to use it, then the service is de facto without any value to these individuals.” (Coates, 2004, p.5)

The most recent estimates for the cost of a national public library service put the cost at £1 billion pounds a year. This is a major public commitment of resources, and although the expenditure fairly reflects the wide range of services that are operated by today’s public library service the domain remains an easy target for criticism due to outdated modes of measurement which threaten the development of the service, and a focus in the measurement on only part of the service environment, namely the lending of book materials.

However, over the years the role of public libraries have changed from institutions merely providing circulation and reference services to institutions taking a major part in educating and reinforcing society (Aabo 2005a). This has lead to an explosion in the range of services provided by typical public libraries, which can be categorized into six inter-related strands:

1. Leisure services: lending books and media for leisure activities, offering drop-in access to read newspapers and magazines, allowing the use the library as a venue for community group meetings, maintaining listings of local events.

2. Information services: lending books and media as sources of information, providing reference services – both in person as well as virtual (e.g. Ask a Librarian, http://www.ask-a-librarian.org.uk/), maintaining community information listings, conserving and digitising local heritage collections and setting up and running web sites and intranets supporting the local community and local government services respectively.

3. Advice services: offering personal advice in vital areas like health, careers, social security/pensions, major life events, etc.

4. Learning services: fostering reader development, offering homework clubs and family learning programmes, developing lifelong learning in the community by means of basic literacy and numeracy initiatives, ICT skills training, and the provision of a wide range of networked learning resources, some of which might be self-produced.

5. Equity services: ensuring opportunity of access for all by means of housebound services, pensioner/young people’s services, ethnic minority services and disability services

6. Citizenship services: encouraging the local community to participate in its governance through building community portals containing information on local government, central government and pan-national governments and agencies and on e-government services and functions

These strands are all inter-related in that, for example, lifelong learning can be fostered by online resources, by print and media materials, by community groups running events in the library, by linking with schools and other appropriate agencies, both local and national etc.

It is quite clear that, given the wide variety and the complexity of the services provided by the public libraries in today's world, it may be useful to set measurement criteria for each strand of service provided by public libraries and appropriate methods for data collection, which may comprise both qualitative and quantitative methods. However, evaluating strands is not the same thing as evaluating the whole package. Moreover, since public libraries are dependant in terms of service delivery and impact on the socio-economic infrastructure of their locality, it is important to attach appropriate conditions or parameters to performance criteria for each strand.

Current evaluation methods for public libraries

Given the diversity, complexity and novelty of service strands provided by public libraries, it is extremely important that a set of measurement criteria be developed and followed for evaluating these services that leads to an accountable, but service-development focussed sector. This has not happened for two reasons. First, national performance indicators currently implemented merely cover quantitative features of traditional services like book loans (Audit Scotland 2004). New services, or those without quantifiable outputs, are not covered at all. For example, the Accounts Commission in Scotland (2004) publish an annual report on the performance of public libraries in Scotland based on three Statutory Performance Indicators (SPIs):

(1) Indicator 1: Borrowers as percentage of the resident population and the average number of issues per borrower. The report points out that this performance indicator may be influenced by such factors as the marketing policy on libraries, the nature of the stock of the libraries, the loan period and the number of items issues to the customers at a time, the location of the libraries, the demand for the stock, and the levels of investment on the stock.
(2) Indicator 2: Changes in library stock measured by the library stock turnover per 1,000 population. This relates specifically to the expenditure on the collection development and is influenced by such factors as the demands for the various categories of document sin the collection, the level of wear and tear, the level of loss of items, patterns of past investment in collection development, and income generated from certain types of collection, such as video renting.
(3) Indicator 3: Book requested measured by the average time taken to satisfy book requests. This indicator is influenced by such factors as the level of demand and the availability, the efficiency of the currently practised ordering system, the loan period, and the late returns of items by the customers.

Clearly these indicators focus only on the lending services of the libraries which form only one part of the library services.

Second, qualitative measures exist but are flawed. In Scotland the Best Value regime in the public sector has focussed on using more qualitative measures to justify public services, which is welcome. Guidelines for assessing some of the more traditional library services have been developed by the Local Government Act and the SLIC (Scottish Library and Information Council) Best Value in Public Libraries initiative as audited by Audit Scotland. However the ability of local authorities to develop their own evaluation

criteria has led to a lottery in terms of what services are covered, and the exact criteria used. In a climate of criticism what is needed is a set of evaluation guidelines that all stakeholders – government, funding bodies, librarians and the general public – can use to assess the quality and value of public library services.

The problem of evaluating public library services has a long pedigree. “Public libraries have a long held tradition of using quantitative measures to assess performance and monitor trends” (Favret, 2000, p. 341). To try and counter the charge of irrelevance a new SPI on learning centre access has been added to compensate for declining borrowers and issue statistics. However one new indicator still means coverage falls far short of the breadth of service strands covered earlier. Not all authorities use all SPIs. For example, Argyll and Bute Council gather information for two of them. Even if authorities use the same SPIs comparison between authorities is difficult to obtain as using the same indicators for each authority would suggest that each authority operated under precisely the same circumstances and like was being compared for like. However, factors such as length of loan period, location of the library, local authority funding and investment in stock all vary from authority to authority and will undoubtedly influence the outcomes of SPIs. Therefore, an understanding of context and circumstance must be in place to interpret and fully appreciate the relevance of public library statistics:

“The initial conception of performance indicators as hard-edged market surrogates was badly flawed – the challenge now is to rescue PIs from a mechanistic and impoverished model of management.” (Midwinter and McVicar, 1996, p.29)

Moreover even if public libraries meet all of the SPIs this is still no hard indicator that “the real needs of users and non-users are being met or whether society is benefiting from public library use and offsetting the costs of providing for the service”. (Brophy, 1986, p.32).

“It is easy to measure output in terms of, for instance, average time taken to satisfy book requests but more difficult to measure the ultimate value of reading, literacy, information, and knowledge” (Linley and Usherwood, 1998, p. 85). It is a case of attempting to ‘measure the unmeasurable’ and performance indicators are unable to assess ‘the totality of library effectiveness’ (Sumsion, 1999, p.179). Qualitative analysis can be carried out in an attempt to gain a better understanding of service performance and the actual impact which the service has on its users. This approach takes context into consideration and allows for a more narrative measurement of impact.

There are many studies which outline the positive social impacts of the public library, for example learning in low achievers (Proctor and Bartle, 2002), the public library’s effects on social inclusion (Train et al. 2000) and adult basic skills (Train, 2003), the impact and value of homework clubs (Bevin and Goulding, 1999) and the public library’s role in family learning (Kirk et al. 2004). Linley and Usherwood (1998) state that:

“These findings are largely derived from qualitative, often anecdotal, evidence. The key message of this study is that qualitative data, properly gathered, are valid evidence and it should be treated as such by both politicians and professionals.”

This study took the form of a social process audit, discarding traditional quantitative performance measurement methods and focussed on the outcomes, impact and value of the public library rather than its outputs. The research therefore sought to analyse the

goals (aims), inputs (resources), outputs (the programme or service) and outcomes (actual experience) of the public library and information service. As a public service, the public library would be expected to hold certain social objectives and it is these objectives which act as the starting point for the social audit process. These objectives were likely to revolve around issues of social inclusion, community participation, outreach and equity of access for all. Interviews with stakeholders from a variety of locations (e.g. staff, users, councillors) were carried out in a variety of ways, alongside focus groups and workshops. Linley and Usherwood concluded that, in the two locations in which the studies were carried out, it was felt by many that the public library had a unifying influence on the community which helped to 'promote social cohesion and community confidence' and sustain community identity (1998, p.84). It was also found to have a social impact on user skills and confidence and proved psychologically beneficial for the isolated and vulnerable. In addition, it had an economic impact in the provision of resources for start-ups and successful job-seeking.

'Soft' data is seen as inferior to 'hard' data as generalising from qualitative findings is impossible. However, extrapolation is possible: 'modest speculations on the likely applicability of findings to other situations under similar, but not identical, conditions.' (Patton, 1987 in Linley and Usherwood, 1998). This is undeniably useful when measuring the value and impact of a public service. However, it is difficult to apply qualitative methods of measurement in a standard manner across different libraries and different local authority areas.

Contingent Valuation

While quantitative measurement measures output and qualitative measurement attempts to measures impact, the main impetus the current climate of evaluation and measurement is economic. Therefore, it makes sense to assess library performance in terms of economic value:

'Contingent valuation draws upon economic theory and the methods of survey research to elicit directly from citizens the value they place upon goods not traded in private markets.' (Aabø and Audunsen, 2002).

CV utilises rational choice theory in which people are held to calculate the likely costs and benefits of any action before deciding what to do. In rational choice theory, individuals are seen as motivated by the wants or goals that express their 'preferences'. Rational choice theory holds that individuals must anticipate the outcomes of alternative courses of action and calculate that which will be best for them. Rational individuals choose the alternative that is likely to give them the greatest satisfaction. CV works through constructing a market by an interview survey of its potential players (Aabø and Audunsen, 2002) using:

- a scenario or description of the hypothetical or real policy or programme the respondent is being asked to value or vote upon
- a mechanism for eliciting value or a choice from the respondent
- information on the respondent's socioeconomic characteristics, attitude and behaviour towards the good to be valued, and whether the respondent understood and believed the scenario and took the hypothetical decision-making seriously

A final CV can be calculated by comparing the perceived return on the service to the actual costs of the service and the costs users incurred accessing the service.

CV is also potentially good in measuring non-use values, something which traditional quantitative and qualitative measures do not do – a person who does not go to the public library will have little opinion on, for example the quality of its reference services. However, they may still place value on the public library reference service in terms of its worth to society. CV generates quantitative results which can then be interpreted in a qualitative manner: i.e. understanding user attitudes towards the library (e.g. what services do they value?) rather than user behaviour and actions alone (e.g. how many books borrowed?).

CV has already been applied to public library services. There have been three major studies. St Louis Public Libraries (1999) surveyed branches separately and found returns on a USD varied from USD 1.30-2.70 in Birmingham Public Library to USD 10 or more in Phoenix Public Library. Differences in return were also found for the same service at different locations. Griffiths et.al. (2004) looked at investment in Florida State Libraries and found that USD 6.84 was returned for every USD spent. Barron et al (2005) looked at South Carolina State Libraries and found a direct return on investment of USD 4.48 for every USD spent on public libraries. Bolton Metropolitan Borough Council and MLA North West (2005) found a low return of GBP 1.60 for every GP spent. In comparison, a recent use of the methodology at the British Library suggested that for every GBP spent on the service, a return of GBP four is generated (Pung et al, 2004). Aabo (2005b) has attempted to apply CV to the Norwegian public library service as a whole.

As Missingham (2005) notes, there are issues in using numerical values as a measure of success – how comparable are they and is there a potential to find a benchmark, what causes variations in results and what contextual and external factors might affect a CV study? To a large extent these issues relate back to the core proposition of CV, that people can make rational economic judgements about hitherto 'unvalued' services.

This paper is about an experiment carried out which tries to elicit the motives for CV choices from respondents. It is hypothesised that the roots of instability in CV might stem, not from people's irrationality, but from their inability to make a valuation because of lack of the knowledge and the experience required to do so. This study therefore does not force respondents to make valuations. When valuations are asked for, respondents can make a valuation or not, and, of they wish, make a comment or not. No pressure, in the shape of a person asking questions and expecting answers, was used. Rather a questionnaire survey was delivered and left to respondents to complete alone as and when they wished.

East Renfrewshire Library Service was chosen to host this study. It is an exemplar of a 'modern' public library service, in that it aspires to deliver the range of services listed in the strands model above, and performs will in traditional evaluation measures. This paper will elicit respondent viewpoints about East Renfrewshire Public Libraries to use as context for the CV questions.

Survey of East Renfrewshire Public Library Service

East Renfrewshire is located south of Glasgow and was created in a local government re-structuring in 1996. It is bordered by East Ayrshire, Renfrewshire, South Lanarkshire, Glasgow and North Ayrshire. Approximately two thirds of East Renfrewshire is rural farmland containing the villages of Neilston, Uplawmoor, and Eaglesham, whilst the remaining area is made up of the mainly suburban residential areas of Thornliebank,

Giffnock, Clarkston, Busby, Netherlee, Newton Mearns and the town of Barrhead. East Renfrewshire Public Library Service has branches in all there areas.

A survey form consisting of four sides of A4 was constructed, in consultation with staff from East Renfrewshire Public Libraries. It was designed to be answered chiefly by option ticking and to be completed within 5 minutes. Questions were grouped into four sections:

A: Awareness of public library services
B: Usage of public library services
C: Contingent valuation of public library services
D: User Characteristics

A grid was used to present the range of services East Renfrewshire Public Libraries provided, using the service strands model developed earlier:

Borrowing books	☐	Borrowing music CDs	☐
Borrowing videos/DVDs	☐	Reading newspapers etc in the library	☐
Reading your email	☐	Surfing the web	☐
Looking up information yourself	☐	Asking the staff for information	☐
Finding out 'whats on' locally	☐	Finding out about local history	☐
Getting advice on health matters	☐	Getting advice on careers	☐
Getting advice on social security	☐	Getting advice on pensions	☐
Getting advice on courses	☐	Learning how to use computers	☐
Doing a course on a computer	☐	Improving your reading/writing skills	☐
Joining a family learning group	☐	Joining a reading group	☐
Special services for the housebound	☐	Special services for the young	☐
Special services for the retired	☐	Special services for the disabled	☐
Special services for ethnic groups	☐	Booking a library room for an event	☐
The Barrhead.com website	☐	The Holocaust Survivors website	☐

Most are self-explanatory. The last two services are unique to East Renfrewshire Public Libraries: Barrhead,com is a local community portal and the Holocaust Survivors website is a prize-winning initiative which records the memories of survivors of holocausts throughout the 20th century, who live in East Renfrewshire (McGettigan et al, 2004). This grid formed the first questionnaire section A, asking respondents to tick which services they were aware of.

The next section, B, on public library usage, asked the questions:

B1: *Which branch libraries were visited?*
B2: *How long the respondent had used East Renfrewshire Public Library services?*
B3: *How often they went to their most visited branch library?*
B4: *How long on average was their journey to their most visited branch library?*
B5: *How long on average these visits lasted?*

Respondents were presented with the service grid again and this time asked to tick which services they used (question B6). They were also asked for their opinions on three perceived core services: book loans, drop-in computer use and the Barrhead.com portal (B7, B8 and B9 respectively). Comments on these services were sought.

The third section asked four contingent valuation questions. Before these were asked a clear, explanatory note was given:

"***Important note:*** *The following questions will ask about paying for library services. They are* ***NOT*** *intended to prove that a paid-for library service is better than a free one, only that a free library service can have its value measured in terms of willingness to pay.*"

and then respondents were asked:

C1: *How would you be affected if you did not have access to any public library services at all?"*

Possible answers were: unaffected, somewhat affected or severely affected. The four contingent valuation questions were:

C2: *The public library service is funded by an amount taken from Council tax payments. The average monthly Council tax payment in East Renfrewshire is around £85. How much of this £85 should be spent on public libraries?*

C3: *Imagine a situation in which the public library service ceased to issue new library cards. The only way of getting a library card would be to buy one from an existing library user. In this imagined situation, if you had a library card how much per month would you be willing to accept for the use of your card?*

C4: *If the public library service had to be funded by voluntary donations, how much would you be willing to give?*

C5: *If the public library service did not exist, how much would you be willing to pay for an alternative equivalent service?*

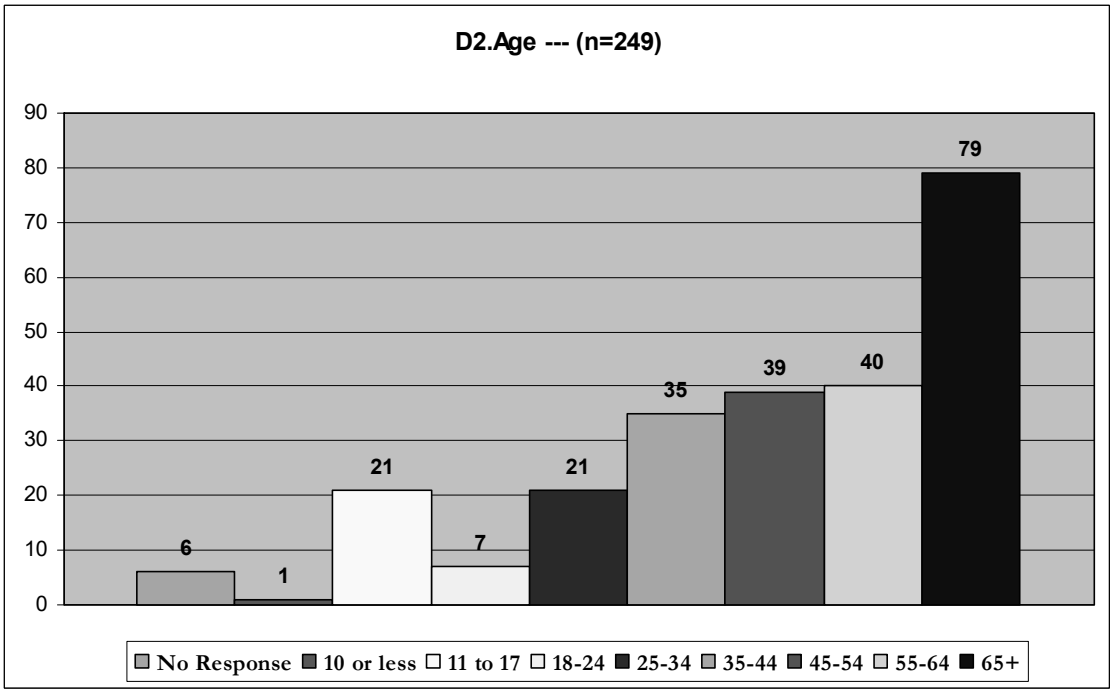
Each of the above contingent valuation questions was given a box for the respondent to comment on their answers.

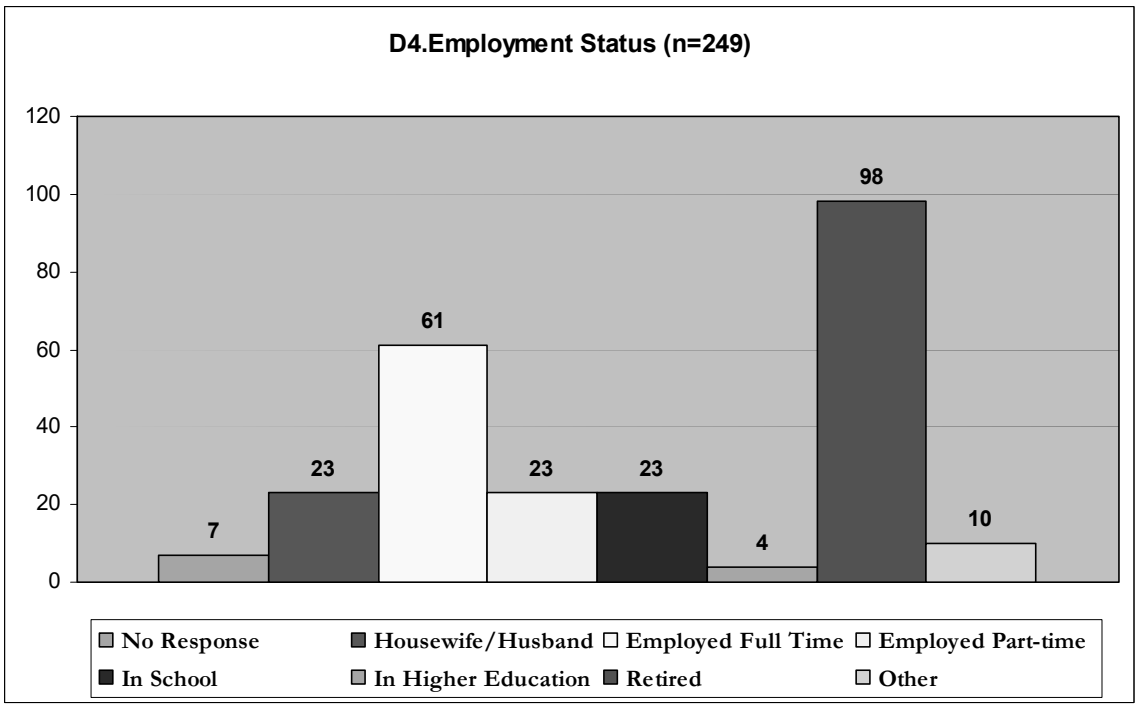
Finally the last section of questions asked about user age, gender, ethnic background, status, length of residency in East Renfrewshire and postcode.

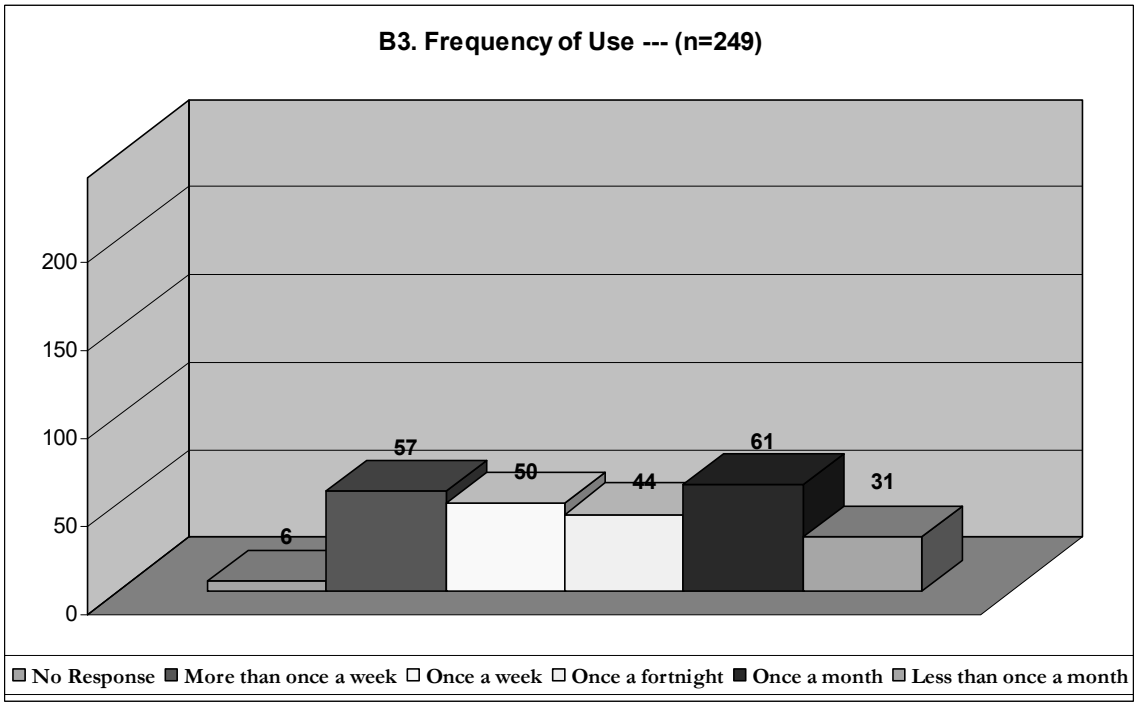
Printed forms were distributed throughout the ten branch libraries in East Renfrewshire over the period of a week. 249 completed questionnaires were returned.

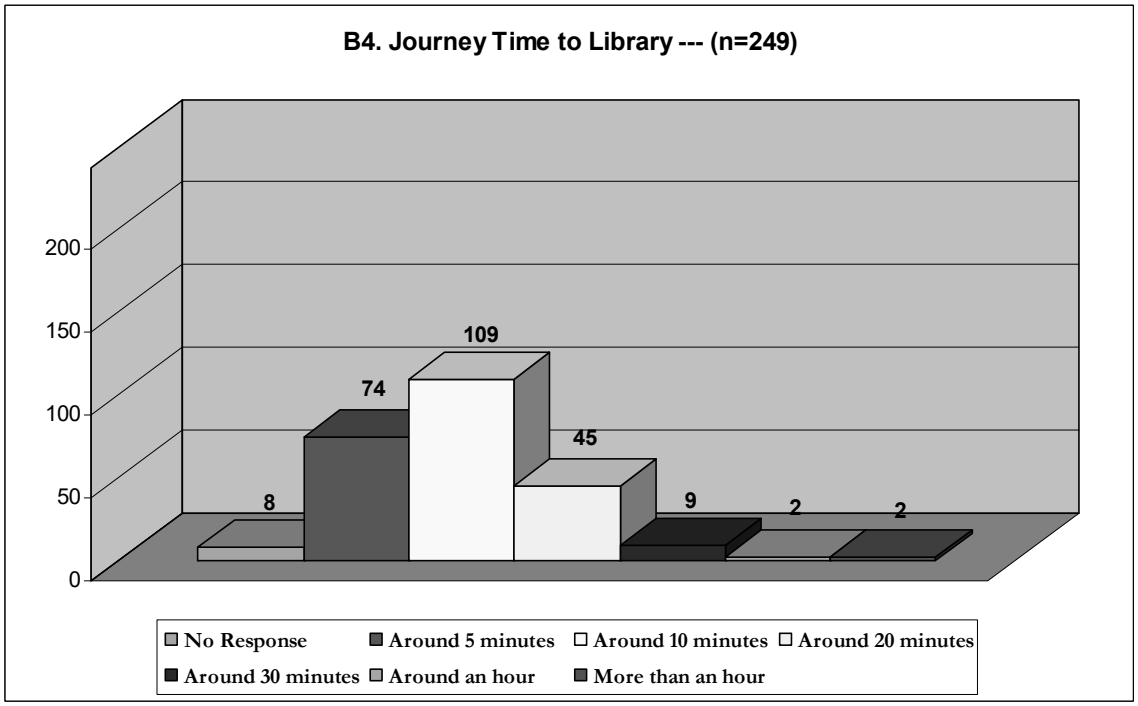
General Survey Results

To start with a breakdown of the 249 respondents, many are stereotypical public library patrons: mainly female, largest grouping by age is 65 or more, largest status is pensioner and most have lived in the locality for 10 years or more. But there are clear signs that East Renfrewshire is reaching outside this group as the detailed results for age (question D2) and status (question D3) show:

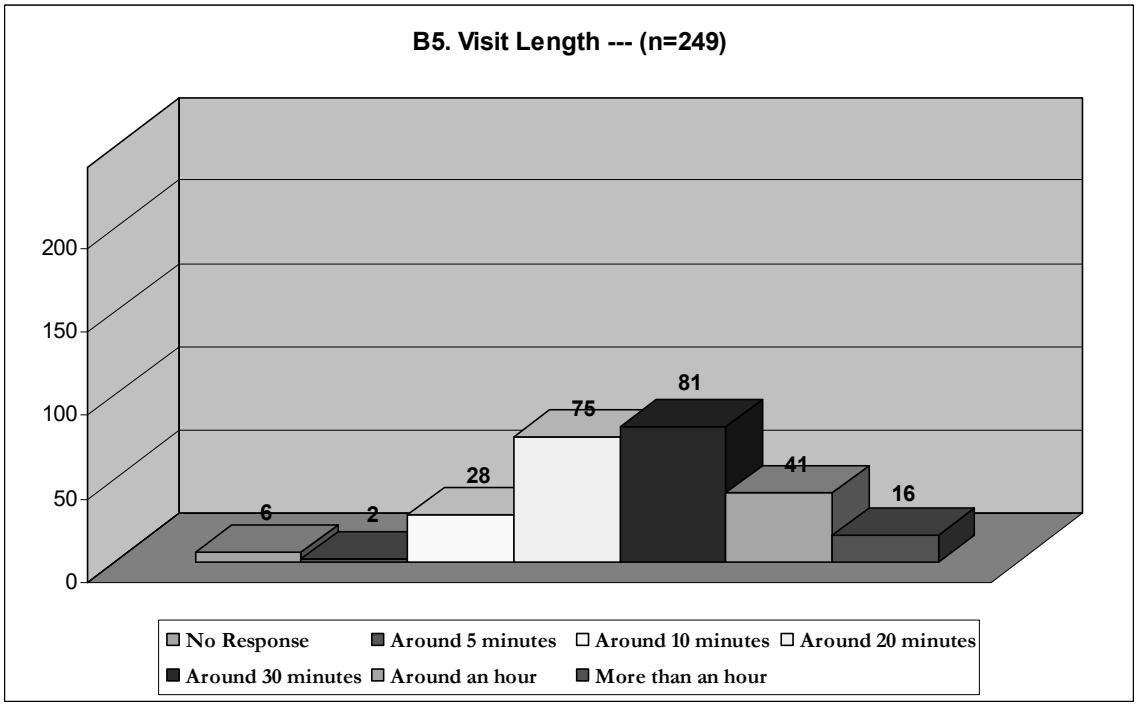

D2.Age --- (n=249)
90
80
70
60
50
40
30
20
10
0
6
1
21
7
21
35
39
40
79
No Response
10 or less
11 to 17
18-24
25-34
35-44
45-54
55-64
65+


D4.Employment Status (n=249)
120
100
80
60
40
20
0
7
23
61
23
23
4
98
10
No Response
Housewife/Husband
Employed Full Time
Employed Part-time
In School
In Higher Education
Retired
Other

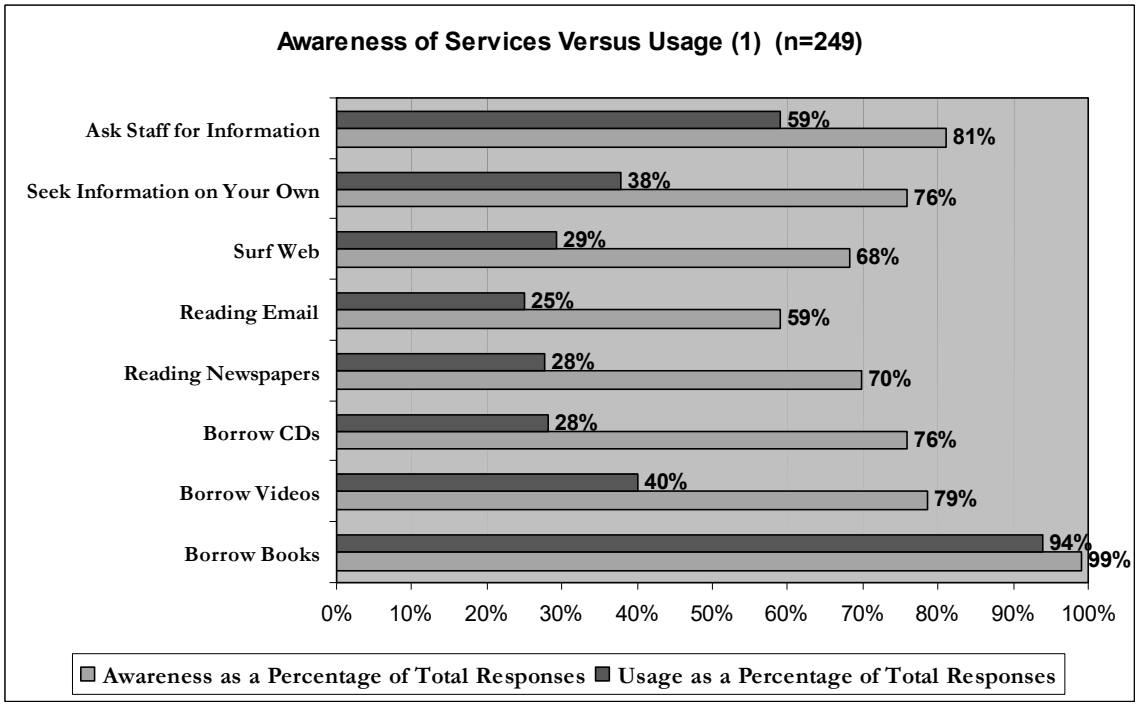


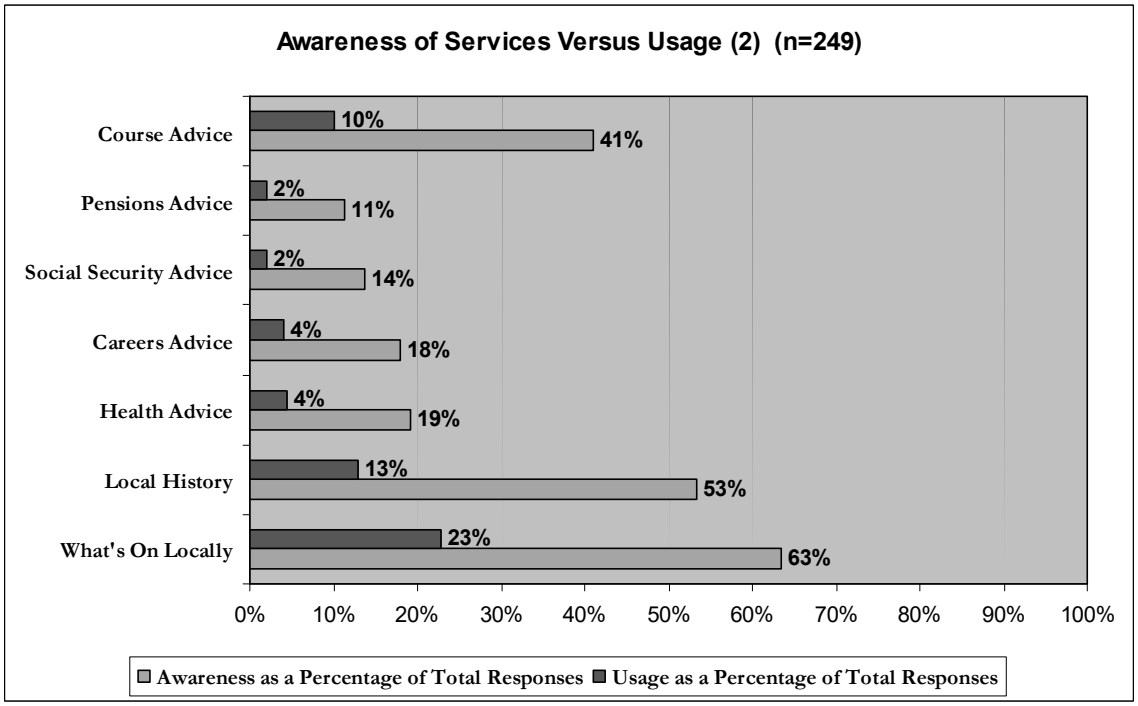


Journey time to the nearest library, frequency and length of visits all appear to be reasonably healthy:

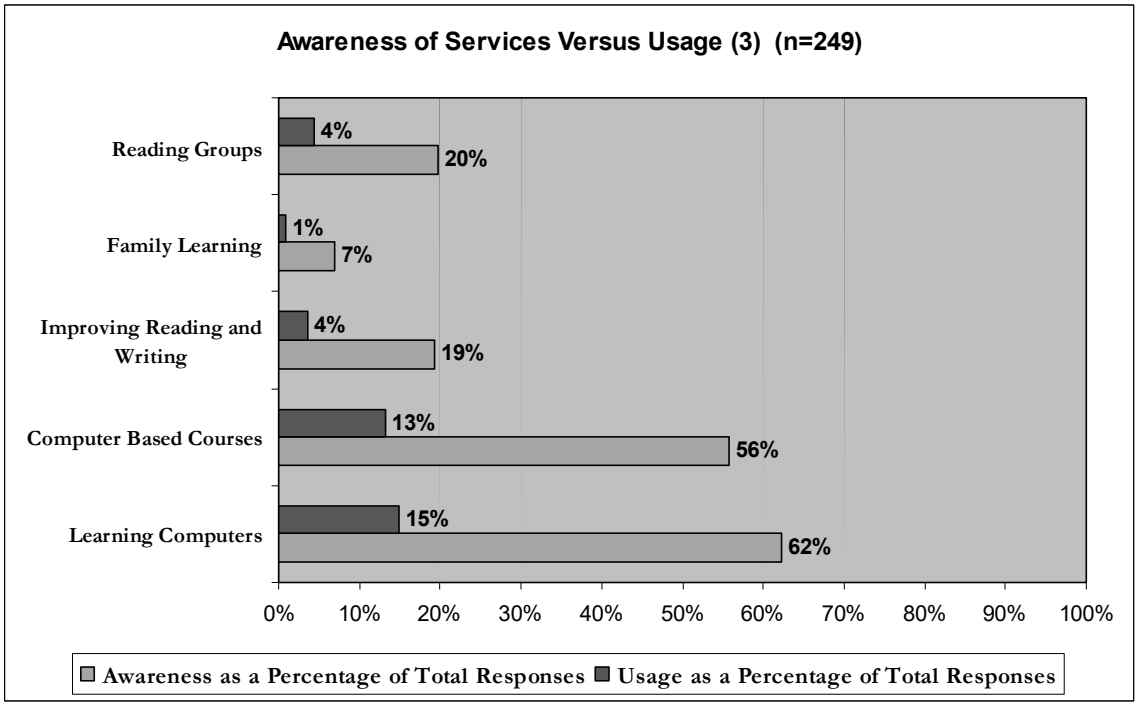


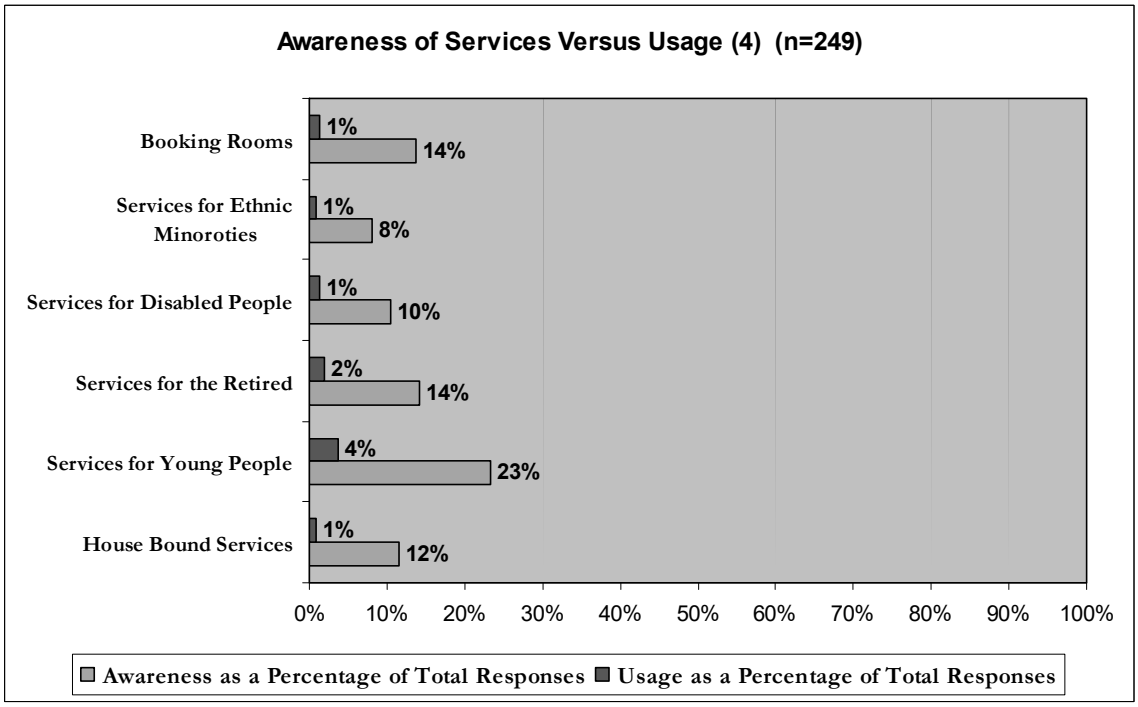
The responses regarding awareness and use of library services show that the full range of services available was definitely not known to respondents and that there was a corresponding bunching of usage around the more traditional services. However some new services, like public access computers, are becoming popular, as the detailed response breakdowns show:



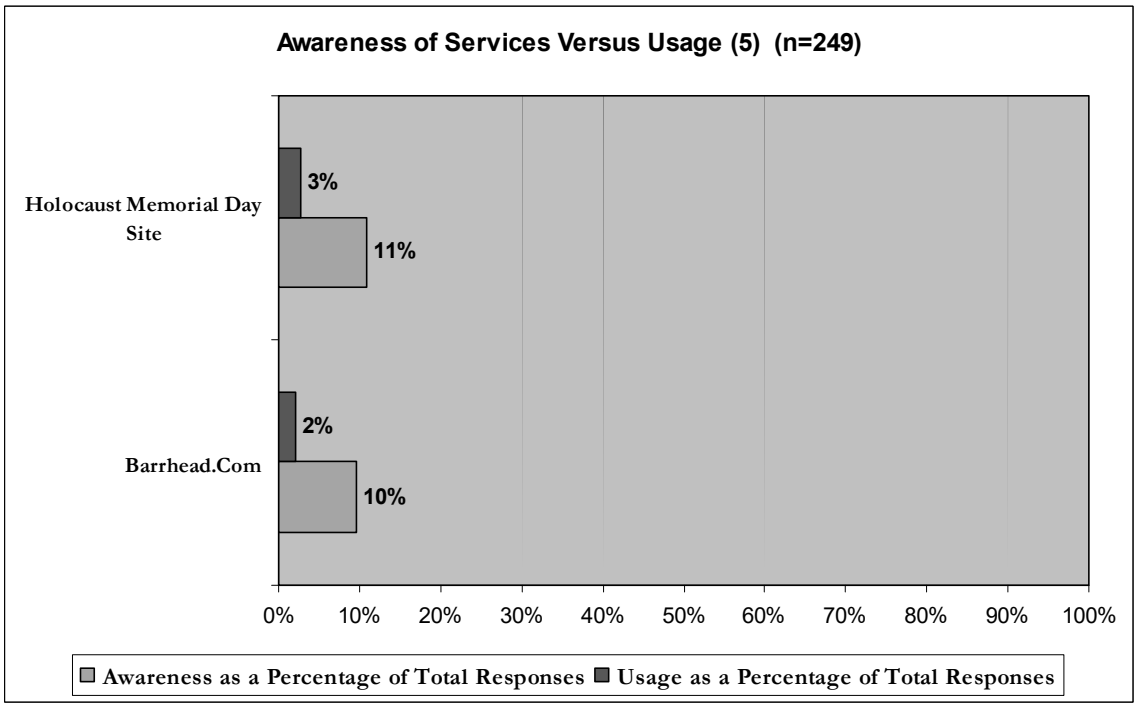


On the results above it can be seen that awareness and use of some services are at low levels and further results show even lower figures:

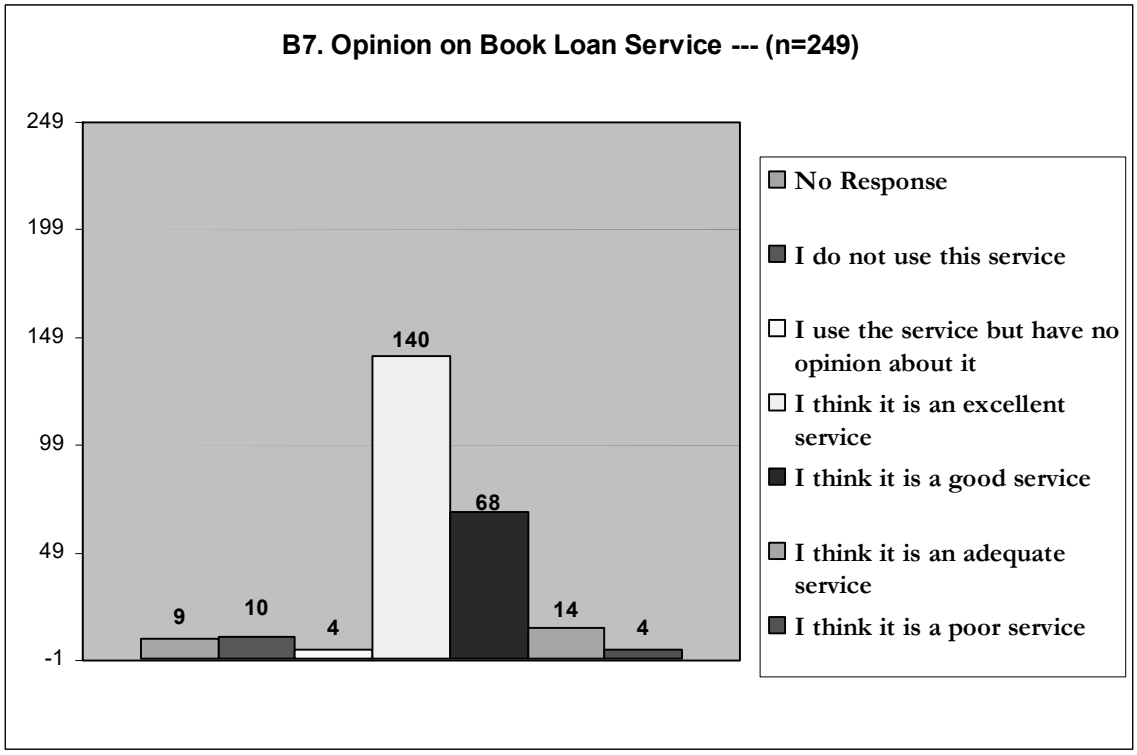




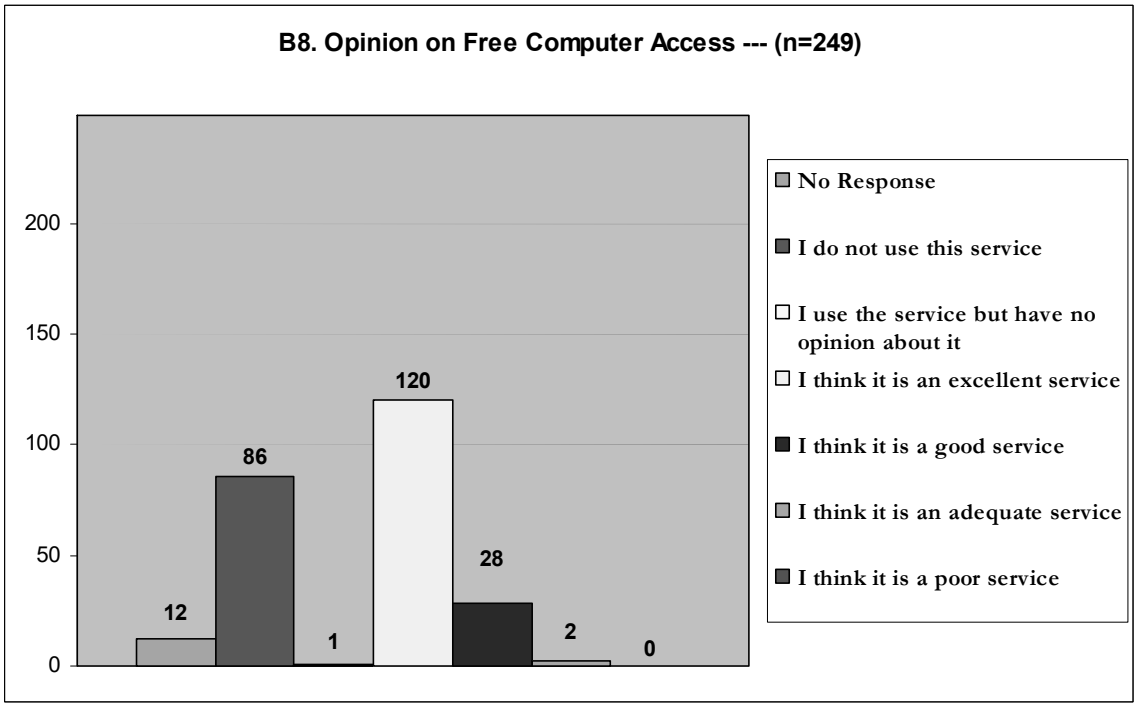
Perhaps the most disappointing results are for the flagship new services, the Barrhead portal and the Holocaust Survivors website:



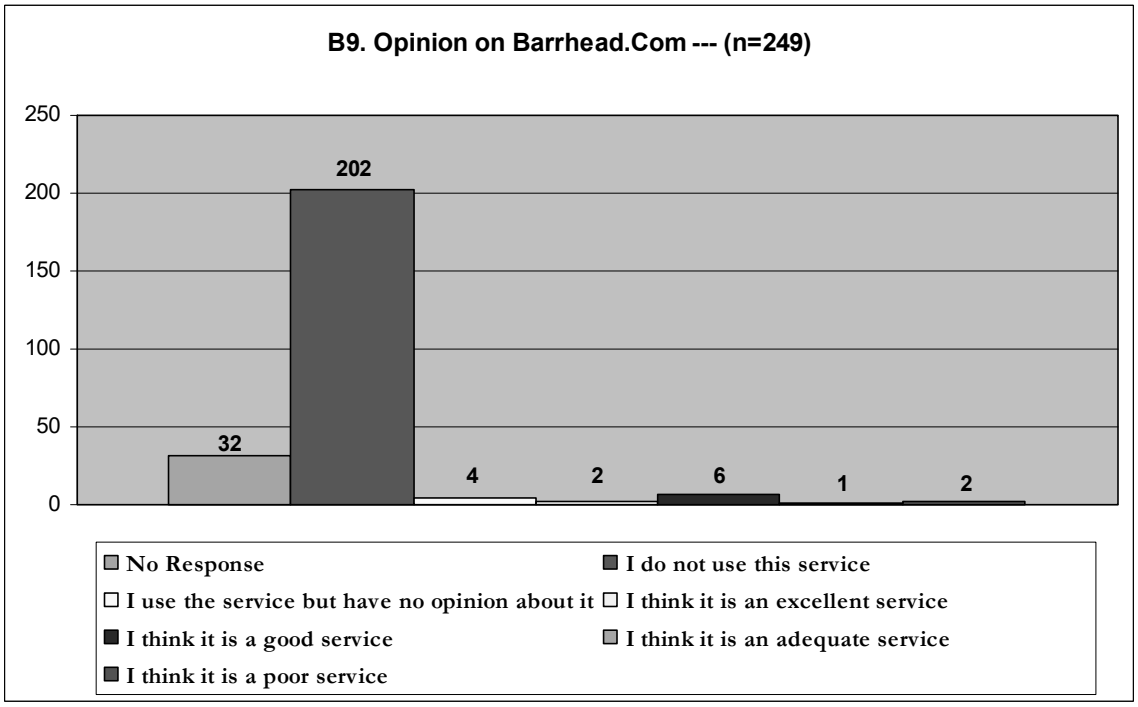
The questions on user ratings of core services: book loans, drop-in computer use and the Barrhead.com portal (B7, B8 and B9 respectively) received interesting responses. For book loans most respondents responded and most of those chose good or excellent. There were some useful suggestions for improvements (e.g. a Scottish fiction section, weeding out old computing books on Windows 95) plus some gripes (lack of new books, lack of certain types of book etc):



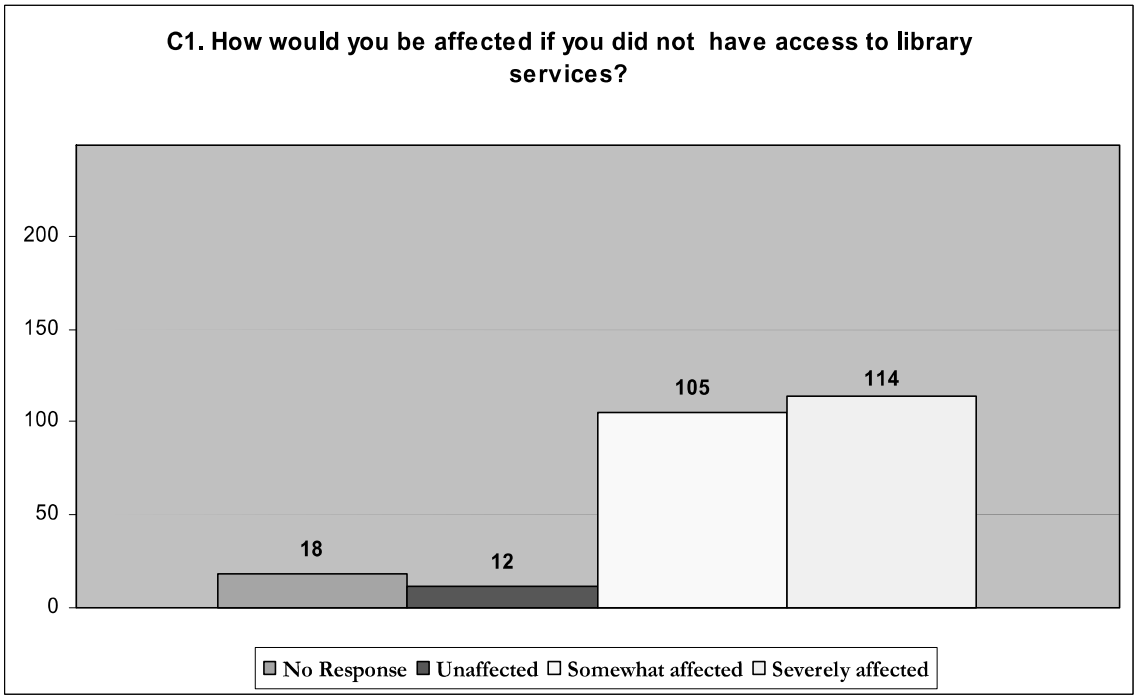
Responses on computer use were more mixed. While it got strong usage, there was also a significant segment that did not use it. Comments on it were mixed: along with the non-users there were those who disapproved of computer-based activities in the library (e.g. kids making noise playing games), and a few who did not want computers in the library all:



Most respondents gave a 'do not use' response to the question on the Barrhead.com portal. One comment said that current Council meeting minutes would make this site much more useful. Obviously something is needed to give this portal 'pulling power':



In answer to the lead in question for the contingent valuation section, only a few said they would unaffected by the lack of a library service. The 'somewhat affected' and 'severely affected' choices split respondents into two roughly equal groups:



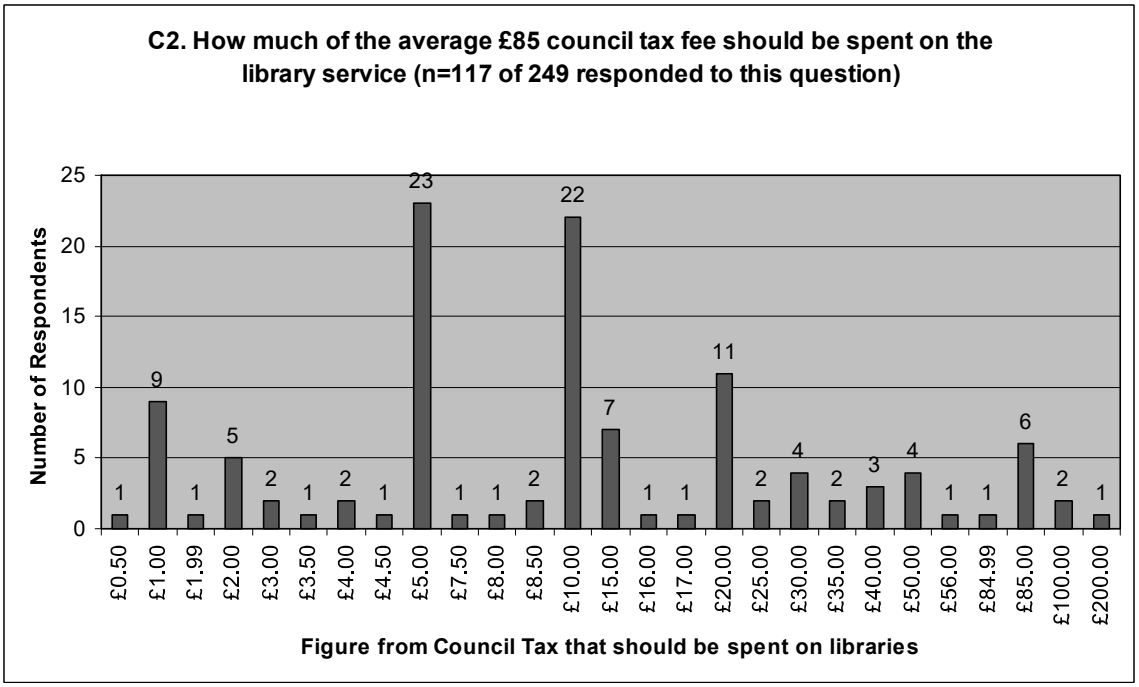
In summary then we see a public library service offering a wide range of services, of which only a portion are taken up. Most users are stereotypical (retired people) but all sections of the community do use public libraries. Public libraries are convenient to use and were used frequently by most respondents. Book lending is still the core service but other services, notably computer use, are being taken up. Most respondents valued, in the sense of being affected if they were lost, their public libraries.

Contingent Valuation Results

In response to the question:

C2: The public library service is funded by an amount taken from Council tax payments. The average monthly Council tax payment in East Renfrewshire is around £85. How much of this £85 should be spent on public libraries?

a wide range of responses were seen:



The clumping of responses around 'easy option' values (£1, £5, £10 and £20) should be noted. The intention of giving out the average Council tax payment was to give respondents a yardstick to use. A large number of comments for this question asked for more details about council expenditure on services so that respondents could use this data to make a realistic choice vis a vis public libraries:

"This question is unbounded that is to say you do not indicate whether if more were spent than is currently the case that a better service would be offered. My guess is that somewhere in the region of £1.50 out of the £85 is spent on Libraries. I would be happy to increase that to as high as £2 if it meant that a better range of bookstock were available and improvements to access all stock holds." (No value chosen)

"Unsure of funding. Taking more for libraries may affect other services or increase (overall) Council Tax." (No value chosen)

"I'm sorry, I really have no idea how much is spent at the moment so I don't want to put less than is currently spent. I would be prepared to pay, say, £2 per visit to use the computers" (No value chosen)

"As much as necessary to provide an excellent service." (No value chosen)

"Cannot be answered without knowledge of cost of running the service. Question should give indication of how much of the average Council Tax is spent at present. However as

you can see from my Council Tax payment which is £223 I am more than helping to pay for the service in ER" (No value chosen)

"This is a difficult question. Without knowing the other expenditure it is not an easy one to answer. At the end of the day it is not an initial service bit it certainly improves the standard of living." (No value chosen)

"Without knowing the costs associated with running the libraries, and the number of people paying council tax, and the current proportion of monies being allocated to it, it is hard to work out a realistic figure for this question." (Chosen value £1)

"You really need to know all other services that are provided to make a realistic assessment" (Chosen value £2)

"This is a difficult question to answer without thinking alot about other services competing for the pot of money." (Chosen value £5)

"For a single retired person like myself, the library service is one of the comparatively few "bonuses"!" (Chosen value £5)

"this is difficult to answer without having a list of all the other things it needs to be spent on, that would help me decide proportion better" (Chosen value £10)

"I don't really know how the Council tax is apportioned." (Chosen value £16)

Although some respondents did appear to have some knowledge of Council budget allocations:

"I think I am aware that ERC has a good record on cost of public libraries, 2nd best in Scotland? per capita cost per head" (Chosen value £5)

"I don't imagine the service gets this proportion of funds at present!" (Chosen value £7.50)

"If the Council stopped wasting money on cycle lanes and other PC matters, they could spend more on libraries." (Chosen value £17)

Many respondents who chose high values for library services from their comments appeared to be aware that they were making an irrational choice but were doing so because of the value they place on libraries or a service they provide:

"I would hate the service to be reduced. Reading is a great pleasure." (Chosen value £85)

"Libraries give good public service and should be maintained." (Chosen value £85)

"I get tremendous enjoyment from reading and computers, so would spend max." (Chosen value £85)

"Only the books though" (Chosen value £84.99)

"To fund books only - not computers." (Chosen value £100)

Conversely, many of the respondents who refused to give a value, or gave a very low value, in their comments stated that they valued their free public libraries highly but did not want to give a figure for that value. This may have been because they felt that valuing highly a hitherto 'free' public service might enable the Council to raise rates if people appeared willing to pay more for services:

"I find this difficult to answer as I do not want my Council Tax to go up (we certainly pay a lot more than £85) howver I do believe that the library service is essential to all communities and should be valued." (No value chosen)

"I think the amount taken from an average Council Tax charge to fund public library services ought to be doubled! What amount? Impossible to answer when one doesn't know how much the amount is. Plus the Council Tax is much, much too high." (No value chosen)

"The sercvice should be free to those that require it. However a free service for all is a good thing and if possible maintained." (No value chosen)

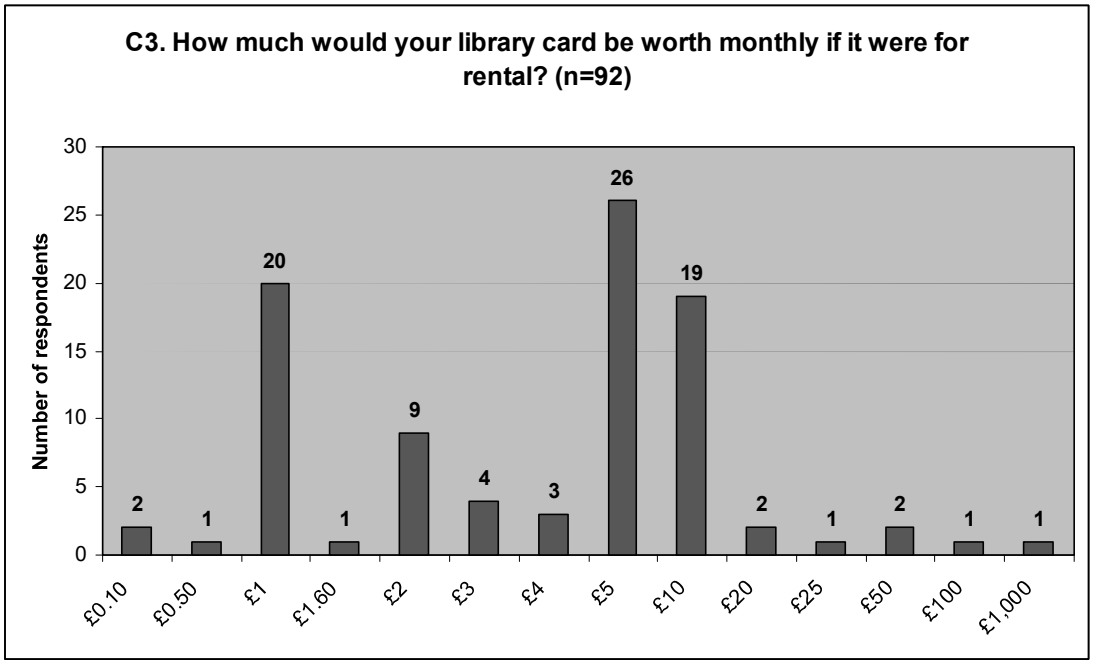
"Considering the first free public library was the Stirling in 1791 why fix it if it isn't broken." (No value chosen)

"Council Tax is a problem for elderly people as there is no lower rate unless you have very little savings. Therefore everything from this Tax should be run very economically to reduce the Tax as much as possible." (Chosen value £5)

In response to the question:

C3: Imagine a situation in which the public library service ceased to issue new library cards. The only way of getting a library card would be to buy one from an existing library user. In this imagined situation, if you had a library card how much per month would you be willing to accept for the use of your card?

a similar wide range of responses were seen:



Again there is clumping around £1, £5 and £10 values. However this question of the four contingent valuation questions got the lowest response rate. The reason for this seems to have been that this question was regarded by some as unanswerable, in that the scenario it envisaged was extremely unlikely and therefore not possible to judge:

"I don't approve of the question. Sounds complicated to operate." (No value chosen)

"This seems a peculiar idea." (No value chosen)

"This is beyond my imagination" (No value chosen)

"Don't know. You can't know until the situation arises." (No value chosen)

"Unfair question" (No value chosen)

"Not a relevant question!" (No value chosen)

"As this is an unlikely scenario - my answer would have to be that an alternative solution would have to be found - maybe use your C.tax number/Nat Ins number instead." (No value chosen)

"I cannot answer this question as this imagined situation is totally unrealistic." (No value chosen)

"A ludicrous scenario!" (No value chosen)

"C3 question is absolutely outrageous - what about very young children - how on earth would they be able to buy a ticket!!!!!!!!!!!!!" (Chosen value £1)

"Really no comment as I cannot envisage such a situation." (Chosen value £1)

"Not interested in this idea." (Chosen value £10)

A few were happy with the question however:

"This is a very inventive question - is it useful?" (Chosen value £5)

"I would not like to share my card. However, selflessly, I would hand it over for £5!" (Chosen value £10)

Many respondents did value the library service highly in their comments but again many gave no value figure:

"I would willingly give the use of my card to someone who couldnot afford to pay if it meant they had access to books" (No value chosen)

"As an ex-librarian, I don't think I would sell my card, as I think the public library service is priceless." (No value chosen)

"I think in this case people would stop using libraries altogether so many people buy books now as they are a lot cheaper from supermarkets and charity shops although I myself enjoy going to the library and I think although I don't have children the childrens

section always looks good and imaginative for children starting at a young age." (No value chosen)

"I would not part with my library card for any amount. It is too precious a possession." (No value chosen)

"I would be willing to lend a card free of charge." (No value chosen)

"As I am disabled and am limited by circumstances outwith my control it would be dreadful not to hav exclusive use of a card, or to have to pay beyond my means." (No value chosen)

"Nothing if I also retained use of the card. If use was lost entirely to the new owner I would not offer card for sale." (No value chosen)

"Somewhat defeats the purpose of a public library - I think people would stop library use." (No value chosen)

"I didn't pay for my card therefore I would lend it for free." (No value chosen)

"I receive too much pleasure to give my card away." (No value chosen)

"The exact figure is difficult to judge, for my personal use I would say it is worth very little. I would simply reread more of my own books or borrow more from friends. The main value to me of the library is as a source of reading material for my children if someone were wanting to borrow one of their cards then the price would be much higher say £10." (Chosen value £0.50)

"I believe libraries are wonderful places and would probably give my card for free." (Chosen value £1)

"I would not mind paying a token amount for thr use of the library, 25 p fines probably cost more to administer overall than they raise, say £1 a month to use the library, no payment made when the service is not used" (Chosen value £1)

"This would be very detrimental. Reading needs to be encouraged - many would turn away in favour of TV etc." (Chosen value £5)

"This does not relate to what i would be willing to pay for a card -but if i was still using a free one i wouldn't want to lose the use of it -so would price it accordingly." (Chosen value £10)

"Academic answer as i would never sell/rent my card as fines alone could well exceed the rental income!!" (Chosen value £10)

"This service ought to continue to be free to all" (Chosen value £50)

Finally some saw this question as a stalking horse for privatisation:

"I work in a school library and have access to whatever books information I might need through my work and through the internet. I mistrust questions like this because the Thatcher years destroyed any faith I had that central government actually believed in providing high quality public services for all. I do not want to give East Renfrewshire

council any ammunition for any further charged-for services, particularly since the service in my local branch library (Mearns), is not as good as it was, and seems less good than in other areas of the authority" (No value chosen)

"Public libraries should be free! Think of the people who fought for this." (No value chosen)

"Are you thinking of charging for your service?" (No value chosen)

"As a matter of principle I would not pay for a service that should be free to all." (No value chosen)

"I would give free use to a closely associated person. Unethical to charge." (No value chosen)

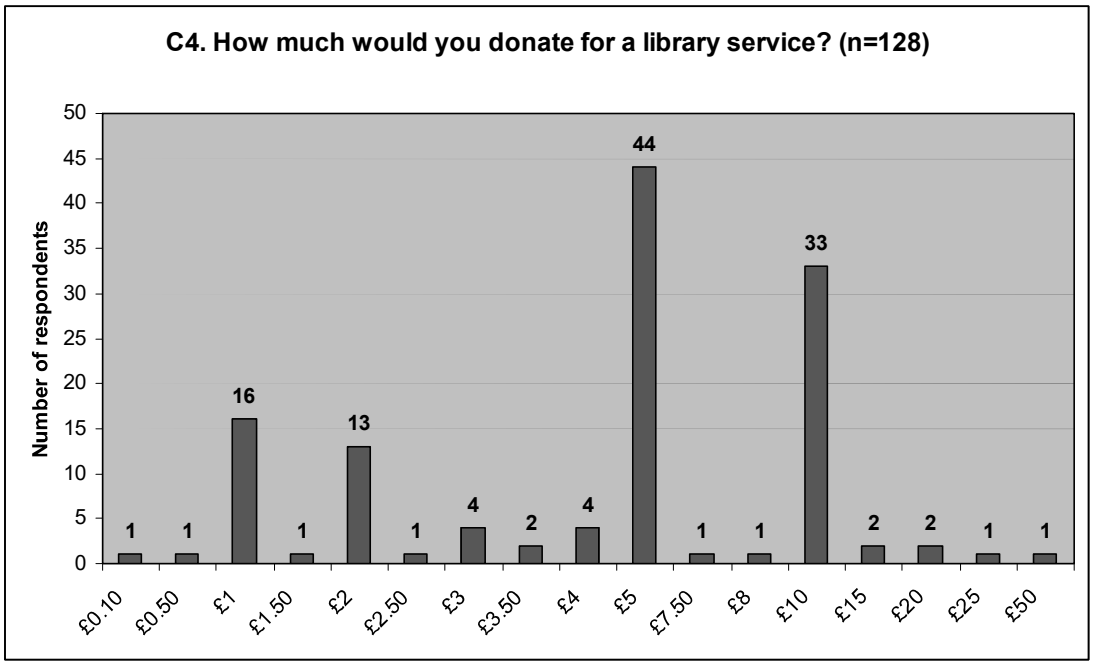
"Unfair to ask this as if we are going towards fees!" (No value chosen)

"I do think that users that can afford to pay toward service should. £10 is not excessive." (Chosen value £10)

In response to the question:

C4: If the public library service had to be funded by voluntary donations, how much would you be willing to give?

Again a clumping around £1, £5 and £10 was seen:



Most of those who offered comments were against the idea:

"I would put my money into a campaign to get this decision reversed and not buy into it." (No value chosen)

"I do not think that libraries should be voluntarily funded" (No value chosen)

"Councils should fund public services, councillors should fund trips abroad or fact finding missions, free drinks for council meetings should cease" (No value chosen)

"I think the library is a service which should not be funded by the public unfortunately I don't have spare money every month therefore I would be unable to commit to a monthly donation." (No value chosen)

"The idealistic part of me would like to say that I would be prepared to spend say £4 or £5 a month to support public libraries. The realistic part of me thinks that this is unlikely as I suspect that a library service run on donations would swiftly decline." (No value chosen)

"Is that Ewart spinning in his grave?" (No value chosen)

"Pay Council Tax, this should allow for this. Re-coup unpaid Council Tax from those owing!" (No value chosen)

"As a matter of principle I would not pay for a service that should be free to all." (No value chosen)

"Considering we get 'mugged' by the Council Tax - it is 'not on'." (No value chosen)

"Increase in illiteracy if this was ever introduced." (No value chosen)

"Library should always be free for benefit of people" (No value chosen)

"Not a reasonable question - would either be run via council or as a private concern - cannot see how it could be run by donations - would never get enough!" (No value chosen)

"Unfair to ask this as if we are going towards fees!" (No value chosen)

"If I was also paying the same £85 in Council Tax, I would grudge that more of that could not be given to a public library service. What about choosing honw one's Council tax is distributed instead?" (No value chosen)

"I find it really difficult to put a price on this as I strongly feel there should be open and wider access to books" (Chosen value £1)

"Again a ridiculous question - it would lead to the demise of a certain group of people even thinking about reading and using the library, as a housewife I do not have extra funds to fund public libraries - I expect my council tax to pay for this!!!!!!!!!!!!" (Chosen value £1)

"I think we all expect the library to be free to encourage people to read books. Also School children make excellent use of the library both as a meeting place and reference place." (Chosen value £5)

"It should NEVER happen." (Chosen value £10)

However some could envisage voluntary funding or using an alternative source:

"Any reasonable amount considering the cost of books." (No value chosen)

"Would prefer using charity shops." (No value chosen)

"I would not donate anything as you can buy from charity stalls." (No value chosen)

"I donate to a variety of charities and would donate to library services onliy if essential." (No value chosen)

"10% of my Council Tax payment." (No value chosen)

"Willing to pay 'cost of running public libray' divided by 'number of borrowers times number of books borrowed'.." (No value chosen)

"For this money I would expect 7 day a week access." (Chosen value £4)

"It would be worth it. I love reading - if I had money it would be £20 per month." (Chosen value £5)

"Many would refuse - after life time of free provision it is seen by many as citizen's due." (Chosen value £5)

"This is a "top of my head" answer. I would probably pay more as I received a great deal of pleasure from the library services." (Chosen value £5)

"Funded totally. This is a very arbitrary figure but clearly would provide nothing like the service we have now! However, in the end libraries must have a lower priority than (e.g.) refuse collection!" (Chosen value £5)

"As an OAP this is all I can afford." (Chosen value £5)

"Buying spoken word books are very expensive so this would be worth it." (Chosen value £10)

"Response is based on guesstimated cost of buying second-hand books, or tapes or discs". (Chosen value £10)

"plus use of Internet at say £2 per session." (Chosen value £10)

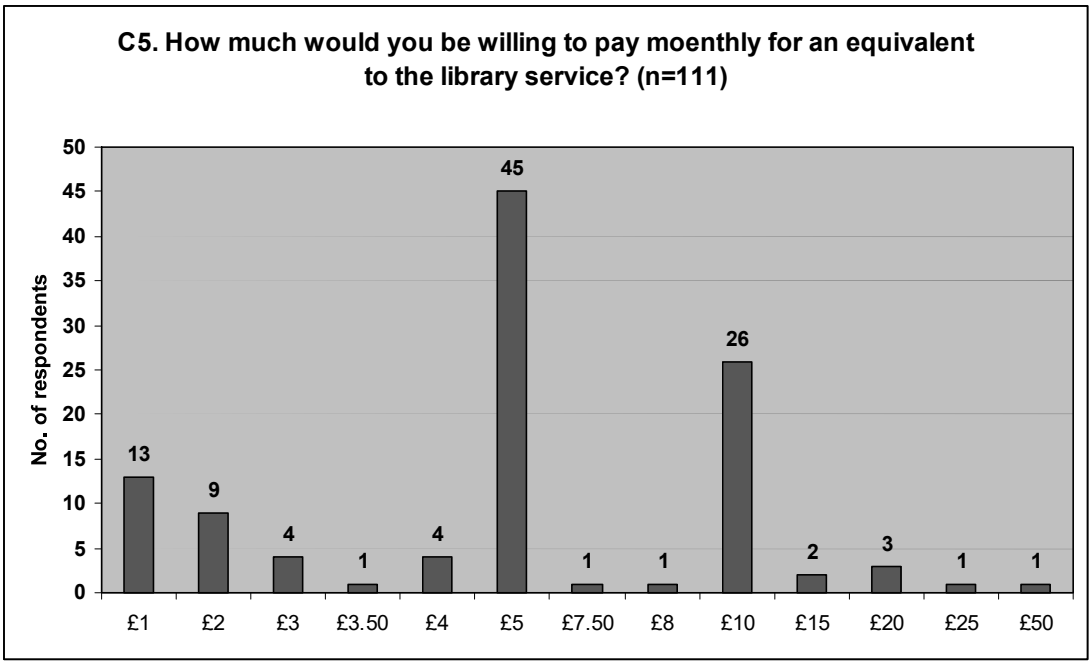
"Maybe less. I am benefits now but Internet is only way to stay in contact with some friends and family and can't do without." (Chosen value £10)

"Dependent upon income. Or charge by book." (Chosen value £20)

Finally, in response to the question:

C5: If the public library service did not exist, how much would you be willing to pay for an alternative equivalent service?

Again there was a clumping of responses around £1, £5 and £10:



This question again polarised respondents, over the implied issue of privatisation. Many were against it:

"Questions like this only give local authorities the idea that libraries are not essential services and therefore are up for budget cutting." (No value chosen)

"I would go to charity shops for books and start book clubs with friends." (No value chosen)

"If a public library service did not exist I would be bereft, and consider not paying my Council Tax in protest." (No value chosen)

"Don't turn history back to subscription libraries. The poor would suffer." (No value chosen)

"Again I feel as though you're indicating that you are going to charge for your service." (No value chosen)

"We already pay quite heavily via the Council Tax." (No value chosen)

"Library should always be free for benefit of people" (No value chosen)

"I would not pay for this 'public service' as the Council Tax should cover it." (No value chosen)

"Too much handed over to private enterprise for profit." (No value chosen)

"The service has existed free since Victorian times for good reason - education availability. I do not expect this to change. If it does - can I stop paying Council tax?" (No value chosen)

"Sounds like the end of the library service as we know it." (No value chosen)

"Many poorer members of community would suffer. Better off could buy books and swap with friends." (Chosen value £5)

"This is a public service we cannot do without!" (Chosen value £5)

And some were for it:

"If I had to pay for a service directly I would want it to be something very different not an equivalent one, instead something that was very good at precisely what I wanted. The service I ideally want is something that offers me a ever changing range of fiction material of interest to me to read whilst on the bus. A wide range of introductory materials in non-fiction to interest me in new areas. More detailed books of areas of interest I would buy myself. A wide range of fiction and non-fiction for children." (No value chosen)

"Dependent upon income. Or charge by book." (No value chosen)

"If it was a good service - I would pay. I fear I would not be visiting the bookshop so often!" (No value chosen)

"Most likely prefer to pay on use rather than monthly" (Chosen value £5)

"I would open a broadband a/c with my ISP" (Chosen value £10)

"If all paid this would probably give fair service." (Chosen value £10)

"But only if Council Tax payments were reduced accordingly." (Chosen value £10)

"This is probably what I would spend on buying books." (Chosen value £50)

Conclusions

It is very clear from comparing comments to valuations that there is no clear link between a person's intrinsic sense of 'value' for the public library service and the contingent values they returned. Without any element of pressure, many people refused to give a contingent valuation. One reason for this was that the potential consequences of doing so (enabling local government to raise rates or central government to privatise the public library service) made any valuation dangerous. Another reason was the continual stress respondents reported in trying to make contingent value judgements without having the knowledge and experience of this method they felt they needed. The obvious artificiality of the questions made contingent valuation an alien activity to ordinary people. What people did seem to do was just guess: of those that did give a valuation many (over half of responses across all contingent valuation questions) plumped for round-number choices: £5 and £10. If the cost of delivering a library service comes in at under £5, then contingent valuation is going to produce a multiplier of that cost as the 'perceived value', if the majority of respondents choose £5 and £10. This effect would be worse, it is hypothesised, if respondents were put 'on the spot' by an interviewer: this could make them even more likely to respond with a round number.

Two further issues arise from this study. Firstly, it surveys users and not non-users. If users cannot supply cogent, rational contingent valuations of library services how can non-users? Secondly, there is a danger of evaluating the library service offering as users see it,

which appears to be a subset of the actual provision. If new services are not used (and thus cannot feature in any evaluation) is this an indictment of the mix of new services or of poor marketing of those services or both? The original problem, of justifying new library services to keep the public library service alive, appears not be addressable by contingent valuation methods.

One approach that might be promising is 'relative valuation' i.e. asking respondents to rank library services against other services competing for the same budget. Final rankings would determine flows of funding from relatively unwanted to wanted services. This people can do and are willing to do, as long as figures are available, as some responses already quoted above to C2 showed:

"This question is unbounded that is to say you do not indicate whether if more were spent than is currently the case that a better service would be offered. My guess is that somewhere in the region of £1.50 out of the £85 is spent on Libraries. I would be happy to increase that to as high as £2 if it meant that a better range of bookstock were available and improvements to access all stock holds." (No value chosen)

"Unsure of funding. Taking more for libraries may affect other services or increase (overall) Council Tax." (No value chosen)

"Without knowing the costs associated with running the libraries, and the number of people paying council tax, and the current proportion of monies being allocated to it, it is hard to work out a realistic figure for this question." (Chosen value £1)

"This is a difficult question to answer without thinking alot about other services competing for the pot of money." (Chosen value £5)

"I don't imagine the service gets this proportion of funds at present!" (Chosen value £7.50)

"If the Council stopped wasting money on cycle lanes and other PC matters, they could spend more on libraries." (Chosen value £17)

Advantages of 'relative valuation' would be that new services could be trialled for their acceptability for funding vis a vis existing services and that non-users would have a framework in which to situate their judgements of public library services.

One irony about contingent valuation is hinted at by one comment already quoted above for C4:

"Is that Ewart spinning in his grave?" (No value chosen)

William Ewart, MP for Dumfries, was a sponsor of the 1850 Public Libraries Act. When the Act was being debated, opposition to it focused on the concern that the wealthy would be funding a library service for the poor, which runs counter to a central tenet of contingent valuation, that people will value (and pay for) a service that gives value to others and not necessarily to themselves.

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Paper 6

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EDITORIAL

Internet identity and public libraries: communicating service values through web presence

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Abstract

Purpose: To discuss the nature of public library websites and what they communicate about the values of the sector

Design/methodology/approach: The article examines a range of Scottish public library websites to determine domain and quality of information resources provided.

Findings: That many public libraries in Scotland have a virtual identity problem brought about by being part of larger websites for their parent bodies. It is argued that this identity problem is to the detriment of the service, and that models of good practice should be urgently considered by public librarians.

Practical implication: The article should be of interest to librarians considering how best to present their websites and the potential challenges in doing so as part of a larger umbrella organisation.

Originality/value of paper: This is the first article to examine all sites from Scottish public libraries in terms of their origins and content.

Paper type: General review

Keywords: Public libraries; websites; Internet identity

A colleague and I have just completed a small project examining access to the Internet in British public libraries (McMenemy and Poulter, 2007). As part of this we undertook visits as mystery shoppers to gauge how easy it was for non members of the library service to gain access to the Internet; we also investigated how complex the sign-in and log-on procedures were, and how useful the web-based gateway provided by the library was for information seeking. We are still putting together the data for publication later this year, but one aspect of our research that stuck out to us was the variance in quality

of public library websites. Indeed for us, this was one of the most disappointing aspects of the research; that several of the public libraries examined had singularly failed as information organisations in putting together sites that were extremely poor information resources. Another troubling aspect was the fact that most sites we examined were essentially just sections of the larger site of the local authority that administered the libraries. Thus the majority of the library sites had no identity of their own but instead were under the corporate banner of the administrative region. These disappointments from the small study have led me to dig a little deeper and examine all Scottish public library websites (Harden and Harden, 2007) to compare how they present themselves in terms of their identity.

Why is Internet Identity an Issue?

Organisations have pre-existing identities in the minds of their users. For the local public library the users may see it in very traditional ways, thus attempting to mimic this image in an online capacity is problematic. For instance how can we replicate a building such as the New York Public Library? Like any grand library built a period of time ago it represents an ideal of what the generation that constructed it feels a library should look like and the values it should exude. Modern incarnations of libraries look very different, and it could be argued are designed to be more functional. All of this impacts on the mental model we have for the library in a virtual world. A major plot device in the mid 1990s movie *Disclosure* sees a company building a virtual library, complete with grand ceilings, book stacks, and all the attributes of the traditional grand city library.

Conversely creating an Internet identity that in some way detracts from the old image of the service is equally problematic. As Nielsen and Tahir have observed, the website of an organisation is its face to the world, its building lobby and its receptionist (Nielsen and Tahir quoted in Harpel-Burke, 2005, p.193). It should represent an appropriate vision of what the library is about and the services it offers. Obviously creating a web identity also allows the

library to communicate itself to non users or others who may not like the traditional image it has, but this has to be done so with empathy for the image the service has in the eyes of the entire community. Producing a site that is consciously different in identity from the service it represents may be desirable if the bid is to break from past practice, but it also runs the risk of cheapening the image of the organisation in the eyes of others.

British E-Government – the problem?

Therefore creating a public library website that represents the service values of the sector is a difficult challenge in the UK e-government scene. In the UK all services that could reasonably be so were targeted to be delivered online by December 2005. The push towards e-government services impacted all local authority services, from payment of local taxes, to planning applications, to public libraries.

As will be seen below, the vast majority of Scottish public libraries have their web presence under the banner of the local authority which administers them. While logical from an administrative standpoint, it could be argued that such an approach forces the public library to adopt an identity based on the that of an administrative region rather than the service itself.

Let us take a hypothetical example created for this paper; Adminshire County Council operates libraries on behalf of its user community. Each library has its own page on the Internet, and they follow the convention below:

www.adminshire.gov.uk/libraries/name-of-library.html

This same protocol is followed by all departments in the local authority, including public housing, education, planning and others. Due to concerns over corporate image, it is the case that the design of the main site is replicated across all pages, and thus the libraries page would look almost identical to other departmental pages.

It has also to be said that local authority names are not always easy for members of the public to work out. In the UK there have been two major periods of local government reorganisation where in addition to changing the names of the local authority there were also instances where libraries and other services transferred ownership from one local authority to another. To highlight this point, the author has lived under three different local authorities in his lifetime, despite never having moved from the same area. This is a confusing system, and to this day some older people in my community refer to the authority as the name it was known as 25 years ago. This is a challenge in terms of organisational identity, and doubly so when it comes to Internet identity. For instance, how much will the local library have actually changed for the user when it transferred from one local authority to another? As a child using the library when the first change took place I noticed no difference. The library remained in the same place, it still offered books. All that visibly changed for me was my library card and the stamps inside the books. Thus to me, the local authority that administers the library service is almost a side issue. It offers merely an administrative label for the service; it does little or nothing to alter the identity of the library itself. Indeed, there is no reason why it should. Why should it then be the over-arching identity presented for the library as part of its web presence?

Linked to this is the nature of how local authority services are organised. In the UK public libraries no longer are separate departments, and thus come under an umbrella department. This varies across the country from culture departments, to community services departments, to education departments. There is no uniform identity for public libraries in terms of which departments they belong to in a local authority, and this often means that the person in charge of the larger department is not a librarian. What does this mean for identity and values, not only virtually but in the real world?

A final challenge, and a significant one, is who exactly builds and designs the library website. For most local authorities e-government is a big concern, and

thus is something undertaken with an eye on all services rather than just libraries. While it may not be possible for all libraries to have control over their websites, they should at least be constructed form the standpoint of the library services on offer rather than by design or IT staff who do not know library services from those provided by cleansing or planning departments. This would not be done in the real world, thus why should it be so in the virtual?

What should a public library website look like?

The challenge is, of course, in an era of e-government what exactly should a public library site do with its web presence? Surely rather than be an online leaflet the focus should be on services. A basic provision should be the library catalogue, which has been the simplest form of gateway to a library's services since they began. Building on this, the online services subscribed to by the library should be easily accessible. Local history and news of events and new services should also be included, in addition to notices regarding clubs and societies that may meet in the library. Therefore rather than just information on the libraries concerned, the sites should contain appropriate services that users can access. Indeed if the site is to be a service it must attempt to replicate as many of the services offered within the library or on the telephone that it can.

Scottish Public Libraries Examined

The small study undertaken for this paper examined the websites for all 32 of Scotland's public library services. Each site was accessed and examined for:

1. Domain name
2. Whether a catalogue was available

The percentages of each site with their own domains were as follows:

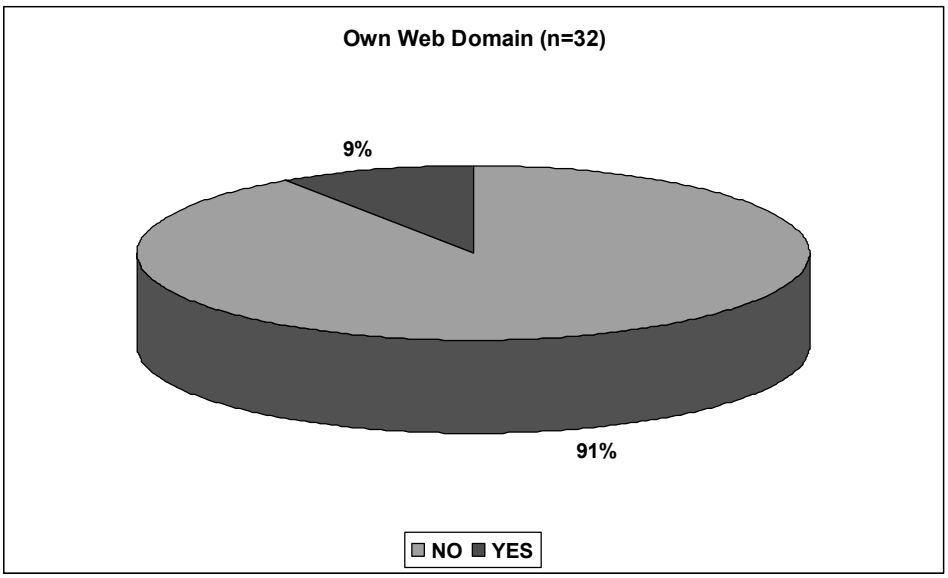

Figure 1. Scottish public libraries with their own web domains

31 of the 32 library websites contained links to the library catalogue, something that should be essential. It has to be said, however, that not all of the sites that did so made the catalogue easy to find. Several sites listed the library catalogue under online services, alongside links to pay council tax. Thus suggested that organisation of such resources was orchestrated under the banner of the entire local authority rather than the library itself. In terms of terminology I found this confusing, and the sites that were successful in this regards had clear links to the catalogue on the library homepage.

For example, Glasgow City Council offers an attractive corporate site, but the user is presented with a wide range of local authority services on all screens, thus even while viewing information on libraries, it is presented with links as diverse as births, deaths and marriage, going to school, clean Glasgow, and others:

http://www.glasgow.gov.uk/en/Residents/Libraries/

These are of questionable relevance to the user seeking library services. Perhaps most disappointing is the limited information available on the Mitchell

Library, which is Europe's largest public reference library and in terms of collections is world class.

The site is successful in terms of highlighting new initiatives and information on each library, but one is left with the feeling that with its domain, or with the rest of the council services played down significantly, this could be a vastly more useful example of a good public library site.

Best Practice - Examples

There are some sterling examples of library web sites in Scotland. I do not believe it an accident that the two websites that had their own domains and thus their own Internet identity were among the best sites examined. Shetland libraries have their own domain name (http://www.shetland-library.gov.uk/) and as a result have a site that is devoted exclusively to library services, news and content.

The site works well not only in terms of offering an information gateway, but also from an extensive news service about what is going on in the library. This is difficult to do in as much detail on a site that has to present numerous services via the same gateway. We can see clearly the benefits for the library service in having their own domain name are related to the depth and amount of content that can be presented. Only library services and information are presented, thus much more can be presented to the user when there is no pressure to present other council services too.

Equally there were some excellent sites that operated under the larger banner of the local authority. Those that were successful in this regard limited the amount of options available to users and focussed primarily on library services. One such example is that of East Renfrewshire Council, who have created a useful information gateway for their users:

http://www.eastrenfrewshire.gov.uk/libraries

The site offers a range of information services to users, with information on lending and renewal of books, as well as local history, and health information. So despite being part of the wider local authority site, the libraries section of the site stands alone as a quality information source, unburdened by a range of irrelevant e-government links. While not presenting its own domain, it manages to present its own identity while maintaining its larger identity as part of the local authority concerned. This is a very successful example of what can be achieved by the public library even when it has to adopt its web identity as part of a larger site.

Conclusions

In an ideal world each library authority would have its own web domain in order to extend its real world identity into the online environment. In the cases of the Scottish public libraries examined in this paper, there was a tendency in some examples for the larger local authority site to confuse the user and dwarf the services on offer from the libraries part of the site. Equally it seemed to me to be a potentially false premise that users looking for information on how to submit a planning application should also be at the same time presented with information on schools, environmental health, museums, libraries, and cleansing; yet this is what is done with the approach of far too many local authority web sites. This may be felt to be the best way forward corporately; however it is debatable whether this is a system that can truly be called user-friendly, since it attempts to present an information overload policy as being inclusive. This should be of concern for librarians, and significant research needs to be undertaken into the best way of presenting the information on different local authority services to users.

Public libraries need to examine best practice in the provision of sites, and if it means library directors lobbying for their own Internet domain for the service then so be it. There is a reason that library services such as the New York Public Library (http://www.nypl.org/) can provide outstanding service in both

the analogue and virtual world, and that is because they have control over their identity in the real world and online. Scottish public libraries need to recognise that their Internet identity is vital, and whether politically expedient or not, some of the sites that represent them are potentially damaging their image due to adherence to larger local authority e-government goals rather than a focus on library services.

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Paper 7

McMenemy, D, Poulter, A & Burton, P.F. (2007) Freedom of access, privacy and acceptable use. In. McMenemy, D, Poulter, A & Burton, P.F. *A handbook of ethical practice: a practical guide to dealing with ethical issues in information and library work*. Cambridge: Chandos Publishing. pp.85-106.

6

"What did that suspicious-looking man in scruffy clothes borrow last week?"

– Rights to equity of access and privacy, and management of inappropriate use of library resources

This chapter will deal with some fundamental issues, but issues that are currently hotly debated both within society and within librarianship generally. Historically libraries have partly served to remove the disparity between the information haves and have-nots. Part of this was the belief that equity of access was a vital democratic function. Coupled with this was the belief that the right to user privacy should also be cherished. Indeed, contemporaneously, both equity of access and privacy stand tall as two of Gorman's enduring values (Gorman, 2000).

Yet managing access for users in the digital world poses great challenges. Use that is deemed inappropriate becomes an issue between those who believe users should have access to all knowledge, and those who equally believe that there are some types of information libraries should not provide, such as pornography, email, games and chat rooms. Like many ethical issues discussed in this book, both sides of the debate have legitimacy to their arguments, but this makes decisions all the more challenging in the front line of service provision.

The focus of this chapter will be a discussion of four of the key ethical questions identified in the first chapter, namely:

- How much control should an individual have over the information that pertains to them?
- Does an individual have the right to access any piece of information he or she needs?
- Is there a duty to make certain information inaccessible when appropriate?
- Is there a duty to make information fully accessible and findable?

As with previous chapters, case studies will be presented after the discussion to highlight some of the practical challenges faced by librarians, and the range of ethical choices available to them.

Equity of Access

Equity of access to knowledge and information has been and continues to be a key concern for the library profession; indeed, as we saw n the discussion of ethical codes, many of the professional associations representing librarians place equity of access as a core mission. Gorman defines equity of access in the following way:

> Equity of access…means that everyone deserves and should be given the recorded knowledge and information she wants, no matter who she is and no matter in what format that knowledge and information is contained. It means that one should be able to have access (either to a library building or from a remote location), that library services should assist in the optimal use of library resources, and that those resources should be relevant and worthwhile (Gorman, 2000. p.133).

This very much mirrors the beliefs of key library thinkers such as Ranganathan as well as professional associations. For instance, in the UK, CILIP's Ethical Code of Practice states that librarians should show, "commitment to the defence, and the advancement, of access to information, ideas and works of the imagination" (CILIP, 2006a). The Australian Library and Information Association (ALIA) mirrors this by stating that part of the mission of its members is:

> Promotion of the free flow of information and ideas through open access to recorded knowledge, information, and creative works.
> *We assert that this access across time and across cultures is fundamental to a thriving culture, economy and democracy* (ALIA, 2002). [Emphasis in original]

Internationally IFLA's Free Access to Information and Freedom of Expression (FAIFE) Committee deals with issues relating to equity of access on behalf of the world's librarians. It argues that:

> The right to know and the freedom to express are two aspects of the same principle. The freedom of expression is realized by the preservations of the right to know. The right to know is related inherently to the freedom of thought and conscience and all other fundamental human rights. Freedom of thought

> and freedom of expression are necessary conditions for the freedom of access to information (IFLA, 2005).

Equity of access, then, continues to be a key concern for librarians worldwide.

Yet it would be churlish to ignore the fact that a belief in the equity of access does not necessarily equate to equal access for all. As a mission for librarians to achieve it should remain, but in reality even in the developed world complete equity of access is a myth. Take for example the services available to the university student versus those available to the public library customer. Part of a university's remit is to make available works of a scholarly nature, including vast runs of periodical literature and peer reviewed publications. Invariably this material is becoming available electronically and via large database systems to which the university subscribes. Students normally access such material via campus computers or via a password supplied by the university library. Public libraries very often do not make access to scholarly periodicals a priority, understandably given their financial priorities. Therefore for the lifelong learner access to such works can be problematic and piecemeal at best. This is a straightforward example of equity of access not being achieved, and it is purely a case of simple economics. There will never be enough money for a library to grant access to the world's knowledge to their users: it is a laudable aim, but an increasingly unrealistic one.

This is even more the case in the developing world, where even universities cannot afford access to scholarly works which are essential for the development for their economies and their professions. Equity of access for such countries becomes more than a mere mission for a profession, but an essential component of that society's development to a knowledge economy. In other aspects such access also becomes a democratic necessity if the populace are to be given the information they need to question decisions made by government and bureaucrats.

Barriers to Access

Notwithstanding the user's inability to access library holdings that are not there, equity of access also relates to other barriers to access, including the physical and non-physical. For instance, library buildings themselves can become barriers to

access, both literally and metaphorically. Many libraries are buildings of historic importance: the unprecedented building programme of the early 20th century constituted by the generosity of philanthropist Andrew Carnegie saw some 3,000 public libraries constructed worldwide. Many of these libraries still remain to this day, and continue to be cherished for their architecture. However, old buildings bring potential access problems and it is fair to say that many of these libraries (and many since) were not constructed with the less able-bodied user in mind. Physical disability can pose tremendous problems in accessing many library buildings, and libraries have a moral duty to ensure all citizens can access the services on offer. This is easier said than done, with many libraries posing significant problems in terms of the ability to alter their infrastructure to allow disabled users enter. In the UK the *Disability Discrimination Act* puts priority of access to buildings as a key aspect of equal rights for disabled users. Libraries must make their buildings as accessible as possible within reason, and this can be an expensive undertaking. Similarly, in the USA the *Americans with Disabilities Act* sought to make sure people with disabilities were not disadvantaged when accessing services. It is no surprise to see many libraries start from scratch and move to new modern, accessible premises as a result of such legislation, given the inadequacy of many library buildings.

Disability also needs to be considered when delivering electronic services. With more and more services now available remotely, it is essential that libraries make their Internet presence accessible to all users. Within the library premises itself, libraries must ensure that adaptive technologies are available for users who need them; these can be anything from large key keyboards, to tracker balls that replace standard mice. This may also involve the purchase of specific software that reads pages aloud for the visually impaired. All of these issues relate to equity of access and are ethical duties for librarians, notwithstanding any over-arching legal duty.

Equity of access can also relate to where a building is sited. Many public libraries may have been constructed during the Carnegie era in a location that was then the heart of the community. Communities, like libraries, are growing organisms and may spread in such a way that the library is no longer at the heart of the community. This can often pose severe problems of access when the library is perhaps not situated on public transport routes. Even when transport is available, other factors may

come into play. A situation faced by one of the authors in his time in practice was a public library that serviced a large inner-city community where a large number of children could not access their local library because it was situated in an area that was the domain of a specific children's gang. This may seem trivial, but to the children who were too frightened to visit the library due to fear of being attacked, it was a major barrier to access. This was addressed only partially, with the library service funding a weekly bus service for the children concerned that transported them from their home area to the public library and back again. This only addressed the issue on a surface level, but it was at least a commitment to the notion of equity of access. Addressing such quandaries may well be a daily task for librarians in inner-city libraries worldwide, and responding positively to them is an ethical concern. Certainly being aware of such a barrier and not attempting to address it could be argued as being unethical.

Another hugely controversial area is that of opening hours. In terms of equity of access this absolutely crucial. A closed building is as inaccessible as it gets. Yet it is common, when finances are an issue, for opening hours to be the target of cost-cutting. Often this is seen as the lesser of evils, the other option being full closure. Yet while the pragmatism of keeping a library opened under restricted hours may save a service point, it is also likely to have an impact on equity of access. Issues of materials may well go down, but even if they do not in the short term, "over the long term reductions both in opening hours and materials spending are likely to have an impact on levels of materials issues although this may not be discernible for up to two years after a cut" (Loynes and Proctor, 2000, p.622). Again, when deciding on reducing opening hours, there is more than a fiscal concern that needs to be considered. The ethics of reducing the service quality must be considered if short-term 'band aid' solutions to finance are not to become long-term barriers to equity of access.

Privacy

Privacy differs from confidentiality and security. Privacy is the overriding concept which involves the right to be left alone and the autonomy to determine with whom we share details of our personal lives or personal information. Confidentiality is a

narrower concept. Violation of confidentiality undermines privacy but privacy can be achieved without confidentiality in that you can choose not to share your information in the first place and thereby not entrust others to keep it confidential. In the context of library membership it is difficult to see how individuals can gain full access to services without passing on their personal data, however. Security is necessary to maintain confidentiality and therefore privacy, as stored data need to be kept securely and be accessible to only those who need it for the purposes for which it was provided.

Privacy has also to be balanced against other values. As with other rights, there are trade-offs and competing rights and interests which need to be respected. Economic interests may cause consumers to trade privacy for convenience such as occurs in credit card shopping. Efficient government requires personal information for taxation, health care. Privacy can also conflict with publicly accepted principles of law enforcement and public safety.

It could be argued that privacy is beginning to become a potentially old-fashioned concept. The increasing desire of our governments and the businesses we use to know more about us is impinging more on our day-to-day lives. Registering for many web-based services sees us having to tick boxes to unsubscribe from mailings or to ensure we do not have our data passed on to "selected third parties." Individuals and organisations increasingly have to spend money on spam and junk mail filters to attempt to ensure that their email inbox is not stuffed with inappropriate mails offering dubious services. This is all, at the very least, an inconvenience, and at the worst offers the potential for personal information to be abused or misused.

In the context of libraries we must consider two separate but equally vital issues:

- User privacy as it relates to their successful use of library resources
- Privacy of the user's personal data

User Privacy When Using Library Materials

It is inconceivable that a librarian would look over the shoulder of a user to see which book he or she is reading. The thought is anathema to what libraries and librarians do. The post 9/11 scenario seems to be that trust is now something we cannot afford – whether accurate or not, an extremely sad state of affairs indeed. Even before the tragedy of 9/11 there was an increasing pressure on librarians who were delivering the Internet to users. The nature of the Internet and some of the information therein led many in society to challenge what they saw as inappropriate material being made available in the public, school and university library. Measures to control this were brought in, and this included developing acceptable use policies (AUPs) that each user would have to agree to before being given Internet access. Their purpose was to define what constituted acceptable use of the library facilities. This was a useful management tool for many organisation, but at its root it is an attack on equity of access, since it defines some information as inappropriate. This is entirely understandable when the issue of child protection is the goal; no right-minded individual would wish children to be exposed to pornographic content when visiting their public or school library. However many policies define sites such as chat rooms, gambling sites and games sites as being inappropriate. Is this a value judgement that can be made in the 21st century with any degree of credibility? It is oft posited that libraries should move with the times, and as people become more and more familiar with the many uses of the Internet, the bar on anything but information use within a library becomes difficult to sustain ethically.

The second measure introduced by many libraries, and perhaps the most controversial, was the software based solution of Internet filtering. While AUPs define in a general fashion what is and is not acceptable use of the Internet, filtering software goes that step further and blocks any information it is programmed to block, either by using keywords, or a list of banned addresses, or a combination of both. While it is certainly true that, as Hauptman puts it, “unfiltered access to the Internet presents some major ethical challenges even to those whose commitment to intellectual freedom is unequivocal,” it is equally true that, “it is not our business to mediate between users and the virtual world” (Hauptman, 2002, p.65) It could be argued that many organisations ventured down the filtering route to protect themselves rather than in a bid to halt intellectual freedom, but this makes the decision even more problematic for an ethical professional. The problem with

filtering is that while it may block material that is offensive or questionable (though the question remains to whom), it has also been found to block material of a legitimate nature, and often this material is of personal or sensitive importance to a user, such as health information or information on sexuality. Any library professional should feel troubled if such a scenario exists in their service, as failure to provide a service is just that - a failure. The problems with filtering have been defined thus:

> First, under-blocking occurs when content is not blocked that should be restricted. Second, over-blocking occurs when content is blocked that should not have been restricted. Steps can be taken to reduce the frequency of errors, and to reduce their costs (for example, by providing easy appeals processes, quick overrides, and corrections) but some errors are inevitable (Resnick et al, 2004, p.67).

Errors are inevitable, but are they welcome? It could be argued that it is the clumsiness of filtering software that poses the largest ethical concern; it will never be 100% accurate, even if it ever becomes 99.9% accurate. Taking the human out of assessing information for a user is always a bad thing, but to put it in the hands of a software program is clumsy in the extreme. Combating the ignorance of many stakeholders with regard to the accuracy of filtering is also a challenge of the 21st century facing LIS professionals. When and if an inappropriate access occurs it can cause major controversy for the library, and an organisation that feels it is protected is one operating under a false sense of security. As Gorman succinctly puts it, "the truth is that filtering systems *do not work* and they *never will work*!"(Gorman, 2000, p.96) It is sad to see a situation in which many librarians worldwide are placing the vital job of information delivery in a system that is not fit for the job. Whether introduced willingly or unwillingly, the use of filtering technologies in libraries of any kind is a major ethical concern. Regardless of which side a librarian comes down on in the debate, it is essential that all are aware of all of the implications that using the software may bring when making a decision.

Privacy of the User's Personal Data

For those countries who have legislated for data protection, a core set of principles tend to govern their actions. These principles embody rights the user has with regard to the information that is stored about them, and include:

- a right to inspect the information;
- a right to have it corrected if it is erroneous;
- a right to sue for compensation if wrongful information has caused them damage;
- in some instances, a right to object to such information being held at all.

Data protection began to concern society in the late 1960s and early 1970s when the dawn of new technologies made it possible for organisations to electronically store information on individuals. The growth in the amount of information being gathered on individuals and the creation of large databases, not least by government, combined with the ability to link information across such databases, have brought the issue of data protection to the attention of the public, most recently in the consultation on identity cards, itself a reaction to the growth in terrorism since 9/11. Growth in database marketing and the activities of credit reference agencies which utilise such large databases have also raised public awareness about how much personal information is held in electronic form and the negative consequences which can ensue should such information be found to be inaccurate. There is growing concern over civil liberties and personal privacy especially in respect of personal data contained in, for example, medical, financial and employment records.

Data protection legislation varies considerably across the world in the degree of protection which it actually affords the individual. For example, in Britain the current legislation governing the processing of personal data is the *1998 Data Protection Act* (which came into force in March 2000 and superseded the 1984 Data Protection Act). The fundamental principles are the same as in the 1984 Act, although the main difference is that the 1998 Data Protection Act also covers the processing of manual data as well as data processed automatically. Therefore the Act covers electronic processing and handling as well as paper records. All such personal data must be collected, stored, and used in accordance with a set of data protection principles and anyone who keeps such personal data must register this fact and state how the data will be used.

One of the main challenges facing librarians with regard to data protection is the communication to the user of just how important their personal data are. The more services that transfer to the Internet, and the more users who begin to use library ICT

facilities, the more opportunities exist for users to visit websites and pass on their personal data to websites that may abuse that information. Librarians should certainly communicate this to users in any user education they undertake about using the Internet. This is especially important if the library offers children and young people access to the Internet, since they need to be aware that passing on their personal details while online can be dangerous. Certainly it would be problematic for a librarian to assume that young users were already fully aware of the dangers of passing on their details, and there would be an obvious ethical duty to educate the young user in this area.

Privacy and the War on Terror

Perhaps the most controversial issue related to privacy and libraries in recent years is the concentration of legislation aimed at combating the 'war on terror' in the aftermath of the 9/11 attacks. Libraries came to the fore in the debate for a crucial main reason; it was revealed that some of the terrorists who were involved in the attacks had used public library computers, an issue a Florida librarian raised with the police after the attacks (Hauptman, 2002, p.40). In the immediate aftermath of the attacks this was a major development, since early theories had suggested that the terrorists had used web-based email to communicate, and there were even stories in the media that suggested that the terrorists were passing secrets and plans to each within coded computer images. It has also recently been revealed that two of the terrorists used public library computers in New Jersey to order the airline tickets for the 9/11 attack (Oder, 2005). Understandably such developments make the population generally, and the lawmakers specifically, look at free and unfettered Internet access in public libraries as a potential liability. It also makes library staff question the bona fides of users in ways which would have been undreamt of on September 10th 2001.

Yet the main ethical challenges facing librarians relate to the legislation that has been introduced since 9/11 and its impact on the workings of the library. In the US the introduction in 2001 of the *Patriot Act,* or to give it its full title the *Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act*, introduced the ability for law enforcement agencies to serve

National Security Letters, or NSLs, on organisations in a bid to gain information on potential terrorist suspects. NSLs are not only a library issue; they can be served on any organisation from libraries to companies to gymnasiums. The John Doe case discussed in Chapter Two was as a direct result of an NSL being served on a Connecticut public library which the librarians concerned felt it was their ethical duty to challenge. Their recent victory in the case has in no way lessened the use of NSLs by law enforcement, although it did raise the issue of how far the FBI was prepared to go to gain the data they wanted.

In the UK several library partners, including CILIP, the British Library, the National Library of Scotland and other library agencies joined forces to lobby against a provision in a proposed Act of Parliament that would have made it illegal for any organisation to supply someone with information that could be deemed to be promoting terrorism. This was obviously a clause that greatly concerned librarians, who felt that they could be accused of abetting a terrorist by the mere action of issuing a book, or providing a computer. Much lobbying of the Government took place and in the end the clause was removed from the Act, which was passed in March 2006 to become *The Terrorist Act* (CILIP, 2006b).

We need to be careful as a society that we are not sacrificing our freedoms in the war on terror. As Nijboer has stated, "society must not fight terrorism in a way that destroys democracy. We do not want to accept terrorists' methods and maybe walk into a trap that will have given them a major victory" (Nijboer, 2002, p.260).

Conclusion

In conclusion, it can be seen that the historic concerns of librarians relating to equity of access and privacy remain as vital today as they did over 100 years ago. If anything their importance has increased. Both are key areas where librarians and their associations have fought for their voices to be heard on behalf of the user.

Certainly times are harder and the voices have to be raised louder to be heard; but despite the worries of those who feel civil liberties are being eroded without any

effective advocacy, the successes of the John Doe librarians in raising their ethical dilemma with the world's news media illustrates that people continue to care about such issues, and are willing to support committed professionals who wish to stand up for such rights. The success of the advocacy in the UK over the *Terrorism Act* is another example of how the historical ethical principles of librarians can be argued successfully if undertaken in a professional and organised way.

The case studies that follow will deal with some of the issues discussed within this chapter.

CASE STUDIES

Case Study 9 – The Right to Know?

Alice McNeill is the branch librarian in a rural village public library. The library serves a small-knit community and thus users and staff know each other very well, with most staff members living in or near the village.

When shopping in the village store one day, Alice is approached by a local lady who confronts her by saying that she was disappointed that Alice did not stop her 14 year old daughter from accessing information on contraception on a library Internet terminal. Alice tells the lady that she was unaware her daughter had sought such information, but that even if she had been aware that she would not have passed on that information to her mother, as the daughter had a right to privacy. This angers the mother, who leaves telling her that she is relieved that not all of the library staff are as inconsiderate as the librarian.

Alice is concerned that a member of library staff may have told the mother about the girls' visit to the library, and is extremely disappointed that any of her staff could betray user trust in that way, regardless of how closely they knew the mother. Next day in the library Alice begins to ask her staff if they knew of who had passed on the information. It becomes clear very quickly that the person who passed on the information, Janet, is a member of staff who happens to be a neighbour of the mother and the girl, and when confronted about the issue she happily confesses, suggesting that Alice is over-reacting and that the mother had a right to know.

Which of the following approaches should Alice take?

A. Alice decides to take Janet aside for a long chat to explain exactly why she feels so angry about what Janet did. She informs her that wishes her to undertake a training course on data protection legislation, and if she refuses she will have no option but to instigate disciplinary action against her.

   Go to section A1

B. Alice is so incensed by Janet's actions that she contacts the Human Resources Department immediately and requests that she be suspended pending an investigation into exactly what happened.

   Go to section B1

C. Alice rebukes Janet and tells her in no uncertain terms that her actions were unacceptable. She informs her that she must write a letter of apology to the girl.

   Go to section C1

D. Alice ignores the actions of Janet in the hope that the incident will go no further.

   Go to section D1

Case Study 10 – Access to *All* Information?

Alana Boyd is an Arts subject librarian in a university library. One morning while staffing the information desk, a user explains that the filtering software being used by the library is blocking access to sites that are essential to his research. Alana enquires to the nature of the sites, and the user explains that the sites are pornographic, and the focus of his PhD study is societal impacts of pornography on the Internet. She explains that accessing pornographic material is against the library regulations, and apologises, however the user becomes insistent that as a registered research student he should be able to access all relevant materials necessary for his research.

Again, Alana apologises and explains to the user that accessing the sites may in fact be illegal depending on the content on them, and this may make the university liable if they purposely unblock the sites in order for a user to access them. The user tells her that not all of the sites contain illegal material, only material of a graphically sexual nature. Alana reiterates that despite the potential legality of the sites, they would be against the acceptable use policy of the university and as such she cannot offer access. The user becomes more frustrated and insists that the university is the only location where he can access the Internet. The incident is not resolved to his satisfaction and he informs Alana that he will be complaining to his research supervisor. The next day, the professor supervising the student contacts Alana to insist that his student is allowed to access the sites he requires, and that he shall take full responsibility for any liability incurred. He states that if she does not arrange for this to happen that he will complain to the University Librarian.

Which of the following approaches should Alice take?

A. Alana reinforces to the Professor that the library cannot allow access to sites of that nature, no matter what the need is. She tells him that in no way can he take responsibility for another person's search, and in any case, as the provider, ultimately the library would be responsible.

   Go to section A2

B. Alana simply tells the Professor that he will have to contact the University Librarian with his concerns, as she is no longer in a position to help him.

   Go to section B2

C. Alana offers to forego the university policy on this occasion and meet with the researcher again to see if any of the sites would be possible to look at without placing the researcher or university in a position of breaking the law.

   Go to section C2

D. Alana relents on her earlier decision and offers to unblock the sites for the researcher on request, as long as he undertakes his search in a secluded area.

   Go to section D2

Case Study 11 – Panic Out of a Crisis?

Alex Hannah is the systems librarian with responsibility for Internet services for a public library system of 15 branch libraries. One afternoon he receives a call from the Library Director in a state of agitation who informs him that a parent has complained in a branch after finding out that her son had been viewing pornography on an Internet terminal. She discovered this via pictures he had saved to a disk while in the library for viewing on his home computer. The problem had the potential to get larger as the parent had claimed when leaving the library that she was going to report the incident to the local newspaper. The Library Director asks Alex to immediately close down Internet access for the entire library service pending the outcome of an investigation into this incident. Alex believes that the Director is over-reacting but does so anyway. The Director asks Alex to produce a list of websites accessed by the specific machine at the time the parent claims the child had viewed and downloaded the image.

The following day a reporter from the local newspaper contacts the Library Director for a quote, to which the Library Director states that the Internet should have been filtered as it had been

decided by senior management to do so, but that the evaluations of which system to buy had been taking longer than expected. He informs the reporter that the Internet would be offline in the library service until a filtering system had been identified, purchased and installed. The story makes it into the next morning's newspaper which Alex and all his colleagues read.

As the person charged with evaluating the different potential systems referred to in the article Alex is angry at the Director's insinuation that the incident was somehow his fault for dragging his heels on the evaluations. In actual fact Alex had recommended a system months earlier but the senior management team had put it on the backburner because of the prohibitive costs. Thus Alex feels it is their responsibility that the child accessed the image.

The Library Director summons Alex to his office and instructs him to procure and install the system he had recommended months ago, and to have it ready to run within a week.

How should Alex handle this situation, bearing in mind his grievances?

A. Alex feels so aggrieved at the insinuation of the Library Director that he contacts the journalist direct, but without the knowledge of his employer, to set the record straight. He informs the journalist that the only reason filtering had not been installed was due to the senior management team not being wiling to spend the sum involved.

   Go to section A3

B. Alex makes his disappointment clear to the Library Director, and asks for an apology. The Director refuses and rebukes Alex for his disrespect. He reinforces to Alex that he expects the filtering software to be installed and operational within the week. Alex informs him that his timetable is unreasonable and had he authorised installation of the system when it had been recommended this would not have happened.

   Go to section B3

C. Alex begins by informing the Director that he feels slighted, but he will leave his comments at that. He informs the Director that his timetable is unreasonable and that he needs more time to ensure the filtering is working properly. He informs the Director that if the filtering is too stringent it will block legitimate material and too lenient it will allow material through of the type that caused the controversy.

   Go to section C3

D. Alex does not comment and merely leaves the Director's office to begin the process of procurement an installation.

Go to section D3

Case Study 12 – The Library Snoop

Sasha Alexandria is the Head of a large academic library. It serves a world-famous University which has research strengths in a range of disciplines, from science and engineering through to arts and humanities. Sasha's library is correspondingly large, with a large book and journal stock, access to a range of databases and facilities to allow hundreds of students to access workstations. It is a multi-site library, split so that its various parts can serve certain Faculties and Departments.

One morning Sasha receives an email from a member of library staff known (behind her back) as Snooping Susie. She has complained in the past to her Site Manager about things she says she has observed students doing on the workstations in the site's general access suite. These have ranged from allegations of viewing pornography to plagiarism. None have ever been substantiated. This time the email (which has not been sent to Susie's Site Manager) complains that a certain overseas student, Mr X, always uses the same workstation, one at the very rear of the access suite which staff cannot see unless they leave the Enquiry desk and walk to the other end of the Library. She alleges that he waits until that workstation is free and then stays on it until the library closes. Every time that she has tried to see what he is doing on it, he switches screens quickly and brings up a document that he appears to work on. She says that his behaviour appears odd to her and she thinks that something should be done. Because he only uses this one machine she wants it 'bugged' or a hidden camera rigged up to views its screen.

Which of the following decisions should Sasha take?

A. Sasha forwards the email to Susie's Site manager and tells her to deal with it.

Go to section A4

B. Sasha forwards the email to Susie's Site manager and requests a meeting with her and Susie. Sasha is annoyed that Susie keeps trying to spy on students using workstations. Sasha wants to tell her to stop this and do something more useful instead.

Go to section B4

C. Sasha forwards the email to the Department in which Mr X is a student, and asks if there is anything unusual in their experience about this student.

Go to section C4

D. Sasha deletes the email and does not respond.

Go to section D4

CASE STUDY DISCUSSIONS

Sections A1 – A4

A1. – The Right to Know?

Certainly there is a need to let Janet know how serious a breach of client confidentiality her actions were. Indeed in many countries what she did is an illegal act which could have made the library accountable. Alice is wise to see the need for training for Janet to reinforce her knowledge of data protection, but given she undertook her actions for a friend there is no guarantee that the training will have the desired effect. Alice's desire not to involve disciplinary proceedings unless Janet refuses is admirable, but ultimately Alice may well be storing problems for herself, given the seriousness of the action. If Alice ignores the action and something similar happens in the future, she may find herself subject to serious disciplinary action for not reporting it to the appropriate senior member of staff. There is also no guarantee that the girl will not complain if she finds out how her mother found out, and thus Alice's attempting to keep the incident quiet may show loyalty to Janet more than the girl or the library service.

A2. – Access to *All* Information?

Alana is within her rights to reinforce to the Professor that the library regulations cannot be breached on this matter. Ultimately the Professor cannot take responsibility for the Internet searching of one of his students, and as such any breaches of the library and university policy would be the university's responsibility. Due to the nature of the material being requested, Alana could be seen to be looking after the interests of the organisation before those of the user, but in this case that may well be justified.

A3. – A Panic Out of a Crisis?

Alex's anger is understandable given the circumstances, but by contacting the journalist he has potentially brought his library service into further disrepute, and more seriously for himself has potentially placed his own job at risk. The story the Director told the journalist may well

have been untrue, but it served to limit the life of the story and the potential embarrassment to the organisation. Alex's decision may well ensure the story continues to run in the newspaper, and given his position in the organisation it is likely he will be the first person suspected of speaking to the journalist. In this case it could be argued that he has looked after his own interests at the expense of his organisations.

A4. – The Library Snoop

This is a sensible response. Ultimately Susie has bypassed the appropriate chain of command (in all likelihood deliberately) by coming straight to Sasha and ignoring her line manager. Susie's line manager can discuss the email with her, discipline her, or investigate, depending on how seriously she takes the accusations. The incident may well end up back at Sasha's desk, but only once appropriate channels have been followed. It is important that Sasha reinforces the chain of command that exists, and this decision helps to do that.

Sections B1 – B4

B1. – The Right to Know?

Unfortunately for Janet, Alice may have no option but to report the incident to HRM and to instigate disciplinary action. Ultimately what Janet has done is a major ethical and legal breach that could have serious ramifications for the library service. Alice's duty to the user may outweigh her duty to Janet with such a serious incident. Janet is also attempting to do right by the organisation by making them aware of the incident and allowing them to address it.

B2. - Access to *All* Information?

Passing on the request to the person in the organisation who has the ultimate say may well be a sensible move, but it may also be the case that the university librarian may see this as a straightforward case that Alana should be handling based on the regulations that are currently in force. Certainly it is the case that the Professor is more likely to accept a "No" from the final arbiter, but Alana's decision is perfectly justifiable in the context of the rules and

she should be able to reinforce that decision without recourse to senior staff. Unless the user himself has asked for the case to be passed on, it could be argued that Alana is passing the buck by attempting to do so.

B3. – A Panic Out of a Crisis?

Alex is certainly within his rights to ask the Director for an apology given how he has behaved. However, since it has only angered the Director it puts Alex in a difficult position when it comes to explaining to the Director how unrealistic his timetable is for implementing the new filtering system. It is clear that the Director does not understand what is involved in the implementation, but it is also clear that since he is now angry with Alex he is unwilling to listen to him. It now means that in the short term at least Alex's professional judgement will be ignored once again, which may lead to potential problems for both Alex and the library service when the software is not ready in time. Perhaps Alex would have been better served by leaving aside his personal feelings and addressing the serious issue facing the organisation.

B4. – The Library Snoop

This is a sensible response. Ultimately Susie has bypassed the appropriate chain of command (in all likelihood deliberately) by coming straight to Sasha. A meeting with Susie's line manager involved can have both Sasha and the line manager reinforcing to Susie that her behaviour is unacceptable. A decision point would be whether or not it is felt the actions merit disciplinary action. But ultimately any meeting would only be a success if Susie's behaviour altered for the better. It would certainly have to be made clear to Susie how seriously her behaviour is taken by the senior staff, and that hey expect her to alter it.

Sections C1 – C4

C1. – The Right to Know?

Is this really an incident that an apology can fix? This is a serious breach of client confidentiality, and Janet has abused her position of trust in a very serious way. A rebuke

may well make Janet aware of her mistake, but ultimately Alice may have to instigate formal disciplinary proceedings in a bid to protect the library service from any potential ramifications. As much as Alice may feel that Janet has learned from her mistakes, ultimately the decision on how to proceed may be out of her hands. She should at least seek counsel from a senior colleague in how to ensure the proper channels are followed.

C2. - Access to *All* Information?

By making this decision Alana could be seen to be caving in to the pressure applied by the Professor. She should certainly think twice about altering the regulations unless she can be absolutely sure that the sites being looked at are legal for the jurisdiction in which she operates. Even so, the Internet service provider used by the library service may have to be consulted before she can make such a decision, since as provider to the library they may well be unhappy at the regulations being waived.

C3. – A Panic Out of a Crisis?

By addressing his grievance as a comment at the beginning of the meeting before moving on to discuss the professional issue at hand, Alex at least still has the ear of the Director when he explains that the proposed timetable is unreasonable. The chance remains that the Director will not alter the timetable, but given he is still calm, he may well offer Alex any assistance he may need to ensure that the software can be implemented as quickly as possible. By keeping a cool head Alex can help to ensure that the potential damage to the library can be minimal and that he can receive the resources he needs to ensure the project is carried out efficiently.

C4. – The Library Snoop

Firstly this is a potential invasion of privacy, since there is nothing intrinsically wrong with a student using the same machine, nor trying to hide what they are doing. Second, by spreading a rumour about the student, Sasha is potentially making life more difficult for an overseas student. There is no evidence that the student has done anything, and thus to escalate the incident by involving another department would be inappropriate at this stage.

The student has a right to privacy, and it is highly unlikely that the other department would consider sharing gossip with the library anyway, so such a request is likely to be futile.

Sections D1 – D4

D1. – The Right to Know?

Ignoring the incident is not a sensible option for Alice to pursue. The seriousness of the incident suggests that Alice will need to pass the matter to a senior colleague for a decision, and she should certainly seek senior colleagues' opinions on what to do. Ultimately the library service may be liable for the data protection breach, and this means the decision should not be made by her alone.

D2. - Access to *All* Information?

Alana is clearly bowing to the pressures placed on her by the Professor. By unblocking the sites herself she is ultimately taking full responsibility on her own shoulders for a decision which may well have implications for the library as a whole. If she feels intimidated she should think first about passing on the request to a colleague who is more senior to her rather than allowing her own insecurities to place the library in a vulnerable position from her decision.

D3. – A Panic Out of a Crisis?

By just leaving the Director's office without a word to press ahead with the project, Alex is in danger of storing up serious problems for himself. His anger at the Director is merited, but he needs to ensure that he bottles it up for the short term in order to communicate to the Director how flawed his timetable is for implementation. Not saying anything to the Director in this way is as bad as losing his temper with him, since the effect is the same and he does not get the opportunity to offer his professional opinion. If the project is now late then it is likely that Alex takes all blame.

D4. – The Library Snoop

Since Sasha may see this as a storm in a teacup, deleting the email may be tempting. However, there is a management decision that needs to be made here. If Susie's behaviour is beginning to become this erratic it may well be the case that students are noticing it too. It may only be a matter of time before one of the students who are being spied on will complain, at which point it may well come across Sasha's desk again, and with prior knowledge of the behaviour she may well find that her judgement is questioned for not addressing the problem earlier on. Ignoring the situation does not seem sensible in this case.

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MEDLIS: Model for Evaluation of Digital Libraries and Information Services

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Abstract

The review of literature revealed that there is no uniform model or framework for evaluation of digital libraries. A generic model for evaluation of digital libraries and information services, called MEDLIS, is discussed in this paper. It proposes a generic framework for evaluation of digital libraries, which takes into account a number of pertinent issues related to a digital library service including the usage and usability issues, users' as well as service providers' perspectives, and most importantly, the business model of the concerned digital library. A multi-method evaluation strategy is proposed, which can be used for evaluation of any type of digital library.

Introduction

After a decade of intense research and development in different areas of digital libraries, evaluation still remains at crossroads owing to the different applications and the diversity of user communities. We evaluate a system in order to ascertain the level of its performance or value, and in the context of digital library evaluation, we need to assess how good the concerned digital library is, whether it has made any impact on the users and the community/society, and so on. The aim of a digital library evaluation is to study the impact of such a digital library and its role in transforming information and its use, research, education, learning and living, and so on vis-'a-vis target user community. However, a digital library evaluation study may be designed to answer another pertinent question, especially from the funding agency's point of view, which is, 'what is the value for money'. In other words, it is important to assess whether it is worth continuing the digital library service, and if so whether the current funding model is appropriate, and so on.

Many researchers believe that there is no uniform methodology for evaluation of digital libraries and information services (Chowdhury, Landoni, and Gibb 2006; Saracevic 2004; Borgman 2002) because digital libraries vary from one another in terms of their objectives, content, target users, funding models, and so on. Most of the digital library evaluation studies so far have focused on one or more specific issues such as the usability, information access, user interface, infrastructure, and specific user-related issues. However, there are many other aspects of evaluation, and a holistic approach to evaluation is necessary to answer the most important question: whether the concerned digital library is worth the resources required to run and maintain it. Most of the digital library evaluation studies have not addressed this issue. In other words, digital library evaluation studies have often ignored the management and the business model of the service. Again, most digital library evaluations have not studied the service from the perspectives of information professionals who play an important role in developing and providing the service, and therefore make significant contributions towards the success of the concerned digital library

This paper aims to bridge the gap by proposing a model, called MEDLIS, which provides a generic framework for evaluation of digital libraries. It proposes a holistic approach to the

evaluation of digital libraries, which takes into account a number of pertinent issues related to a digital library service including the usage and usability issues, users' as well as service providers' perspectives, and most importantly, the business and management model of the digital library. Although the model was designed specifically to evaluate a publicly funded digital library, it is proposed that it can be used to evaluate any type of digital library with little or no modifications.

Research on digital library evaluation

Several online bibliographies on digital library evaluation are now available (DELOS WP7 2005; Neuhaus 2005; Giersch, Butcher, and Reeves 2003; Zhang 2004). Regular international workshops on digital library evaluation also take place under the DELOS programme, as well as in course of the various digital library conferences. Several evaluation guidelines and methods have been proposed in course of the evaluation projects like, ADEPT 2005, DELOS 2005, eValued 2004, JUBILEE 2003, and so on. The eValued project has developed a toolkit and a set of guidelines for evaluation of electronic information services in the higher education. According to these guidelines, an evaluation is carried out for (eValued, 2004)

♣ strategic planning strategic planning and management of EIS (electronic information services),
♣ managing the day-to-day management and delivery of EIS,
♣ exploring problem-solving and investigating usage and impact of EIS,
♣ improving the design and delivery of EIS including support services, and justifying accountability to funding agencies and external bodies.

The hyLife hybrid library toolkit (2002) project proposes a set of generic guidelines comprising following five steps.

1 Designing the evaluation
2 Drawing up an evaluation plan
3 Data gathering and recording
4 Data analysis and interpretation of results
5 Presentation of findings

A five-point guideline has also been proposed by Reeves, Apedoe, and Woo (2003), which includes the following instructions.

1 Identify the decision-making process for the digital library evaluation activity.
2 Identify the questions that need to be addressed to inform the pending decisions.
3 Identify the evaluation methods and instruments that need to be used for collecting information on the questions that need to be addressed.
4 Carry out the evaluation in a manner that is as effective and efficient as possible.
5 Report the evaluation results in an accurate and timely manner so that it can provide the information needed to make the best
possible decisions.

Many researchers and institutions have produced guidelines and toolkits for digital library evaluation. Scott (2004) argues that in order to gain a thorough understanding of a library system, it is necessary to gather information from different areas of the library system

using different perspectives. General guidelines for evaluation of digital libraries include those of Borgman (2004), Choudhury, Hobbs and Lorie (2002), Larsen and Borgman (2003), and Saracevic (2000, 2004, 2005). In general, these guidelines suggest that an evaluation study should focus on the issues related to the digital library users, and should use appropriate research methods for evaluation, such as digital library contents and characteristics, information access and use patterns, transaction data, and so on.

Although a number of general methods and guidelines have been proposed by researchers, as of date, there are no generic models for evaluation of digital libraries (Chowdhury, Landoni and Gibb 2006; Saracevic 2004). This paper proposes an evaluation model providing a generic framework for evaluation of a digital library. The model was developed for evaluating one aspect of a publicly funded digital information services, called SCRAN. The full evaluation report of SCRAN is available online (http://www.slainte.org.uk/files/pdf/slic/scranevaluation.pdf) and hence, is not reported here. The main objective of this paper is to discuss the various steps of a multi-stage evaluation process, while justifying the method(s) adopted to gather the necessary information for the evaluation, and whenever necessary, for the purpose of illustration, the paper draws attention to the data found in course of the SCRAN evaluation study.

Digital library evaluation: generic issues and questions

Although the proposed model has its foundation in the previous research experience of the authors, especially, Gobinda Chowdhury, (Chowdhury and Chowdhury 2003, Chapter 13; Meyyappan, Foo, and Chowdhury 2004), it has been validated in course of a recent evaluation of SCRAN. The authors of this paper were commissioned by the SLIC (Scottish Library and Information Council) to evaluate SCRAN; the evaluation project was undertaken over the summer months of 2005. SCRAN was then a subscription-based digital library and online learning resource service but is now a ‘charitable online learning resource base with over 360,000 images and multimedia files from museums, galleries, archives and the media’ (http://www.scran.ac.uk/).

As stated earlier in this paper, an evaluation study may be conducted to address several issues and find answers to various questions, such as: (1) how useful is the current level of service, (2) how easy it is to use the digital library, (3) what are the issues and concerns related to the management and provision of the service, (4) how good is the current business model of the service, (5) whether the digital library service is sustainable, given its current level of performance compared to the other similar services, and so on.

Keeping these broad questions in view, it is important to find out the following.

♣ The objectives and characteristics of the digital library service: the kind of service being provided and with what rationale, and so on.
♣ The people (information professionals) involved in the provision and management of the service; people involved in providing the service at the customers’ end; and in each case their observation about the service, especially in relation to its uniqueness, effectiveness, and so on.
♣ The users of the concerned digital library, how easily and effectively they use the service, how satisfied they are with the service, and so on. In addition, there are some broad questions, such as:

♣ what are the other digital information services that are similar to the service being evaluated, and what are their
characteristics and access requirements, and so on,
♣ how does the current digital library service compare with other similar services,
♣what makes the current digital library service unique over others, and
♣ whether the current access requirements for using the service are appropriate, and therefore, whether the economic model of the service is sustainable.

Evaluation methodology

In order to find answers to all the above questions, a complex methodology comprising various complementary data collection tools and analysis techniques needs to be adopted. In order to illustrate various stages of this evaluation methodology, in this paper, we use the SCRAN evaluation study as an example, which comprised the following tasks.

♣ A detailed and critical study of the SCRAN website.
♣ Visits to SCRAN headquarters to interview key personnel and to study useful documents.
♣ Extensive analysis of Web logs and other usage statistics supplied by SCRAN.
♣ A survey of selected library staff (intermediaries) to understand as to how the service is used by the end-users with the
perceived benefits, level of difficulties, and various issues.
♣ A survey of end-users to understand the usage patterns and level of satisfaction.
♣ An analysis of the case study materials promoted by SCRAN as examples of best practice.
♣ Analysis of minutes from steering group and project group and relevant documentation from the SLIC.

Each of these tasks was undertaken to meet a specific requirement of the evaluation study, and taken together, these tasks formed the entire evaluation study. We discuss this methodology in the form of a model, called MEDLIS, and each stage of the evaluation model has been illustrated by drawing examples from the SCRAN evaluation.

Stage 1: Background information

The first stage of an evaluation study should be to gather detailed information about the concerned digital library including the origin and nature of the concerned digital library service, the objectives and target of the digital library service, the funding model, and so on. It is important to find out details of every stated objective of the concerned digital library service, and this can be accomplished by adopting a combination of data collection techniques. In the case of the SCRAN evaluation, these data collection techniques comprised the following.

♣ A review of the SCRAN website
♣ Visits to the SCRAN office
♣ Discussions with the SLIC and SCRAN staff
♣ Critical review of the relevant documents ‘minutes of the meetings, memos, and so on
♣ Critical review of the SCRAN usage statistics

These techniques enable the evaluators to gather details of the stated objectives of the

concerned digital library service, which form the basis of the evaluation study. In case of the SCRAN evaluation study, it was noted that the SCRAN service was designed to

♣ provide licensed access to SCRAN for all Scottish local authority libraries,
♣ provide multi-user rights to SCRAN albums and CD-ROMs, and resources to all libraries,
♣ deliver a programme of training information professionals in developing their own use of the resources and in assembling learning objects,
♣ encourage good practice and sharing of resources,
♣ provide unrestricted 24’7 access, free at the point of use, to multimedia resources,
♣ provide user names and passwords to all participating libraries, and authentication system including IP authentication where required,
♣ handle IPR (Intellectual Property Rights) management of all resources,
♣ distribute guides and application software toolset to all schools,
♣ send e-mails with lifelong learning hints directly to subscribed teachers
♣ provide albums functionality with captioning and local output to personal mini-website, and
♣ provide support of connecting communities initiative.

Stage 2: Gathering management information

Once the goals and the specific objectives of the concerned digital library are ascertained, it is important to gather information on the objectives of the management and practices, as well as issues and concerns of the management team. This can be done in a number of ways, mainly through the management interview, and thorough analysis of relevant documents some of which may be available on the concerned digital library website. In the context of the SCRAN evaluation, detailed information about the SCRAN management was collected and that comprised the target users, resource development and access management policies as well as licensing and copyright issues, and project management details including project costs, pricing models, and other relevant details (for details see the full project report) at (http://www.slainte.org.uk/files/pdf/slic/ scranevaluation.pdf).

Stage 3: Digital library usage statistics

Once the basic characteristics, objectives, and policies of the management of the concerned digital library service are noted, it is necessary to move further to find out who uses the service, when and how, with what level of satisfaction/difficulties, and so on. Part of this information, especially the usage statistics, may be gathered through detailed analysis of the transaction logs, while for others, a detailed user survey needs to be conducted. However, appropriate help and support of the service provider is necessary in order to clearly understand the usage figures from the transaction logs maintained by the concerned web server. Taking the example of the SCRAN evaluation project, we made several visits to the SCRAN office, and held discussions with the staff members there that enabled us to get access to, and understand, SCRAN usage statistics. Discussions with SCRAN members further helped us in analysing the transaction log data that was made available to us for analysis. For detailed analysis of the SCRAN usage statistics and access management issues, please see the detailed project report (http:// www.slainte.org.uk/files/pdf/slic/ scranevaluation.pdf).

Stage 4: User survey

Analysis of the transaction log data provides information about the access patterns of the concerned digital library service, and also tells us about the information behaviour of the users. However, it does not tell us anything more, that is, why do the users behave in a way that is reflected through the transaction analysis, the level of satisfaction or difficulties the users face, and so on. The findings of the transaction log should be supplemented by a detailed user survey. Two main questions should govern this stage of evaluation: (1) how the service is used and (2) what are the users' reactions to the service. Information on this may be collected in a number of ways, for example, through questionnaire survey, through interviews and focus group studies, through observation, through the use of screen capturing software, and so on. However, no one single method can provide all the necessary information, and often it is necessary to use more than one method of data collection, and this was done in course of the SCRAN evaluation. SCRAN user survey provided detailed information about the usage patterns, users' perspectives and comments on the service, and so on. For details, please refer to the full project report (http://www.slainte.org.uk/files/pdf/slic/ scranevaluation.pdf).

Stage 5: Staff (intermediary) survey

Analysis of data from the transaction logs and user surveys may reveal some interesting information in relation to the management and provision of the service. For example, in case of the SCRAN evaluation, it was felt that the differences in the usage patterns among the various authorities may have been caused by several factors including the staff training issues, staff attitude towards the electronic library services in general and SCRAN in particular, marketing and promotion of the SCRAN service, and so on.

As stated earlier in this paper, an important part of a digital library evaluation is to look at the service from the perspectives of the providers and managers of the concerned service, and to gather information about the issues and concerns related to the day-to-day operation and management and provision of the service. Such information may be gathered through questionnaire survey and interviews; other possible methods may be to run workshops to discuss various issues and run focus groups discussing specific points. However, often a combination of approaches may be required to gather the required information. For the purpose of the SCRAN evaluation study, a combination questionnaire survey and interviews was used. The following description of the surveys conducted in course of the SCRAN evaluation provides an idea of the kind of approaches to be taken, tasks to be performed, and information that may be gathered at this stage.

A Web-based questionnaire survey was designed to find out answers to the service issues in relation to SCRAN. Since there was no way to reach the library staff directly, the survey was conducted via the Internet, with the URL of the survey e-mailed to the heads of service and SCRAN training contacts within each local authority with the request that it be passed on to staff for completion. A total of 419 responses were received. One of the objectives of the staff survey was to ascertain the reasons for huge differences in usage figures among the various library authorities. Further information about the staff attitudes towards the service, problems encountered while using the service on behalf of the users, and so on, were ascertained through a series of interviews of library staff. Detailed findings of the staff survey, including specific comments of the surveyed staff on SCRAN appear in the project report, which is available at (http://www.slainte.org.uk/files/pdf/slic/scranevalution.pdf)

MEDLIS: the model

The methodology discussed above enabled us to critically evaluate and comment on every aspect of the SCRAN service, ranging from the wider issue of its viability in terms of value for money to its suitability and effectiveness from the perspectives of information professionals as well as end-users. Features of the model, called MEDLIS, developed in course of this evaluation project, are briefly discussed in this section.

MEDLIS, as shown in Figure 1, can be used as a generic model for evaluation of any digital library with little or no modifications. An evaluation should begin with some broad questions, and it is important to find out who

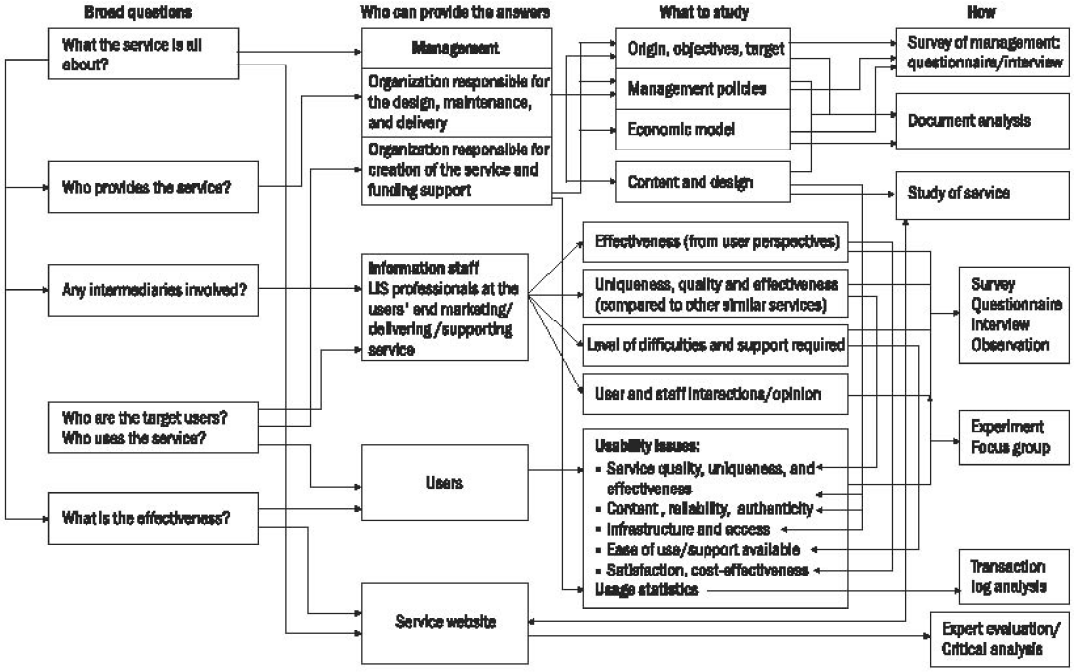

Figure 1 MEDLIS: A generic Model for Evaluation of Digital Libraries and Information Services

should best provide the answers to the questions. For example, information related to the origin and objectives of the digital library service, the management and pricing model, and so on, can be obtained from the management and the service website. Although some of this information can also be obtained by studying various documents minutes of meeting, memos, design documents, and so on - access to some information is usually restricted and can be obtained only through the management. Similarly, some information, such as the reasons for using the service, ease of use of the service, user satisfaction, and so on, can only be obtained from the users.

Some digital libraries and information services, like SCRAN, are provided through libraries where LIS (Library Information Service) professionals play several important roles ‘ ranging from marketing and promotion to providing user support, or even acting as an intermediary by conducting search on behalf of the users. Under such circumstances, significant amount of valuable information can be obtained from these intermediaries. Nevertheless, as discussed below, information collected from each stage of the evaluation can be useful to compare with, substantiate by, or use in combination with, the information collected from

other phases of the evaluation study. The last column of MEDLIS (in Figure 1) lists the possible methods that can be used to collect necessary information. The list is obviously not exhaustive, and one may apply one or more appropriate research methods to collect information depending on the situation - nature of the digital library, users, evaluation objectives, and so on. The methods suggested here, however, are commonly employed in evaluation studies, and they prove to be quite appropriate for evaluation of digital libraries.

As shown in MEDLIS, any evaluation study should begin with two most basic questions: (1) what the service is all about, and (2) who is the provider of the service. To find answers to these questions easily and most appropriately, one should study the website of the digital library services, and should work with the management team responsible for the design as well as day-to-day management of the service. Management of a digital library service can be divided based on two sets of tasks. Although in some cases, it may be the same management team or organization, it will be appropriate to distinguish between the two sets of activities involved in the management:(1) sets of tasks that are concerned with the design, development, maintenance, delivery and management of the overall digital library service, and (2) other sets of tasks that are responsible for creating service (from strategic perspectives) and providing the necessary resources. Information on a number of pertinent issues, such as the objectives and target of the service, management policies, economic model, design policies, and so on, can be obtained by conducting surveys of the management team, analysing various pertinent documents, critically studying the usage statistics, and so on.

MEDLIS shows links among the various evaluation questions, the possible sources of the required information, the possible methods for collection of data, and the factors or points to be studied in each case. Specific answers to some of the questions can be obtained from more than one source and the necessary information may be obtained using different methods. For example, as shown in Figure 1, the information on effectiveness of the digital library can be obtained primarily from the end-users of the service, but further information may be obtained from transaction log analysis, and also from the survey of intermediaries (information professionals who deliver the service at the users' end) who can not only comment on the actual usage patterns and user satisfaction based on their day-to-day experience of serving users, but can also comment on the uniqueness and effectiveness of the given service in comparison with other similar services that provide access to the same or similar type of information.

Usability is one of the central issues of digital library evaluation, and a large number of digital library usability studies have taken place over the past few years. While some of these studies have focused mainly on user interfaces and HCI (human-computer interaction) issues, others have looked into the more complex issues of usability, including the various user-centred issues (Blandford 2004; Blandford and Buchanan 2003; Blandford, Keith, Connell, et al. 2004; Chowdhury 2004; Jeng 2005; Saracevic 2005). Detailed discussions on usability of digital libraries are beyond the scope of this paper. However, as shown in Figure 1, usability is a very important component of MEDLIS. Most digital library usability studies have rightly focused on the end-users, but as shown in MEDLIS, usability studies should consider both the end-users and intermediaries, since the latter group can provide much valuable information.

Conclusion

MEDLIS provides a generic model that can be used to evaluate any kind of digital library. It can be used for both the types of digital libraries - where there are no intermediaries such as the ACM (Association for Computing Machinery) digital library, and also where information professionals play an important role in making the service available and more usable for the end-users, as in case of SCRAN. Again, it can be used for evaluating services wherein the users have to pay or subscribe, as in case of the ACM digital library, but can equally be used for services wherein no payments are involved. The bottom line is that for every service, there is a service and a business model, irrespective of whether or not the users pay for the service at the point-of-use, and the service can survive only as long as the business model works and appropriately supports the service objectives and ethos. It is therefore important to study how viable the current business model is, given the nature of the service and its users, usage, usability, and so on. MEDLIS provides a generic framework for such an evaluation study. It is hoped that further evaluation studies of different kinds of digital libraries will be undertaken in the near future in order to validate and improve the model.

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EDITORIAL

Internet access in UK Public Libraries: notes and queries from a small scale study

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Abstract

Purpose: Discusses the findings of a small scale study of Internet access in UK public libraries. It examines all aspects of access, from the moment the service is requested, to the acceptable use policy for each library, to specific Internet sites that are banned.

Design/methodology/approach: The methodology involved unobtrusive testing, commonly referred to as mystery shopping. 14 different library authorities spread across the UK were visited by the researcher.

Findings: Variances in access to the Internet in public libraries in the UK exist. Of concern was the lack of time staff in most libraries allocated to explaining the acceptable use policy the library was asking the researcher to sign. In some libraries the AUP was actually bypassed by the staff member entirely. Other concerns related to the differences in Internet filtering adopted in the libraries visited, with legitimate sites blocked in some and not others. The quality of the experience was also lessened by inadequately designed front-ends and the lack of helpful guides on using the Internet.

Practical implication: The paper should be of interest to public librarians and others interested in the implementation of Internet services in public libraries.

Originality/value of paper:

Paper type: Research paper

Keywords: Public libraries; Internet; Acceptable use; filtering

The national initiative *The People's Network* (LIC, 1997) led to an unrivalled Internet infrastructure in UK public libraries after its implementation in the late 1990s. This national initiative focussed on ensuring that Internet access was fast, with modern information and computing technology (ICT) to access the world of information on it. However since public libraries are under individual local authority control, implementation of the project took on local dimensions, with potential for differing rules in place in terms of acceptable use, filtering policies, and the like.

This paper discusses the results of a small study that has raised several key questions related to the provision of Internet access in UK public libraries post the *People's Network*.

Methodology

The recipient of the 2006 Elsevier/Library and Information Research Group Award, *Open*

Gateway or Guarded Fortress, the project tested Internet access in a small sample of UK public library services. The goals of the project were to test what were perceived by the researcher to be reasonable expectations of service levels related to:

1. Consistency of service access and quality in libraries across the UK
2. Rigorous and consistent application of Acceptable Use Policies (AUPs)
3. Clear, consistent and visible policies about Internet filtering
4. Consistent front-ends for users

The project utilised unobtrusive testing (mystery shopping) and visited 14 different UK library authorities (8 English; 4 Scottish; 2 Welsh). Where possible neighbouring libraries were visited; the hypothesis being that two libraries that were close but under a different local authority control could conceivably be visited by the same people and thus any differences in service would be noticeable to the users. The only stipulation for each authority selected was that travel from central Scotland to the location was reasonable and cost effective.

In terms of consistency in the project, the researcher visiting all 14 libraries was the same person, and the scenario given was that he was not a library member but wished to access his email using the library computers. The researcher had no means of proving his address, only being able to show identification (ID) such as credit cards or workplace ID in order to gain access to the service.

The researcher attempted to access 25 different websites while using the library computers. The check list of web sites that access was attempted for incorporated:

- chat sites,
- web-based email,
- web 2.0 sites such as myspace and faceparty and bebo,
- sexual health information sites,
- advice sites on sexuality issues,
- dating services,
- downloading sites
- and gambling

The 14 libraries in the study will not be identified, since it is not the intention of the project to highlight specific library services but instead raise general issues of concern arising from the study.

Findings

12 of the 14 libraries visited allowed the researcher access to the Internet, which is a significant majority of those surveyed. This was despite the researcher being a non-member and having limited ID. The 2 libraries that refused access did so on the basis of the researcher not carrying acceptable ID that showed his address. Interestingly one of the libraries that refused access stated they would have been happy with one non-photographic item of ID that stated address, meaning that a utility bill or similar would have been acceptable, raising the potential issue of identity theft and whether a bill that did not belong

to the individual would have been enough.

Only 1 pair of libraries used the same network and shared interface/AUP/filtering standards. These library services also allowed members to borrow items such as books from the neighbouring authority, offering an attractive set of reciprocal entitlements all round.

Application of AUPs

In only 1 of the 12 libraries where access was granted did the staff make any attempt to explain what acceptable use of the Internet constituted and what the responsibilities of the user entailed. Indeed in 2 of the 12 libraries staff helpfully logged the researcher on to the computers, bypassing the on-screen AUP on behalf of the researcher.

The user signs this document, but unless the details are explained to them, is it ethically acceptable for the library to assume the user knows what is expected of them? Public libraries are open to all, users will vary in terms of their depth of understanding of legal issues, many may not even be able to read and understand the document in question. This is a major concern for a professional service, and the reasons for it need to be debated. Is it due to lack of staff time or perhaps poor training? Ultimately the AUP is the document that creates a contract between the user and the library, and it is paramount that it is understood by both parties.

Clear and visible policy about Internet filtering

Of the 12 sites providing access there was no consistency in Internet filtering, 2 libraries blocked nothing on the check list, and others blocked varying numbers of sites in different categories. The most commonly blocked were chat sites (50%) an advice site for gay teenagers (33%) and a gambling site (33%). None of these sites were illegal, and their availability in other library services tested does raise questions about consistency of access to legitimate content across the country.

In terms of how blocking appeared to the user, some blocking was overt, with a clear screen being displayed saying that the site had been blocked and to see staff if the user wished it to be unblocked. This does raise issues, since it is questionable whether a teenager would ask staff for a site on sexuality to be unblocked given the personal nature of the content.

However some blocking did potentially appear to be covert, displaying what appeared to be *404 error* messages, presented in such a way as to suggest it was not a standard 404 error and thus hint that it was the filtering software blocking the site rather than the site being unavailable. This is difficult to state with any degree of certainty, however without knowing the intricacies of the filtering software used.

Is it acceptable for a library user in one district to have access to an Internet site and one in another not to? Especially when that decision to block may be made by an automated system rather than any specific selection decisions by a librarian? Internet filtering is a clumsy method of restricting access to information, and notwithstanding its desirability for many services, it needs to be clearly understood as such and sites only blocked for legitimate reasons.

Consistent front-end

One of the most disappointing aspects of the study was the huge variability of quality in terms of the front-end screen faced by users when they first log-on to the system. Only 1 site visited had produced a coherent information and library orientated front-end which had the sole aim of operating as an information gateway for users. All others pointed to parent local authority website pages, or library homepages within the parent website. These varied greatly in quality, ease of use, and usefulness. Indeed the researcher found several of them to be confusing and with links that did not seem at all relevant to the majority of library users, such as tax payment links, and links to local official information. It did seem that for the majority of the libraries visited that the e-government goals of the local authority rather than the information needs of the library user were given priority. The significance of and wider extent of this has been commented on by the author in a previous editorial (McMenemy, 2007).

Rather worryingly only 1 library of the 12 offered a novice Internet guide on the computer desktop, which meant any novice users would have to rely on the library staff to guide them through their usage of the computers. Given staffing levels are always a challenge for public libraries, it is increasingly unlikely that staff will be able to spend the appropriate amount of time with library users to help them navigate the Internet. This well designed user guides should be a basic requirement of public library computer terminals, to aid the novice user in their first Internet experiences. Who better than librarians to create guides in how to search efficiently for information in this new world?

Recommendations

The project has raised several issues of concern. While all libraries visited saw staff that were extremely helpful to the researcher, even when access to the Internet was denied, there were occasions when the desire to be helpful was potentially putting the library at risk.

Since an AUP forms a contract between the library user and the library, the fact it was not explained to the researcher in 11 out of the 12 libraries visited does raise issues of potential liability. In addition, 2 of the library services actually saw staff logging the researcher on to the terminal with the staff members clicking the AUP screen to proceed. In this scenario who exactly would be responsible for any misuse of the Internet that resulted, either malicious or accidental?

The findings of the project suggest the following issues that need to be thoroughly debated:

1. A need for thorough training in public libraries related to public access computing. Staff members need to understand what the AUP is there for, what its limitations are, and ensure that all users who are accessing the Internet using library facilities

understand what their responsibilities and liabilities are. The rights and wrongs of passing on the liability to the user notwithstanding, it seems unwise to have a policy in place and not ensure that all staff members both understand it and adhere to it. While it could be argued that the 2 libraries out of the 14 who actually refused access were being restrictive, the reality is that they were adhering to the policy of the organisation and thus their actions are entirely justifiable.

2. Libraries may need to consider whether their priority is to provide an unbiased information service or merely act as an agent for the local authority. It is regrettable that some public libraries tested seemed to believe that simply placing the local authority webpage on library terminals is a good way of providing an information source for users. The variability in quality of these sites could mean that novice users are being presented with a gateway that is of no relevance to them, but worse could hinder their information seeking. More research needs to be undertaken on how such gateways influence the information seeking of public library users.

It should be a reasonable expectation that public library users throughout the UK receive a comparable service in all areas. Access to the Internet is one of the trickiest services to manage, but it does seem that a large waste of resources is occurring with every authority developing their own AUP, filtering policies, front-ends and the like. Surely a movement towards an acceptable national model would ensure public library users throughout the country received a comparable service, and that their quality of access to web-based information was not based on their post code.

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7. The Impact of Information and Communications Technologies

Introduction

Information and Communications Technologies (ICTs) have had a dramatic influence on society, thus it logically follows that this has been replicated in public libraries. In actual fact technology has been a key driver in service development across library sectors for decades; however contemporaneously the advent of the Internet and the World Wide Web (WWW) has begun to change how the public use and interact with information, and as a consequence how they expect some services to be delivered.

This chapter will discuss how ICTs have impacted on the public libraries sector, how they are altering how many traditional services are being provided, and what this means for the public librarian charged with managing these developments.

Understanding the use of technology in libraries

The term ICT is a relatively new acronym for describing computer technologies, replacing the term IT (information technology) that was used for decades. The addition of the communications tag has largely been as a result of the ability to use the same technologies for communicating with others via the internet. The terms do, however, tend to be interchangeable for many people, and thus it is common to hear people still refer to IT. Indeed in the USA it is common to find professionals in information and library work who do not use the term ICT and continue to use IT to describe the technologies.

ICTs can be found in many aspects of the modern public library service. In a previous chapter we have discussed equity of access, and indeed public libraries remain crucial gateways for many people to access ICTs who otherwise could not afford to do so. Yet long before the first library user interacted with a computer in the public library, the technologies that underpin them had been transforming how the services they used were delivered.

Library Management System (LMS)

The gateway to the library's collections is the catalogue, more often than not nowadays in the form of an online public access catalogue, or OPAC. The OPAC can

be accessed within the library building, and for most public library systems in the developed world, via the internet using the website of the public library authority concerned. Indeed, in the UK this later access was a cornerstone of e-government expectations for local authorities.

The LMS is the most important technological tool in the library; it manages the important data used in the day to day operations such as user membership records, borrowed items, borrowing entitlements and periods, and fines. Modern LMS solutions tend to be modular in nature, meaning that after buying the basic catalogue system a service is able to add extra functionality that can control other aspects of the work of the library, such as:

- Ordering and acquisitions
- Serials control
- Management information (usage statistics, etc)
- Revenue control (for collecting fines, sales monies, etc)

Many also offers modules that can create digital libraries, or more interactive spaces for users, however each module added is an extra expense for the library and also can mean that more assistance from the IT support staff is necessary.

CD-ROMs and Databases

The 1980s also saw the arrival of the CD-ROM as an important information storage and delivery tool. The ability to store databases containing bibliographic, indexing and abstracting tools that had been the staple of libraries for many years, such as *Library and Information Science Abstracts*, *British Humanities Index*, *Books in Print*, and numerous other titles, was the first sign that traditional ways of delivering some library services were now under challenge. Add to this the ability to store full text databases containing many years of journals, newspapers, poetry and other texts, and it was clear that from a user standpoint, access to resources was to become quicker and more efficient.

As technology evolved the media used by companies to store their services also evolved. After CD-ROM came DVD-ROM, able to store around 10 times as much

as a CD-ROM, however increasingly access to databases and electronic services became internet-based, and this is now the norm for subscription services.

Subscriptions to electronic services

Local authorities have been utilising the benefits of consortia purchasing for some time offering opportunities to gain large discounts by collectively using specific suppliers. This is a useful strategy from the point of view of online subscription services, since pricing can be a challenge to both understand and afford when negotiating licenses for such products.

In Scotland an early model of adoption used left-over monies from the country's People's Network allocation to provide access to three services, *Kompass UK*, *Know UK*, and *Newsbank* (Kerr, 2003). These three services provided access to a wealth of reference information such as information on UK companies, general access to a range of standard reference information on UK issues, and subscription to electronic back copies of newspapers.

Recently in England the MLA has negotiated with a range of electronic service providers to offer a framework agreement that all public library services can utilise under its *Reference Online* scheme (MLA, 2008). Services available include many standard reference sources traditionally subscribed to by libraries including *Oxford Dictionary of National Biography*, *Oxford English Dictionary Online*, and both *Grove Music* and *Grove Art*. A full list of all services covered by the agreement is available at the website cited above.

Crucially such agreements make some of the most authoritative reference sources available to some smaller libraries who could perhaps not have afforded to continuously purchase the hard copies. Some of the licenses for electronic services also permit the individual library user to access the services themselves by using their library card details, which means they can access the resources while at home. In this sense the availability of electronic reference services shows one of the key areas where ICTs are making significant inroads in terms of enhancing the quality of service provision for library users.

E-Books and E-serials

Researchers at the University of Loughborough have conducted recent studies into the use of both electronic books (e-books) and electronic serials (e-serials) within public libraries.

In terms of e-books, the project set and evaluated the introduction of an e-books service in the English county of Essex. The provision included:

- lending iPAQ Personal Digital Assistants (PDA) devices with a number of ebook titles loaded, to specific groups of users;
- providing PC-based Web access to two ebook collections to a range of library patrons. Users were offered ebooks for download based on Adobe 6 and Palm 'E-book' formats (Dearnley et al, 2004: 6).

The project found specific issues with the hardware used to deliver the e-books, with users negative towards the PDAs due to screen, text, and battery life. One respondent also noted that it was impossible to take it into the bath unlike a printed book (Dearnley et al, 2004: 21). Overall the study found that e-book provision was not an altogether impossible service to imagine for libraries, although thought would need to be given to the appropriate hardware models and funding regimes to allow users to access the digital content.

In terms of e-serials the data gathered by the researchers for this project indicated that subscription to them was widespread among public libraries, with 71% of library authorities subscribing to one in the period when the study was undertaken (Dearnley et al, 2004: 10). However this number reflected low numbers of actual services subscribed to, with only 53% subscribing to two, 17% three, and only 10% four.

A study by Ball in 2003 confirmed that public libraries were successfully negotiating consortia purchasing in the e-services and serials marketplace. Dearney et al suggested that such purchasing arrangement has created blanket coverage of subscriptions on both Northern Ireland and Wales (Dearnley et al, 2004: 26).

The People's Network

The single largest influence on the development ICTs in UK public libraries has been the People's Network programme. Over a period of only five years it transformed the network and equipment infrastructure and skills levels of staff in public libraries

across the country. The project led to all UK public libraries being provided with computers and high-speed internet access. The project was completed on time and within budget in 2002.

Background and aims of the programme

The key document that started the process was the 1997 Library and Information Commission report, *New Library: the People's Network*. It stated that:

> Tomorrow's new library will be a key agent in enabling people of all ages to prosper in the information society – helping them acquire new skills for employment, use information creatively, and improve the quality of their lives. Libraries will play a central role in the University for Industry, in lifelong learning projects, and in support of any individual who undertakes self-development. (Library and Information Commission, 1997)

The aim of the programme was to create the infrastructure, content, and staff skills to support a new networked public library. Funding for the programme to the tune of £100m was allocated from the New Opportunities Fund (NOF) which was part of the National Lottery programme, with additional support from the Bill and Melinda Gates Foundation.

Staff skills in delivering ICT services

Fundamental to the success of the project was a nationwide training programme incorporating all front-line library staff. Within the allocated funding for each local authority was a sum of money that was to be used directly for the training of staff, and this sum for the entire country totalled £20m pounds.

The follow up report *Building the New Library Network* advocated eight training outcomes it deemed necessary for public libraries:

1. Competence with ICT
2. Understanding how ICT can support library work
3. Health, safety and legal issues relating to ICT
4. Using ICT to finding information for users (including evaluating information)
5. Using ICT to support reader development
6. Using ICT to support users to ensure effective learning
7. Effective management of ICT resources
8. Knowing how to use ICT to improve efficiency (Library and Information Commission, 1998)

The first outcome was deemed to be the minimum level that all staff working in public libraries should have as standard. The solution adopted by the majority of public libraries was to use the competencies inherent in the European Computer Driving License (ECDL) as the benchmark for Outcome 1, which was based around competence in computing applications. This ensured all staff were trained in word processing, web browsing, spreadsheets, and databases, as well as an overview of computing basics like hardware and software, and managing files and desktops. The more advanced outcomes were covered by more specialised training courses such as the *Diploma in Applications of ICT in Libraries* and the *Advanced Diploma in Applications of ICT in Libraries* developed in Scotland by the Scottish Library and Information Council under the banner of the Scottish Qualifications Authority.

For most authorities the challenge of training staff was a mammoth one, freeing staff time to undertake training was perhaps the biggest challenge. Certainly the training programme was unprecedented and massively upskilled a entire workforce in a relatively short space of time. A 1999 study suggested, however, that the skills of the staff in the new library would only be partly be based around ICT skills, and that the new demands placed on the service necessitated staff skilled in outreach and education, and helping learners through the process of utilising the ICTs for their benefit (Jones et al, 1999). As discussed in Chapter six this can certainly seen to be the case as public libraries increasingly provided learning opportunities for users through their new facilities and offered enhanced staff development through their ability to help the learners.

Evaluation of project

By 2004 there were over 30,000 PCs available in public libraries in England and Wales, with an average of 7 computers per library (Brophy, 2004: 21) and this was a monumental improvement on the situation before the project was implemented. Not only the numbers of computers but the speed of connection meant that all libraries were offering high speed and high quality ICT access to their users, allowing the most up to date uses possible of facilities, including enhanced multimedia access..

Sustainability of ICTs

The issue of sustainability of ICT equipment will be discussed more fully in Chapter nine, however the key issue to consider with regards the *People's Network* was that it was one off grant that allowed for the purchase of one iteration only of equipment for each library service. Thus sustainability was to be the concern of each individual library authority. In terms of numbers this was a major financial concern and it was no surprise to see some public libraries beginning to place charges on access ICT equipment when the funding cycle was complete. Regrettable as this is, the reality is that the expense of replacing an entire ICT infrastructure on a regular enough cycle to keep the equipment up to the standards users need and expect will be an ongoing challenge.

Public Access Computing

The nature of the internet and some of the information contained on it makes for some potential ethical and logistical problems for public libraries in terms of what can be accessed by users using their ICTs. Measures to control how users interact with the internet while in the public library have been brought in across the country, and this has included developing Acceptable Use Policies (AUPs) that each user has to agree to before being given internet access, or if a child is the user accessing then the parent or guardian would confirm this agreement.

The purpose of an AUP is to define what constitutes acceptable use of the library facilities. This is a useful management tool for many public libraries, but at its root it is a challenge to equity of access, since it defines some information as inappropriate. This is entirely understandable when the issue of child protection is the goal; no right-minded individual would wish children to be exposed to pornographic content when visiting their public library. However many policies define sites such as chat rooms, gambling sites and games sites as being inappropriate, and this is where the choice as to what to block becomes potentially problematic.

It is oft posited that libraries should move with the times, and as people become more and more familiar with the many uses of the Internet, the bar on anything but information use within a library becomes difficult to sustain ethically. Sites such as *Facebook*, *Bebo*, and *MySpace* are enormously popular with young people, a group of users who are notoriously hard to reach with marketing. Libraries that restrict access to sites such as these run the risk of alienate this group of users.

The second measure introduced by many public libraries, and perhaps the most controversial, is the software based solution of Internet filtering. While AUPs define in a general fashion what is and is not acceptable use of the Internet, filtering software goes that step further and blocks any information it is programmed to block, either by using keywords, or a list of banned addresses, or a combination of both. While it is certainly true that, as Hauptman puts it, "unfiltered access to the Internet presents some major ethical challenges even to those whose commitment to intellectual freedom is unequivocal," it is equally true that, "it is not our business to mediate between users and the virtual world" (Hauptman, 2002: 65).

It is certainly the case that public libraries ventured down the filtering route to protect themselves and their users rather than in a bid to halt intellectual freedom, but this makes the decision even more problematic for an ethical public librarian. The problem with filtering is that while it may block material that is offensive or questionable (though the question remains to whom), it has also been found to block material of a legitimate nature, and often this material is of personal or sensitive importance to a user, such as health information or information on sexuality.

It could be argued that it is the clumsiness of filtering software that poses the largest ethical concern; it will never be 100% accurate, even if it ever becomes 99.9% accurate. Taking the human out of assessing information for a user is always a bad thing, but to put it in the hands of a software program is a clumsy solution to the problem. Combating the ignorance of many stakeholders with regard to the accuracy of filtering is also a challenge of the 21st century facing public librarians. When and if an inappropriate access occurs it can cause controversy for the library, and an organisation that feels it is protected is one operating under a false sense of

security. As Gorman succinctly puts it, "the truth is that filtering systems *do not work* and they *never will work*!"(Gorman, 2000: 96)

Whether introduced willingly or unwillingly, the use of filtering technologies in libraries of any kind is a major ethical concern. Regardless of which side a public librarian comes down on in the debate, it is essential that all are aware of all of the implications that using the software may bring when making a decision to install or not.

Managing access

Another major challenge that was exacerbated with the People's Network revolution was managing access to the ICTs within the library. Many libraries went from a minimal ICT infrastructure to one that took up much staff time to ensure efficient operation. Managing access took on three important considerations:

- How to manage the volumes of users requesting access, and ensuring fair usage of ICTs
- How to ensure that ICTs were not abused or altered by mischievous users
- How to keep ICTs equipped with most up to date patches and plug-ins.

Booking systems

The administration of ICTs in public libraries is a logistical challenge for even the smallest library. A library with 6 computers that is open for 10 hours may see anything up to 20 users per computer per day if they use 30 minute booking slots. This amounts to potentially 120 users that have to be logged on and off from a computer. This is in addition to any assistance they may require and the need to keep operating the traditional service in unison.

A common solution adopted has been to purchase a software system that can handle bookings of ICT equipment. A popular choice has been Netloan which was a package originally developed by a Swedish software company to manage the bookings of bowling alley lanes.

Its utilisation as a computer booking system has been widely embraced by public libraries in the UK as it offers useful service enhancements, such as the ability

to manage printing and bookings for computers via the internet. This means that a library user can be in their workplace or school and book a slot for themselves in their local library at time convenient to them without visiting the library or calling it. All that is normally needed is the library barcode number and PIN number, as the Netloan system interfaces with LMS data to authenticate the user.

Deep Freeze

As the numbers of computers in libraries increased, so did the potential for users who wished to sabotage the equipment. In a standard computer the operating system and hard drives are open to any user unless an administrator has restricted functionality. The safest way to do this is to employ a software or hardware-based system to make the computer tamper-proof. These generally work by making a mirror of the computer hard drive which is hidden from public view and which boots up every time the computer is switched on. Such a set up means that any tampering with the configuration, either malicious or accidental, is automatically wiped when the system is reset.

Although an added expense, in a public access computing environment such expense is essential and saves on computer downtime significantly.

Plug-ins

A plug-in is a piece of software that works with web browser to allow specific types of content to be displayed or heard on a computer. Examples of common plug-ins are *Quicktime*, *Windows Media Player*, and *Macromedia Flash*.

It is a key challenge for public libraries is to ensure that their ICTs are able to deliver the most up to date multimedia content. Increasingly more and more websites are utilising higher bandwidth availability and offering multimedia as standard, and sites like the BBC offer excellent quality in so doing. Yet if the correct plug-in is not available on a library computer then the user may be unable to access the content.

Keeping plug-ins up to date is not a straightforward task if a library computer utilises a solution like *Deep Freeze* and the staff on the ground are not able or not

authorised to update the computers. This can lead to IT staff employed by the library having to undertake upgrades of such things themselves, and this being the case it will mean it is not done as frequently as it could be. Solutions exist, such as remote access for updating, however whichever way is chosen to upgrade the plug-ins in question, it an ongoing concern as new plug-ins are released regularly and many content providers choose to adopt the latest iterations for creating their content.

Technology-enhanced services

ICTs also offer public libraries exciting opportunities to deliver new ways of accessing current information. As well as subscription based type services discussed earlier, some traditional library services are now also able to be delivered electronically.

Digitization

Digitization is literally the act of taking a physical analogue item and creating a digital facsimile. This is distinct from material that is already born-digital, such as word processed documents, spreadsheets and the like.

Digitization initiatives in public libraries were significantly boosted by the *NOF-Digitise* programme which ran alongside the People's Network initiative to ensure that as well as a physical infrastructure there would also be content for library users to access. The resulting web portal, *Enrich UK*, gave access to all of the websites funded under the programme. The *Enrich UK* portal has now been subsumed by the larger EU wide programme *MICHAEL* (Multilingual Inventory of Cultural Heritage in Europe) and is available via the MLA website.

The NOF-Digitise programme was a major catalyst in giving many public libraries a first taste of digitization and digital content creation. Since most public libraries have collections that are worth digitizing from both local and national standpoints the role of digitization in library services is certain to be an ongoing one.

Websites

All public library services in the UK now have websites, and the entire list can be accessed via the useful website constructed by Sheila and Robert Harden (Harden and Harden, 2008). As mentioned above it was a requirement of public libraries as part of their e-government responsibilities to the local authority to make their library catalogue available through their website.

The challenge for the public library is to balance its e-government goal as a department within a local authority versus its information-based role to provide gateways for users to information. This is a crucial point if the library webpage is used as the first screen a user sees when logging on to a library computer, as happens in many authorities throughout Britain.

Badly designed sites can alter the experience and efficiency of the user's searching, and public libraries should always seek to ensure that these pages are framed with the information goals of the user in mind rather than the e-government agenda of the local authority. In a small scale study conducted by the current author it was found that only one library authority of twelve visited offered a novice guide to the internet as part of their pages for instance (McMenemy, 2007). This meant any novice users would be reliant on staff availability or some other materials being available within the library in order to undertake a self-directed learning opportunity on the PC.

Web 2.0

The most recent major innovation in electronic services is known as Web 2.0 which enhances traditional internet-based services by encouraging more user interaction and input into the process. One of the main advocates of the term describes it thus:

> Web 2.0 is the network as platform, spanning all connected devices; Web 2.0 applications are those that make the most of the intrinsic advantages of that platform; delivering software as a continually-updated service that gets the better the more people use it, consuming and remixing data from multiple sources, including individual users, while providing their own data and services in a form that allows remixing by others, creating network effects through an "architecture of participation", and going beyond the page metaphor of Web 1.0 to deliver rich user experiences (O'Reilly, 2005).

The most famous incarnations of the phenomenon are the commercial sites such as *MySpace* and *Facebook*, however public libraries have sought to enter the domain too. East Renfrewshire Council were the first authority in the UK to create *Facebook* pages for all of their community libraries (Browne and Rooney-Browne, 2008) in a bid to reach out to the many users who may well be *Facebook* users, but not library users. Although still in its infancy, the project found that the library service widened its reach significantly, "not only from East Renfrewshire and surrounding areas but also from Australia, London, Oklahoma, Saudi Arabia and Toronto" (Browne and Rooney-Browne, 2008: 15)

Conclusions

ICTs are now a crucial component in many of the services provided by modern public libraries. They greatly enhance user services in areas of reference work and in digitization of library materials such as photographic collections. However they have not and will not for the foreseeable future replace many of the core public library activities.

Despite the obvious current interest in e-books, they are unlikely in the short term to replace traditional books to any significant degree, except in the areas of reference or scholarly publishing where currency and multiple access issues remain of paramount importance. This may well change as technology improves and developers find more efficient and user friendly ways of displaying the written word electronically, and the Amazon Kindle e-book reader currently popular in the USA is a sign that technology in this area is moving on. However for many users the pleasure of reading is in the touch and feel of the written word on paper and this is unlikely to ever be bettered by technology.

Of all professions it is perhaps librarianship that sees the most debate between those who advocate the use of ICTs, and those who do not see ICTs as being central functions of the service, or worse detrimental to them. There almost at times seems to be a crisis of professional identity with many advocating traditional library services over new, and vice versa. In reality the modern public library service must be cognisant of electronic services where they enhance the

service provided to the user, but they should not pursue an ICT agenda for the sake of it, and certainly not at the expense of traditional services and traditional users.

It is unprofessional for any librarian to inhabit a camp that promotes either technophobia or technophilia at the expense of service development for the user. The reality is that in the 21st century there are many services that are much more successfully delivered via ICTs, and there are many that are not and are unlikely ever to be so. Taking a view on one side or the other is a straightforward way to curry favour from one of the particular camps, but it does little to move services forward for users and even less in consideration of their actual needs. If we allow our own prejudices regarding format to colour own professional judgement we will have failed the users in our service to them.

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Emergent digital services in public libraries: a domain study

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Abstract:

Purpose: This paper explores the emergence of digital services in the public library domain via an extensive study of the websites of all Scottish public library services

Design/methodology/approach: In a 4 month period all 32 of Scotland's public library authority websites were visited by a researcher. The goal of the researcher was to record the options available from the library homepages in the following way:

•Role of library in providing page content: content provider or access provider?

•Was the page providing a digital service?

•What was the audience for the page? Adult, child, or not specified?

•Description of page content

•Any noted usability issues

Each site was only visited to three levels below that of the initial homepage.

Findings: The study found a good standard of innovation in digital services around LMS functions, offering users the ability to keep in control of their borrowing and reserving. In addition there was a consistent set of electronic reference resources subscribed to by multiple libraries, offering high quality information both within the library and for library members from their home or workplace. Problems were found with regards to guidance on the usage of these resources, as well as confusion and inconsistency in terminology usage across different library services.

Research limitations/implications: The paper examines only Scottish public library sites, thus can only claim to be representative of that country. It also can only represent the sites at the time they were examined.

Practical implications: The paper should be of interest to public and other librarians interested in patterns across web sites in their sector.

Originality/value: This is the first national study of Scottish public library websites and its findings should be of value as a result.

Keywords: public libraries; digital services; evaluation websites

Article Classification: Research paper

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1. Introduction

This paper explores the emergence of digital services in the public library domain. In doing so it utilises empirical research into the Scottish public library sector, with an extensive study

of the websites of the entire Scottish public library network, and the range of services delivered by them.

In a recent review of Scottish public library websites to investigate domain presence and quality of information resources provided it was found that only 9% of the 32 Scottish public libraries had their own web domains, and it was argued that those without their own domain suffered from a 'virtual identity problem', with several being no more than directory listings within larger local authority sites (McMenemy, 2007). The research also found general inconsistency in library services offered across the sector, with several confusingly (and loosely) co-located with other local authority services. Not surprisingly usability issues were identified, particularly with regard to navigation and terminology, with the paper calling for significant research into the best ways of providing information services to users, and in particular, public library digital services.

This problem is neither new, nor exclusive to Scottish public libraries, as Harden reporting on an earlier UK wide review found that 'many public library websites are little more than digitised leaflets', and argued that such public libraries lacked ambition in the digital age (Harden & Harden, 1998). Further, a recent review of local council websites by the Society of IT Managers which included public library websites, found that while overall visitor numbers to council websites increased by around 22% in 2009, user satisfaction numbers dropped by 18% (Socitm, 2010). Atherton previously highlighted a proliferation of public sector electronic *information islands* (Atherton, 2002), and argued that a "key concern facing library and information professionals and local authorities is how to make information available to the citizen without confusion, duplication of effort and in a user-friendly way" (p.467). Even more recently a nationwide survey of public library services indicated that 98% of services do not have a digital strategy in place (Reading Agency, 2011).

A significant challenge exists in that there is currently limited guidance regarding exactly what public library digital services should be, which is compounded by the nascent state of digital service design and limited previous evaluations of library Internet services (Aitta, Kaleva, & Kortelainen, 2007; Williams, Chatterjee, & Rossi, 2008). This paper, then, seeks to contribute to the gap in digital library research related to public libraries. In doing so it also by such a focus considers aspects of the role of the public library in the modern era.

The research questions posed by this paper are:

- What emergent digital services are evident in the sample public library services?
- How is the balance between access provider and content provider being reflected in the range of digital services?

- What challenges are resulting from the delivery of digital services?

2. Context of research

The research and authorship of this paper was undertaken in a period when the recession that has impacted on many western countries, including the United Kingdom, was leading to massive cuts in public expenditure, with a knock-on impact on the delivery of public library services. Estimates have been made that up to 20% of public libraries will close in the UK in 20011/12 fiscal year alone, with this being only the first year of the proposed cuts. With the reduction in the physical infrastructure, the webpages of public libraries take on an increasing importance in delivering services to users. Thus enhancing and expanding the availability of digital services that library users can access outside of the physical library building is likely to become even more important for library managers.

Koehn and Hawamdeh argue there are cultural issues at play also as the "increasing quantity of born-digital material and the growing preference of users for digital information access are forcing libraries to rethink their strategy in managing financial resources and serving the greater community" (p.162). Research conducted by D'Elia et al involving telephone interviews with just under 4000 members of the public concluded that, "the Internet was overwhelmingly preferred over the library for the majority of uses, many of which fall under the library's traditional mission of information provision" (p.818). The growth in public ownership of enabling technologies has been exponential, and the modern smartphone is capable of accessing the WWW, displaying e-books and digital audio and video, which leads the author to reflect on the observation of D'Elia et al that, "people who are using both the library and the Internet can now compare the performance of both providers, and are likely to make choices between the two based upon these comparisons" (p.803). In their study D'Elia et al posed three scenarios for the impact of the Internet on public libraries.

1. Status Quo – where the public library and Internet will co-exist providing complementary services
2. Change – where the public library has to adapt to a new mission and drop some services in the realisation that the Internet provides some of its traditional core mission
3. Obsolescence – that the public library ceases to exist as a result of the Internet supplanting it (D'Elia, Jorgensen, Woelfel, & Rodger, 2002).

Much earlier in 1998 in the UK context, Harden & Harden agreed that public librarians should see their websites as an opportunity to enhance services, and should embrace, "the power of the Internet to provide a new medium for delivering library services in innovative ways to existing and new audiences" (p.8). The question remains whether the public library,

even the website provided by it, would factor into the minds of potential users as being somewhere to satisfy a query when utilizing the Internet. The findings of D'Elia et al suggest public libraries face a huge challenge here.

3. Public library services

Public library services are widely defined within the literature - a review of indicative sources on public libraries identifies a number of generic services: lending services (books, films, music, other media); reference services; provision of information and advice; heritage services; digitisation services; genealogy services; online database subscription services; online access to catalogues; ICT skills training and access to equipment; children and young people's services; and reader development and literacy programmes (Brophy, 2007; Chowdhury, Burton, McMenemy, & Poulter, 2008; Dempsey, 2000; Dewe, 2006; McMenemy, 2009). While this list may not be exhaustive, it is argued that it accounts for the main types of services delivered by public libraries.

The challenge for public libraries in the digital age is a fundamental one; do they indeed have a continuing role in an era of the WWW, e-books, and with the ubiquity of devices available to citizens to access such services? Indeed even beyond the public library, "the question is being asked (Brophy, 2000) as to whether information and library services, in any recognisable form, will be needed in the new millennium" (p.163). As has been observed (Wooden, 2006), "with the advent of computers and search engines, digital libraries, and the Internet, some question if libraries are essential and whether they should command priority" (p.3). That said, it is clear that public library websites have a potentially important role in bringing together information "on topics such as education, health, employment, government, economic development, community and social services" (Liu, Martin, Roehl, Yi and Ward, 2006, p.132).

3.1. The emergence of digital services in UK public libraries

In the context of the United Kingdom, the development of public library websites coincided with the focus of central government on delivering electronic government (e-government). As branches of local government, public libraries were subject to the same regulations as other government departments in terms of ensuring their services should be delivered via e-government where possible.

This drive towards e-government was a mainstay of the previous UK government's policy to modernise society; in its white paper *Modernising Government* (HMSO, 1999) it proposed to create an "information age government" ready to lead in developing the knowledge society. It targeted for 25% of government services that could be provided digitally to be done so by 2002, and 100% by 2008. In doing so it identified a vital role for

public libraries in enabling citizens to access to these e-government services. Thus the public library was expected to be an information gateway for citizens, but at the same time had an important responsibility in adhering itself to e-government policy in providing digital services of its own.

3.1.1. Existing taxonomical structures

As part of the movement towards efficient e-government services in the UK, much work has been undertaken in the area of taxonomical development; indeed such work has often seen the involvement of public librarians. Notably the seamlessUK project was an early example of a public library service aiding in the development of taxonomic structures for local authorities (Atherton, 2002). The later development of the Integrated Public Sector Vocabulary (IPSV), the second edition of which was launched in 2006, saw the different threads of work brought together into one over-arching taxonomical structure for government services.

The reality for public libraries is that as administrative units of the local authority, the IPSV clearly offers useful structures for many of the aspects of the information they provide. Its structure related to defining library and information services can be seen below:

Library and information services (5733)

- Archives (580)
- Business information services (5734)
- Call centres (7834)
- Enquiry services (7874)
- Libraries (581)
    - Children's libraries (5726)
    - Library loans and fines (5737)
    - Library stock sales (5740)
    - Mobile libraries (5725)
    - Public libraries (5724)
    - Branch libraries (5729)
    - Reference libraries (5731)
- Library services to housebound people (5741)
- News feeds (7858)
- Tourist information services (5713)

The challenge for public libraries in presenting their digital services is that as organisations they exist to provide the public with access to the range of the world's knowledge, and will inevitably provide services outside of categories defined as government services. If we consider the bookshelves of the public library, they are not limited to organising content related solely to government services.

3.1.2. The emerging roles and responsibilities of the public library

In delivering the modern iterations of the service discussed above, there exists a further challenge for the public libraries which must be addressed - the balance of the role of the public library; "designer and host; transaction service provider; and as facilitator through the provision of free ICT facilities" (Warren & Goulding, 2006). The historic role of the public library has been predominantly as access provider, or intermediary if you will; the library service purchased, organised and stored the collections for the users to access when they needed to. Content creation obviously did occur, mostly related to the construction of library instruction guides and the like, and in some services local history materials such as village or town histories and access guides to genealogical materials.

In the digital age the role of access provider grows in importance as reference materials have increasingly become accessed via the Internet. Purchasing of e-resources is a relatively new consideration for public library managers who previously, unlike colleagues in academic or corporate libraries, had not had to consider the provision of such resources to any great extent. Research into the consortium purchasing of such products suggests consortia in parts of England found the exercise to be expensive, cumbersome, and reactivate to approaches directly from the publishers (Ball, 2003). In Scotland an early model of adoption saw a Scotland-wide consortia deal to provide access to three services, *Kompass UK*, *KnowUK*, and *Newsbank* (Kerr, 2003). This provided digital access to a wealth of reference information such as information on UK companies, general access to a range of standard reference information on UK issues, and subscriptions to electronic back copies of newspapers.

With the provision of such services come challenges, adding new responsibilities for the public library manager, with potentially huge contracts to be negotiated, access to be designed and delivered, and training to be organized for both staff and users. The public libraries must consider the licensing of the resources carefully, with all of the inherent challenges this brings in terms of intellectual property rights and equitable access. As Williams, Chaterjee and Rossi (2008) highlight, the "concept of digital rights is just one area where the provider of a digital service might represent a large number of digital owners in their interactions with other parties" (p.506). Public library managers are faced with issues such as differing licensing contracts across multiple suppliers, as well as convincing

suppliers that remote access is secure via passwords issued by the library service. Indeed Ball's findings from a survey of English public library consortia (2003) saw the issue of licenses as a "minefield" for public library managers, and questioned whether the skills and experience in the sector was suitable for this new service responsibility.

Purchasing and provision of electronic resources, then, is an important consideration for public libraries from several points of view. As well as the responsibilities related to aggregating access to multiple databases for large numbers of users discussed above, ensuring the resources purchased are suitable for the users the library represents must be a crucial concern. Digital libraries designed primarily for educational or corporate clients may not be as suitable for a service that aims to provide services for all members of the public, many of whom who may have limited or non-existent experience of interacting with digital libraries, or even information technology at all. As Koehn and Hawamdeh (2010) observe, "some of these resources are specialized and serve only a small segment of public library patrons" (p.162). This raises significant challenges for the public library in terms of accessibility that need to be addressed via training and also extensive market research as to the nature of the digital divide within the communities it represents. It is important for the public library to know, for instance, how much investment they will need to make in providing computers for their users to use to access such databases. In summary, "it will continue to be important for libraries to remain informed, to learn what they can about contracts, licensing, and negotiations, and to figure out how to best serve their patrons with these resources (Koehn and Hawamdeh, 2010, p.173)

3.1.3. The digitization function

As well as providing access, digital technologies have also afforded public libraries opportunities to enhance their role as content creators. The unique local collections available in public libraries around the world are clearly of local interest, but may also be of national or even international importance. Provision of local content created by the library service can also work as an efficient marketing tool to encourage library users unsure of embracing technology; creation of digital resources about things local users know about is far more likely to encourage them to utilize the service.

In the UK as part of the People's Network programme, public libraries were encouraged to create digital collections of their own materials to make available via their websites; the idea was this material would be aggregated through a national gateway. The overall aim was, "to create innovative online resources of benefit to every UK citizen, bringing together over 500 partner organisations to create support for lifelong learning under the broad themes of citizenship, re-skilling, and cultural enrichment" (Nicholson & MacGregor, 2003). Funds in the region of £50m were set aside for this programme in the

late 1990s, and several public libraries benefitted from the funding to kick start digitization programmes.

The European Union were also keen to promote public library digitization programmes and encourage collaboration and partnership working through its PULMAN (Public Libraries Mobilising Advanced Networks) programme (European Commission, 2003).

4. Investigation of Scottish public library websites

Public libraries in Scotland are administered by 32 local councils, all of whom have provision of the service among a myriad of responsibilities such as schools, social work, environmental health, and sanitation services to administer. The councils have a statutory obligation to provide a public library service that is “adequate” for people resident in the geographical area served by the council.

Library websites generally operate under the larger corporate banner of the council website, with relatively few having their own domain names or separate websites. As referenced earlier, in a study related to Scottish public library websites only 9% were found to have their own domains, all others were under the umbrella of the wider council (McMenemy, 2007).

4.1. The pilot study

In January and February of 2010 a pilot study involving only 8 local authority library webpages was undertaken. The primary purpose of this stage was to explore the issue of consistency of terminology, which the researcher felt could be achieved through identification and comparative analysis of options available from the homepages of a representative sample of 8 of the 32 Scottish public libraries: Aberdeen; Aberdeenshire; Dumfries and Galloway; Edinburgh; Glasgow; Highlands; Shetland; and Western Isles. The sample covered a wide-ranging demographic, and a major proportion of the Scottish population.

All options from respective homepages were factually recorded, referenced, and listed as a master list using an Excel spreadsheet. Redundant repeat entries were then removed. To reduce subjective interpretation during this step removal beyond entries that shared exact wording was limited to those differing through minor nuance of language (slightly different wording, but semantically the same). Findings would provide an indication as to total number and range of options provided across the Scottish public library sector, and consistency (or not) of terminology adopted.

The analysis of qualitative data is acknowledged as a complex and difficult task (Denscombe, 2003), which must be approached in a systematic and structured manner; however, qualitative data tends to lack the structured numerical characteristics of

quantitative data and as a result, often requires conceptualisation and interpretation, with interpretation perhaps the key challenge of this research, as given the previously noted issues, it was anticipated that service terminology would be wide ranging across public library websites.

A major output of the pilot stage was the categorisation, with the options available from the respective websites homepages classified into service categories. Classification can either be derived from the data if approached inductively, or based upon a predefined theoretical framework if approached deductively. This stage adopted a predominately inductive approach (appropriate where there is limited existing research to draw on (Ghauri & Grønhaug, 2005) with categories emerging from grouped information services identified from individual websites (with categories either subdivided or merged with others as appropriate). This step formed an iterative cycle of indexing and cross-referencing, shaped and driven by emergent themes and relationships, with the resultant service taxonomy presented in a hierarchical subject tree format. A controlled vocabulary would have assisted with categorisation, but none were directly applicable.

4.2. Application of the categories to full study of 32 sites

Between March and July 2010 all 32 of Scotland's public library authority websites were visited by a researcher. The goal of the researcher was to record the options available from the library homepages in the following way:

- Role of library in providing page content: content provider or access provider?
- Was the page providing a digital service?
- What was the audience for the page? Adult, child, or not specified?
- Description of page content
- Any noted usability issues

In a paper aimed at defining a taxonomy for digital services Williams, Chaterjee and Rossi (2008) defined digital services as those "which are obtained and/or arranged through a digital transaction…over Internet Protocol" (p.506). The author found this definition to be useful, and for this study considered 3 distinct types of service that could be provided by a public library website:

1. Information on information (e.g. description of or confirmation of the existence of materials held by the physical library)
2. Direct access to digital content on PL website (public library as content provider)
3. Indirect access to external digital content via public library website (public library as access provider).

For the purposes of this study the author considered options 2 and 3 as examples of digital services.

In addition to the categories above, each option was allocated to a category based on the taxonomy developed in the pilot phase. These categories were:

1. Early Learning
2. Scholarship
3. Genealogy and heritage
4. Enterprise and employment
5. Recreational reading
6. Health and wellbeing
7. Community support
8. Reference enquiry
9. Housekeeping (joining information, library rules, mobile library timetables, etc)
10. Does not fit into listed categories

Each site was only visited to three levels below that of the initial homepage; this was to make the volume of work manageable, but also reflected the view of the researcher that access to services within the sites should necessitate a long process of clicking on links, and that they should be findable quickly.

General observations regarding usability were noted throughout both stages. It was not considered practical to attempt to conduct an extensive evaluation of the usability of individual websites, nor necessarily required given the focus of the research to consider the emergence of digital services. However, it was considered of value to consider general aspects of usability, which might inform subsequent design of any taxonomy whether standard or not.

Usability evaluation can be both formative and summative, and is commonly conducted by inspection and/or test, the former without involvement of the user, the latter typically with. Inspection methods include heuristic evaluation, cognitive walkthrough, and action analysis, while test methods include questionnaire, thinking aloud, and field observation (Holzinger, 2005). Given the goals of the research, inspection via heuristic evaluation was considered appropriate, with key usability attributes drawn from a framework (Buchanan & Salako, 2009) which specifies: learnability; effectiveness; efficiency; aesthetic appearance; terminology; and navigation. It was acknowledged that without actual task execution (and involvement of users), limited consideration could be given to learnability, effectiveness, and efficiency; however, it was felt that terminology, navigation, and aesthetic appearance could be considered within the practical limitations and constraints of the study.

The data presented below has anonymised the library services studied, since it is not the intention to embarrass or single out specific services with comments, but rather give a national picture of the situation.

4.3. Limitations of study

The research undertaken for this article was obviously limited in several areas. Firstly, it represents a study of one geographical region, and while the author believe Scotland should be representative of other UK public library services, this cannot be definitely proven without an extended study.

Secondly, the study represented a point in time in terms of public library development, therefore since the spring and summer of 2010 some Scottish library websites have changed in terms of the services on offer. The author then does not claim the findings are wholly representative of the websites now, only at the period when the study was undertaken.

4.4. Data from website study

Across all of the 32 websites examined, 3258 options in total were identified for the study. There was a wide variance in terms of the number of initial options available on each homepage, ranging from 8 to 132.

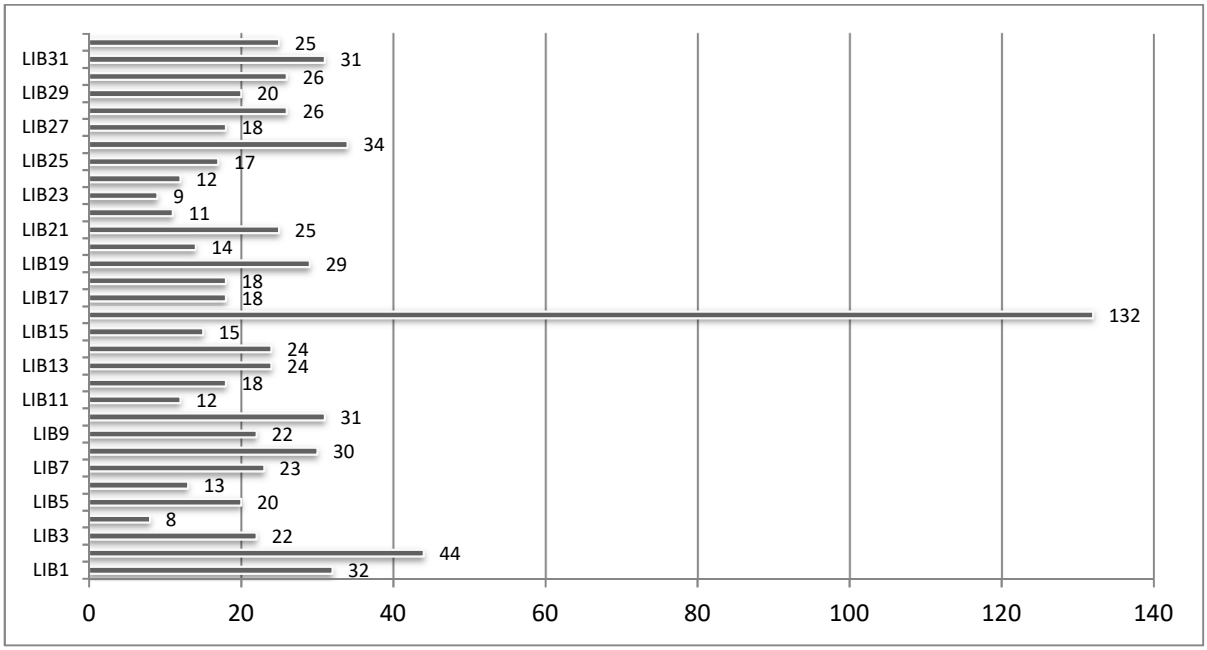

Figure 1- Number of options available on homepage

In terms of best practice, it is suggested that more than 10 options on a webpage can overwhelm users (Morville & Rosenfeld, 2007) and only 2 of the 32 websites fitted this

criteria. The average number of options across all 32 sites was 25. In one extreme case, 132 options were available from the homepage.

4.4.1. Content provider or access provider?

This categorisation related to whether the featured options were links to external sites or services, or to content created by the library itself. In the largest number of cases the webpages concerned were delivering content created by the library service itself (64%); in just under a third of cases (31%) the library was providing access to an external resource.

Clearly the majority of the website options are library-created content; however the 31% indicates the increasing importance of external sources in satisfying the information needs of library users. Types of external resource featured included web links to sites of interest, as well as subscribed reference databases, more of which will be said below.

4.4.2. Issues in consistency of terminology

The initial list of 3258 options was further distilled to exclude duplicate options within each local authority page, which resulted in a total of 2887 unique options. A pivot table was created with this data set which presented a count of identical options used by more than one local authority. The top ten results with the number of authorities using each term can be found below:

Table 1 - count of unique options utilised by more than one local authority (n=32)

Library Catalogue	14
NewsUK	13
Family History	11
Contact Us	9
Libraries	9
Reading Groups	9
KnowUK	8
SCRAN	8
Ask Scotland	7
Bookstart	7
Credo Reference	7
Local History	7
Oxford Reference Online	7
Scottish Readers	7

Archives	6
Catalogue	6
FAQs	6
Library Services	6
Local Studies	6
Mobile Library Service	6

Clearly while there is agreement across a large number of authorities with regards to option categories, there is no majority for any of the terms used on the sites. Notwithstanding that terms such as *Library Catalogue* and *Catalogue* are similar in nature; it would not be unreasonable to expect uniformity in specification of services available from homepages. Similar terms such as *Local History* and *Local Studies* may be obvious in meaning to the professionals constructing them, but may not be so to users. This becomes all the more important in terms of categories that may not be immediately obvious as to what they are, such as some of the commercial brand names featured prominently like *NewsUK* or *SCRAN*.

4.4.3. Emerging digital services

When the issue of whether the library is a content creator or access provider is cross-referenced with whether the service is digital, the following chart results:

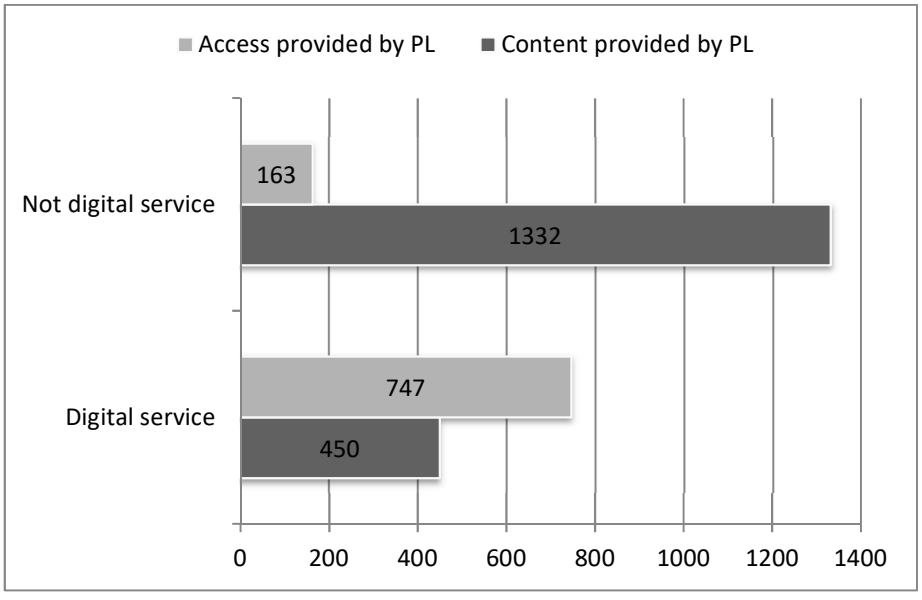

Figure 2 - Content type vs digital service

Libraries were almost 3 times as likely to provide content that is not a digital service, with the digital services provided more likely to be aggregated access to an external source. That

said, library services were often consistent in the types of digital service they made available, with all providing access to facilities for library users to access their digital borrower records, renew their books online, and the like. Other types of digital services created by the library services included image databases, and community information portals, the emphasis generally being on the local content of specific interest to users from their geographic locale.

Figure 3 presents the data for each individual library service in terms of content and access provision, and while most were similar in terms of the ratio of content vs access, several authorities stood out in terms of being at the extremes of either access or content provision. This varied as to reasons, with some authorities providing much more of their own content via extensive digitisation collections, community information databases, local history provision, or other local content, such as information on local authors.

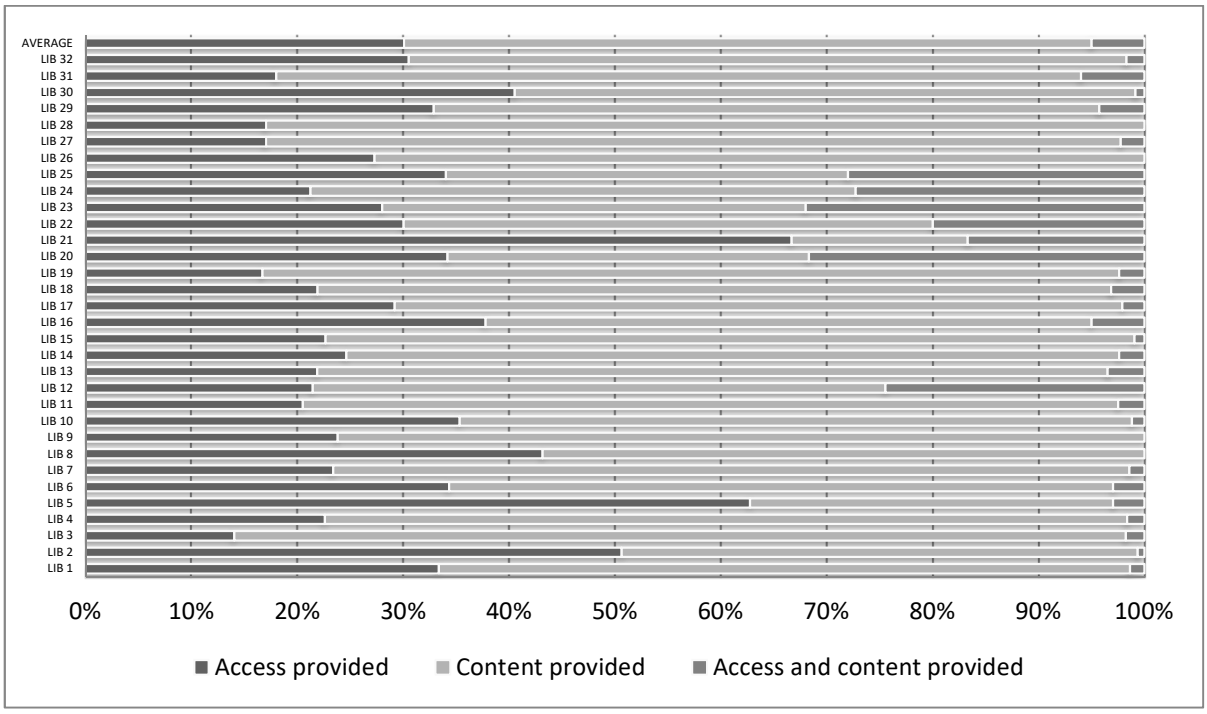

Figure 3 - Authority as access or content provider

Figure 4 presents a breakdown of authorities in terms of their role as digital service provider, and again we see the majority mirroring the average level of provision. However again some authorities bucked this trend by provision of a wider range of digital services such as thise discussed under Figure 3. Clearly when a library service has invested more in its digital offer it can incorporate both local service provision and an emphasis on external databse subscriptions. For those authorities successully offering more digital services this emphasis

was clear; a local digitisation strategy coupled with provision of high quality external reference sources, and enhanced services via the library management system.

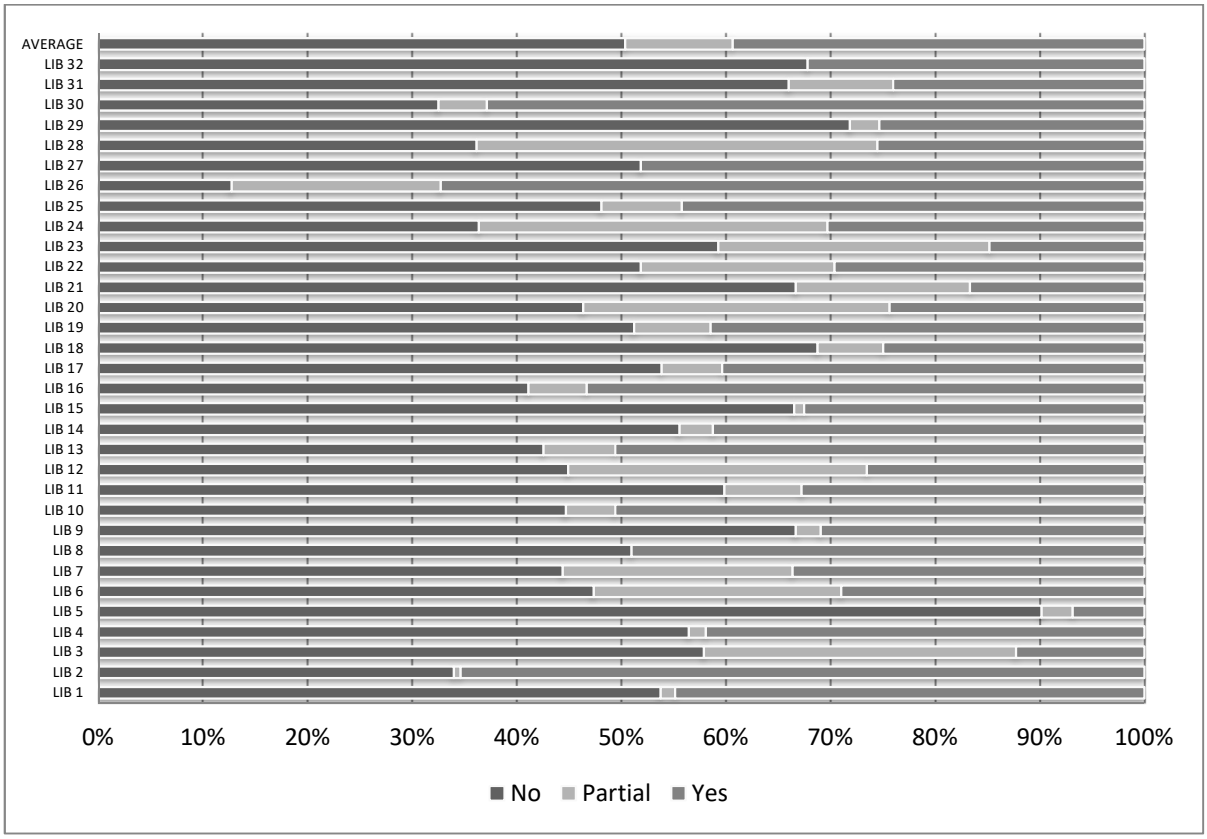

Figure 4 - Authority as digital service provider

The data discussed above included both categories of option, digital services and non-digital services. To determine the characteristics of emergent digital services, further analysis was undertaken whereby only the options categorised as digital services were selected from the main data set. Close analysis was carried out to determine the characteristics of digital services on offer rather than just a list of option titles; to this end, all options of differing title but obvious identical or similar subject/theme (such as catalogue/online catalogue/library catalogue) were all listed under an umbrella term, and a final count of all of these categories was undertaken. This refinement produced 642 options that were classed as digital services.

For space reasons, the 20 most popular digital services are listed below, with the count of how often the option was used across the 32 websites, and the category it comes under:

Table 2 - count of top 20 digital services and how often each was referenced across all 32 sites

OPTION	NO.	CATEGORY
Library Catalogue	52	Housekeeping (joining, rules, etc)
Contact the library service	23	Housekeeping (joining, rules, etc)
Renew and reserve items	23	Housekeeping (joining, rules, etc)
NewsUK	22	Reference enquiry
Britannica Online	20	Reference enquiry
Mobile Library routes and timetables	19	Housekeeping (joining, rules, etc)
Ask Scotland	17	Reference enquiry
Britannica Junior - homework help for primary age children	15	Reference enquiry
SCRAN	14	Reference enquiry
Library ELF	14	Housekeeping (joining, rules, etc)
KnowUK	13	Reference enquiry
Oxford Dictionary of National Biography	13	Reference enquiry
Oxford English Dictionary	13	Reference enquiry
Library guides	13	Housekeeping (joining, rules, etc)
Britannica Student	12	Reference enquiry
Credo Reference	12	Reference enquiry
Oxford Reference Online	12	Reference enquiry
Twitter	11	Does not fit categories above
Clubs and groups	9	Community support
Theory Test Pro	9	Reference enquiry

12 the top 20 digital services provided were commercial subscription databases for library members to access either in the library or from home using their library membership credentials. Other notable services related to library management systems functions (LMS) such as reserving or renewing books, or accessing borrower records. Another example of the innovative services provided around the LMS is the Library ELF service, which was

utilised by just under a third of the library services under study. This service provides an enhanced service for library members. As well as sending email reminders to members regarding when books are due to be returned, it also offers the ability to be emailed or text messaged when requests have been made. Such a digital service makes using the service more accessible, with less need to visit the physical library or contact it directly to interact with it.

500 of the 642 digital service options were unique, representing such diverse services as interactive sites promoting book titles, or local image databases, or sites constructed by community organisations. When this grouping is analysed by subject category, the following results are produced:

Table 3 - count of 500 unique digital services by subject

Category	**No.**
Does not fit categories	71
Early learning	17
Scholarship	18
Genealogy and heritage	57
Enterprise and employment	11
Recreational reading	102
Health and wellbeing	22
Community support	38
Reference enquiry	28
Housekeeping(joining, rules, etc)	136

In the recreational reading category some real innovation was evident on the part of some library services, with audio recordings of local authors reading their works included. These were created by the library service to promote local literature, and neatly illustrate how much potential digital services have to promote traditional library services and local culture. Such innovation was also evident in several excellent locally produced digital image collections created by library services under the genealogy and heritage category.

4.4.4. A suggested initial taxonomical structure

The subject categories developed in the pilot study, and utilised for the full study, proved effective in categorising many of the services available on the website. However they proved limited in scope, and given the significant number of services that could not be categorised by these options, a more refined taxonomical structure is offered for future

categorisation of public library websites. This structure is not claimed to be definitive, merely indicative of the types of services the researcher encountered in the study:

Business resources	Company information Trade directories
Careers and Employment	Careers information CV and interview help Job adverts
Children's and Young Peoples services	Author visits Events Five to Twelve Homework support Pre-school Teenagers
Community resources	Information for new arrivals Local groups and organisations Schools and nurseries Travel information
Family and local history	Family history resources Local history resources
Government information	Contact your councillor Contact your Member of Parliament Freedom of information Your local council
Health and wellbeing	Bibliotherapy Health charities Local health services NHS services
Join the library	Download a membership form Join the library online
Learning resources	Adult learning support Course information Courses in the library Homework support Literacy and numeracy Online learning opportunities Resources for students
Library Members	Access your borrower record Activate your account online Renew your books Reserve a book Sign up for email or text notifications
Literature and reading resources	Author information

	Book recommendations and reviews Creative writing Literary competitions Local writing Reading groups
Reference resources	Access electronic reference services 24 hours a day Ask a librarian Dictionaries Encyclopaedias
Your library service	Computing resources Contact the library Library charges Library events Local libraries Mobile and housebound library service Performance information

5. Discussion

The data presented from the study of Scotland's public libraries gives much food for thought in terms of the development of digital services in the Scottish public library domain. Several questions are raised, namely:

1. Duplication of provision of digital services
2. Consistency of terminology
3. Assistance and guidance in using external digital services

Each of these issues will be dealt with in turn below.

5.1. Duplication of provision of public digital services

The first observation is perhaps potentially controversial; however analysis of the data leads to the question of efficiency in terms of duplication of delivering public information services. This begs the questions as to whether it is desirable for the same type of content relating to the same services to be undertaken 32 times, with the obvious issues that are presented related to the variability of quality inherent in such a scenario.

Certainly the local dimension is of vital importance, and pages need to exist that communicate local information on library services, as well as concentration on local content related to family and community history and the like. However the more generic content and the access provided to external digital services subscribed to by multiple library services could easily be undertaken by a single national body, allowing the local library services to concentrate on prioritizing development of local digital services. The data from this study indicates that public libraries in Scotland are greatly reliant on commercial subscription databases for their digital offer to library members – as such it would seem that collaboration

between library services to ensure that members are able to effectively utilise those services would benefit all stakeholders.

5.2. Consistency of terminology

A key concern raised both in the pilot study, and in the extended full study presented in this paper, was the use of ambiguous or confusing terminology, and application of consistent terminology to services. It was not clear on each site, for instance, whether a formal taxonomy had been used to generate the terms used, and indeed given the diversity in defining even simple terms, it would seem that many sites did not in fact use any.

A startling example of this confusion could be found in how the websites categorised materials for electronic reference materials. Each library website had a unique term for this core service, specifically:

Table 4 – terms used on sites to define reference function

24 Hour Enquiry Services	Online Databases
24/7 reference	Online Information Resources
Access 24/7 Reference Information from Home	Online Information Service
Access information 24/7	Online reference databases
eReference Library	Online reference library
Ez-information 24/7	Online Reference Services
Free Information Resources	Online Resources
Free Reference Resources	Quick Reference
Information and Reference Service	Reference and Information
Information Enquiry Service.	Reference Central
Information Online	Reference Enquiries
Information Services	Reference Library
Internet & Online Subscriptions	Reference Links
Libraries - online information resources	Reference Services
Libraries - Reference and Information	The 24/7 Library
My Library Anytime	YOUR 24 HOUR LIBRARY

Clearly when such a core service is being so diversely defined and promoted to users, there is a case for arguing for one consistent approach to presenting digital services to users to be implemented. Again, the author would suggests that collaboration between the 32 public library networks takes place to agree on the usage of a set of descriptors that all can present

to users in a uniform fashion. Here pre-existing taxonomic structures such as the IPSV offer a quick solution to an avoidable problem.

5.3. Assistance and guidance in using external subscribed digital services

While the services were consistent in providing access to some extremely useful and high quality external subscription digital services on behalf of their users, they were generally remiss in providing guidance to their users on the nature of these services and how to utilise them. It is notable, for instance, that library guides to collections or some other aspects of the wider service were found in 13 cases during this study. Clearly this is something public libraries have been involved in doing since their inception; however it is plainly easy to leave guidance on using an external product to the company that produces it.

While it could be argued that the library user can access help guides created by the digital services themselves when they log in to them, the nature of the public library user demographic must be taken into consideration here. Provision of such services is for everyone within the community, however to enable equity of access to occur there must be the clearest possible explanation of what the services provide, and how they can be used by the patron. It is not enough just to provide a link to a log-in page; the library must try as much as possible to provide helpful guides in using the resources, just as they would if the library patron was utilizing the service from within the library building. As has been observed, "because information only becomes useful within some sort of context, the interface needs to provide that context or there needs to people readily available to help provide the context" (Lease Morgan, 2000). Not addressing this important issue potentially limits the growth of digital service provision in public libraries. In the context of service management the issue of educating the customer has been highlighted as being crucial in expanding innovation in service delivery (Gummesson, 1994):

> We are afraid of educating the customer…In my view it is not only an option but a privilege to educate the customer. It opens up the means for improved services and innovations (p.83).

By not providing appropriate guides to such services, the libraries potentially limit the use of those services by users who may be unfamiliar with the service type. This is regrettable from both equity and fiscal perspectives, but also considering the important historical role of the public library in educating users to make best use of information. The role of the public library as an intermediary is evolving in the digital era; however its responsibility to contextualise such access is as important as ever.

6. Conclusion

This paper explored the nature of public library services and their iteration in the digital domain. The focus of the paper was to attempt to discuss emerging digital services provided by Scottish public libraries via their websites.

The study found a good standard of innovation in digital services around LMS functions, offering users the ability to keep in control of their borrowing and reserving. In addition there was a consistent set of electronic reference resources subscribed to by multiple libraries, offering high quality information both within the library and for library members from their home or workplace.

Problems were found with regards to guidance on the usage of these resources, as well as confusion and inconsistency in terminology usage across different library services.

The author would encourage further research into the provision of public library websites by colleagues researching in the field of digital libraries; as has been argued they are now a crucial digital library provider available to all (Liu, Martin, Roehl, Yi, & Ward, 2006). As such, and given their potential to reach every member of a community, their continued examination in a bid to further understand their reach, relevance, and significance is of vital importance in the development of information services for the general public.

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Paper 12

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Towards a public library standard for acceptable use of computing facilities

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Abstract:

Acceptable use policies (AUPs) in public library services are important documents. They act both as guides to acceptable use of facilities for library users, and protection for the library service against any abuse or misuse of these facilities. Through their role as quasi-legal documents, they also have the potential to both promote access to the library service, and hinder it. How can we be sure all users understand the implications of an AUP? How can language within them be made easily understood while still offering protection?

Such documents are relatively new governance concerns in public libraries, the need for them brought about with the advance of computing and internet facilities in public libraries throughout the 1990s and 2000s. As such there is little in the way of literature or research on their implementation, and only a handful of authors discussing best practice in their design.

This paper adds to the general dearth of material on this important topic. Utilising a discourse analysis methodology, the paper compares differences in AUPs in terms of length, content, and tone. Presenting a range of examples from the United Kingdom, this paper highlights the key issues that the profession should be concerned about regarding design of AUPs, and focusses on how language and tone can be a potential barrier to engagement for users. Can a workable document be developed that is sharable across geographic regions?

The paper finishes with suggestions as to how we can collectively progress workable AUPs that help the library users understand their responsibilities when using computing facilities, while allowing the library service to feel secure in provision of the service.

Keywords: public libraries, acceptable use, computing facilities, internet, standards

Introduction

The Acceptable Use Policy (AUP) is one of the most important interface documents between the user and the library in the modern era. While managing the parameters of access to the services provided, it also acts as a guide to users as to what is expected of them when using the facilities.

This paper reports results from a pilot study analysing 20 AUPs for UK library services aimed at discovering several aspects of their design and implementation. Firstly it will gauge differences in length of the documents, and secondly it will analyze the language utilized in them for consistency of structure, and also tone. Does the tone of the AUPs offer negative or positive connotations to users from the point of view of their use the service? Alternatively, does the AUP act as a barrier to accessing a service due to its tone?

This pilot study will inform the methodology of a project funded by the Scottish Library and Information Council to develop a Scottish-wide AUP that could be used by all public libraries in the region. The PAUL Project (Policy development for Acceptable Use in Libraries) runs from July 2014 to March 2015.

Research and policy context

AUPs can and often do differ in length, style and tone. While guidance exists on how best to design an AUP, ultimately the design and implentation of an AUP document is something that is done locally. Therefore the organisation implementing it must be sure that it represents a proper agreement between it and the library user, one that has a proper legal basis and that can be relied on to ensure protection for the organisation if the rules are breached. Equally, as librarians, we have an ethical duty to ensure our users are properly informed regarding the services they are provided with.

When signing a legal document, users should be made aware of the nature of it and what is expected of them as users, and what they can expect from our organisations. In a study conducted in 2007 by the author, 12 different public library services across the UK were visited by a researcher seeking to access the Interent as a non-member. In only 1 of the services visited was the AUP explained to the researcher, and perhaps more worryingly, in 2 of the services the library staff bypassed the AUP for the researcher by clicking the log-on banner (which acted as the agreement to adhere to the AUP) on their behalf (McMenemy, 2008, p.487). It is doubtful in either of the 2 cases whether the researcher could have been held liable for any misuse of the service.

Advice on AUP development

This section of the paper will highlight some of the advice that has been offered in the literature regarding good practice in AUP design. As far back as 1994 Scott and Voss designed their 7 Ps model for the design of computing use policies. Clearly this was an era before mass access to the Internet, however some of the issues from 1994 remain relevant. The 7 Ps were:

1. Participation: who is involved in the design of the policy
2. Partitioning: the design of the document vis a vis distinct sections.
3. Philosophy: what the facility can be used for (in Internet terms, what can be accessed)

4. Privacy: what level of privacy can be expected?
5. Persnickety: what are the do's and don'ts when using the service
6. Phog Phactor: ensuring readability of the document
7. Publication: how is it going to be communicated to users?

We can still see the relevance of all of these themes today, since they focus on designing a broad-based policy that clearly sets out parameters of use, while remaining accessible to the user who signs it.

Laughton has undertaken a hierarchical analysis of AUPs and suggests that:

> It is impossible for an effective AUP to deal with every clause and remain readable. For this reason, some sections of an AUP carry more weight than others, denoting importance (Laughton, 2008).

He suggests that an AUP has 3 main purposes:

> 1. Educating users about activities that may be harmful to the organization
> 2. Providing legal notice of unacceptable behaviour and the penalties for such behaviour
> 3. Protecting an organization from liabilities it may incur from misuse of the Internet and other computer facilities (Laughton, 2008).

Highlighting the key point that an AUP must respect user rights as well as protecting the organisation, he goes on to suggest that "A well-rounded policy is carefully planned and includes input from and consideration by all parties involved including staff, members, legal representatives and external experts" (Laughton, 2008). He highlights that AUPs that are "confusing and written as if they were specifically targeted at lawyers and legal professionals" are less effective than those that are designed with the user in mind.

Kelehear has also offered advice as to contents of an effective AUP, which it is suggested should include:

1. Statement on the intended use and an outline on the advantages of the Internet
2. List of responsibilities for users
3. Code of conduct administering the use of the Internet
4. Description of what constitutes acceptable and unacceptable use of the Internet
5. Disclaimer absolving the organization from possible responsibility of any misuse of the Internet (Kelehear, 2005, p.33).

Sturges presented a schema for an effective AUP in his 2002 study of public internet access in libraries. Containing 7 key elements, he suggests a range of areas that should be covered for effectiveness:

1. Aims and objectives – not perhaps as straightforward as it may initially seems. What is the purpose of the service? Is it purely educational, or is recreational use allowed?
2. Eligibility – Who the service is provided for? How do young people access, and with whose permission?
3. Scope – The limits of the service.

4. Illegal use – An understanding of the types of use that against the law in the geographic region.
5. Unacceptable use – A description of what is deemed unacceptable by the particular institution.
6. Service commitments – The services that will be provided by the particular institution.
7. User commitments - Any agreements that must be adhered to by the user. (Sturges, 2002, p.122-123)

Sturges highlights that it has become more common for organisations to refer to their AUP documents in more generic terms such as 'Internet Use Policy' or 'Codes of Conduct'; acknowledging that while AUP is a familiar term, it is also a potentially loaded one.

Methodology

For the purposes of this paper and to highlight the issues involved, we have selected Sturges' (2002) schema to code our sample of 20 UK public library AUPs. This has been selected because it is a synthesis of a range of guidance documents, and thus provides a comprehensive structure. Since it was also authored in the United Kingdom (UK) by an academic researching and teaching in that environment it was therefore deemed a good fit for the purpose of this research which focuses on a pilot study of UK services.

20 AUP documents were selected randomly from those publically available on the websites of UK public library services. A simple Google search was conducted for acceptable use policies in UK public libraries. To ensure geographic coverage related to the ration of country size, 3 were selected from Scotland, 2 from Wales with the remaining coming from English regions. All libraries have been anonymized for this study, since it is not the intention of the author to highlight individual libraries for criticism, but instead raise broader issues that are of concern to the sector as a whole.

All 20 AUPs were imported into NVivo software for qualitative analysis, and coded using the schema above. Another important element of the exercise was to ascertain how the AUPs communicate their message to users. To this end, discourse analysis was applied to each document, analysing how the themes were presented from the point of view of behaviour deemed to be acceptable and unacceptable. As one of the key researchers in discourse analysis has observed, "language is an irreducible part of social life, dialectically interconnect with other aspects of social life, so that social analysis and research always has to take account of language (Fairclough, 2003, p.2). In addition, as has also been observed, discourse analysis is an under-used method in library and information science, thus the usage of it in this study is relatively novel (Budd, 2006).

Results

Of the 20 AUPs analysed the number of pages of each document varied in the range from one page long to nine pages long (Figure 1).

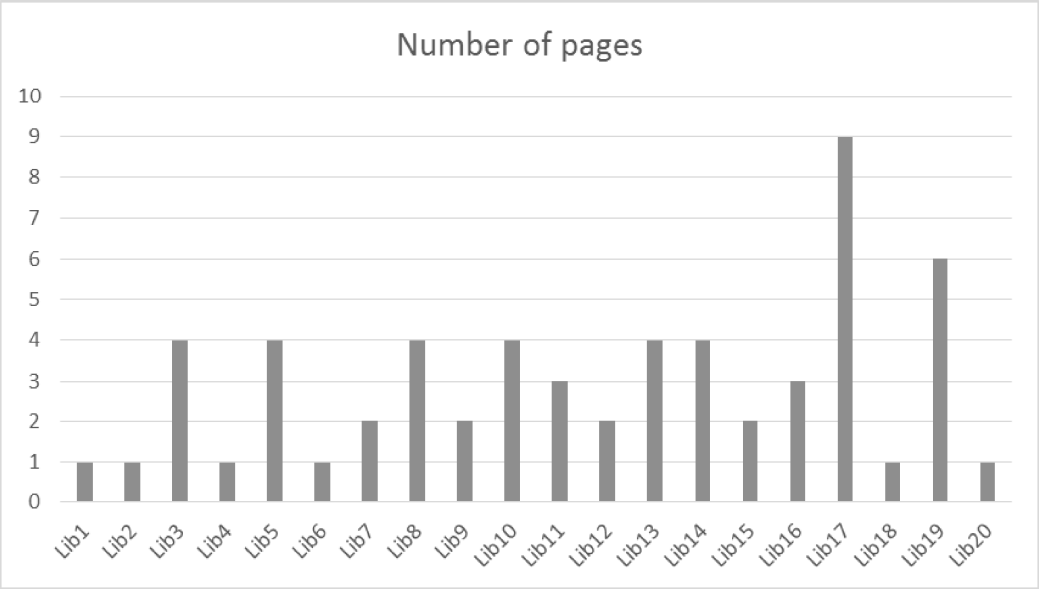

Figure 1

The length of a document will understandably be an issue for some users who have to read and understand the document before they sign it. Making the document as short as possible while ensuring it covers the key areas should be an important goal.

Aims and objectives

In terms of aims and objectives of providing the service, there was a general consistency as to why the service was offered across authorities:

- Lib 8: "to support the educational, information and cultural needs of the community."
- Lib 10: "the educational, recreational, information, cultural and communication needs of the community."
- Lib 12: "to support educational and community information resources. Priority may be given to customers wishing to access such material."
- Lib 13: "provide free access to the Internet as part of its role to enable access to information, recreation, culture and lifelong learning opportunities for its customers."
- Lib 15: "provides free public access to the Internet and other computer resources as part of its role in providing access to information, education and leisure opportunities for the whole community and as part of its commitment to supporting lifelong learning."

This consistency of mission is important, since it confirms that the services country-wide are all basing their provision under similar themes. This would then lead us to question later, if evidence presents itself, any restrictions on access that clash with these aims.

Eligibility

Eligibility for use of the service was generally consistent across the libraries, however it was clear that some restricted access to registered users, while others allowed non-members to also utilise the service. While this kind of decision is clearly a local one, it does seem unusual that some authorities support citizens from outside of the geographic area in accessing the service, while others do not. An inconsistency was also found between those who charged for access to the ICT facilities and those who did not. Clearly, charging for access to the Internet is a potential barrier to use for those on fixed or low incomes.

Scope

The scope of the service as defined in AUPs primarily emphasised the Internet access available. However some of the authorities highlighted other important services that were provided via the ICTs, as follows:

- Lib 1: "provide public access to the Internet, MS Office and a range of ICT facilities."
- Lib 5: "provides public computers in libraries for use by customers and permits the use of personal portable digital devices in some libraries. Wi-Fi is also available in some libraries."
- Lib 9: "We provide access to the World Wide Web, a range of audio, video and other plug- ins, and standard Microsoft Office software. You can use web-based email and we will show you how to set up and manage an email account."

An important point was raised in the analysis by focussing on scope. Libraries rarely looked beyond Internet access in their definition of the scope of the service, which missed out a lot of excellent and potentially useful services the ICTs provided for users. This emphasis is arguably understandable, since the key risk to the library service comes from the Internet; however from a user perspective defining a broader scope as to why the facilities are provided could offer users a deeper understanding of the potential of the service in their lives.

Illegal use

When it came to illegal use, the AUPs often cited specific legislation that was of concern to the library services:

- Lib 1: Users should "Not attempt to bypass security systems to gain unauthorised access to any computer. Any attempt to do so is an offence under the Computer Misuse Act 1990 (c. 18) and the individual may be liable to prosecution"
- Lib 7: "you are bound to the relevant UK law, including the Data Protection Act 1998; Parts of the Criminal Justice and Public Order Act 1994; Computer Misuse Act 1990; Copyright, etc. and Trade Marks (Offences and Enforcement) Act 2002, and agree to abide by it. It is your responsibility to familiarise yourself with all Statutory requirements."
- Lib 10: "you are reminded that it is your responsibility to comply with this legislation including: Copyright, Designs and Patents Act 1988 • European Copyright Directive 2001 • Computer Misuse Act 1990 • Data Protection Act 1998"

- Lib 11: “This Acceptable Use Policy is informed by City Council Policy and the following legislation: The Obscene Publications Act 1959 and 1964 • The Copyright, Design and Patents Act 1988 • The Data Protection Acts • Computer Misuse Act 1990”
- Lib 17: “This includes not using the IT facilities in any way which may result in a breach of the Copyright, Designs and Patents Act 1988 and the European Copyright Directive 2001 and Copyright and Related Rights Regulations 2003; Data Protection Act 1998; The Civic Government (Scotland) Act 1982; Sexual Offences Act 2003 (as applicable); Public Order Act 1986; Computer Misuse Act 1990; Human Rights Act 1998 (all as amended); and any other local, regional, national and international law, order or regulation.”

While making users aware of their responsibilities and the law they may be liable to breach is clearly important, it would seem that merely rhyming off specific Acts of Parliament serves a limited role. For the layperson such legislation is likely to be dense, and it would be appropriate for the library service to synthesise such material in a more accessible way. Not doing so risks the user signing a document that they have not understood.

Unacceptable use

The focus on unacceptable use in the documents tended to focus on specific types of material that users should guard against accessing. For instance material that is:

- Lib 1: “obscene, homophobic, racist or unlawful - is pornographic or could cause offence to others - is in breach of copyright”
- Lib 15: “Creating, sending or storing any abusive, offensive, obscene or indecent images, data or other material, or any data capable of being resolved into obscene or indecent images or material Harassment in any form (including sexual and racial harassment) Infringement of copyright under the provisions of the Copyright Act 1988”
- Lib 17: “users must not use indecent, obscene, offensive, or threatening language in any form of electronic communication including e-mail messages, electronic forms, and blog postings”
- Lib 18: “The facilities may not be used for any of the following: 1. to access obscene or indecent material, or material that is likely to cause significant offence to others; 2. The creation or transmission of any offensive, obscene or indecent images, data or other material, or any data capable of being resolved into obscene or indecent images or material; 3. The creation or transmission of material which is designed to or likely to cause annoyance, inconvenience or unnecessary anxiety”

Again there was a consistency here in terms of use deemed as unacceptable, focussing on terms such as offensive or obscene. The term offensive, however, is arguably subjective, and an AUP would be more efficient if it attempted to define what is deemed to be offensive for that community. Interestingly, Lib 8 attempts to counter this somewhat by informing users in their AUP that it “is not opposed to satire or controversial thought as such, but only sites whose content would, if circulated, interfere with the freedom of others to a greater extent than acceptable in a democratic society, are defamatory, pornographic etc.” The reference to satire being acceptable is a minor, but important, attempt at highlighting freedom of thought.

Service commitments

Service commitments tended to be limited in the policies examined; since the focus was primarily on the acceptable use of Internet access, the wider scope of why the ICTs were provided were largely ignored. It would seem that an AUP should clearly describe exactly what the ICTs provided can be utilized for, and not doing so risks the danger of under-use.

User commitments

The emphasis here was on attempting to ask the user to take responsibility over their use of the service. Lib 4 revealed that it "provides a level of filtering for adult users, but you must also take responsibility for your own activities." Lib 10 also emphasised the responsibility of the user as a member of the community:

> We would like you to be aware of the needs of others who are also using the computers, respect their privacy, to behave in a manner that doesn't disrupt their use and enjoyment and to be responsible in your use of the equipment and facilities in our libraries. We try to prevent customers accidentally accessing sites containing or promoting illegal or offensive content. Please do not deliberately search for, or distribute, illegal or offensive content.

There were also other examples of calls for the user respecting the community in their use of the service:

- Lib 8: "Reporting illegal sites - If you see something you suspect is illegal online report it at www.iwf.org.uk"
- Lib 16: "Library users must respect the privacy of other users, and refrain from attempting to view or read material being used by others"

We can see the library services attempting to respect the user as individuals and request they take responsibility as individuals in using a community service. This is potentially a positive way of passing on responsibility to users that does not patronise them.

Parameters of acceptable and unacceptable behaviour

It is also useful for us to examine the tone of how acceptable and unacceptable behaviour is communicated to the users in the AUPs. We have already highlighted the point that terms such as offensive and obscene were common in terms of what is deemed unacceptable, however there was very little in the AUPs that specified what *acceptable* use was.

Lib 6 determined acceptable use "as (but not limited to): Research • Email • Online retail • School work, and • Homework." This is a limited range of activities in the everyday information seeking of citizens. Lib 8 offered that "We encourage you to access legitimate information on the Internet" and continued it "does not prohibit specific online activities as long as they are not considered to be illegal, offensive, obscene, abusive or troublesome to other computer users."

Unacceptable behaviour was far more prevalent in terms of definition within the AUPs, and the tone this was presented in various ways. While admittedly a difficult concept to communicate, there were occasions when the vagueness of the definition was potentially confusing. Some examples are highlighted below:

Lib 2: “The creation, display or transmission of material which is designed or likely to cause annoyance, inconvenience, unnecessary anxiety, threats or the promotion of violence.
Lib 4: “I will not use the computer for sending material likely to cause offence or inconvenience”
Lib 7: Accessing “material which is offensive in any way whatsoever”

A term like *inconvenience* is extremely vague. For instance, an elected official receiving an email complaint from a constituent could deem the complaint inconvenient, even when legitimate. Would such a scenario run the risk of the user being banned from using the facilities? Additionally, suggesting it is a breach of an AUP to access “material which is offensive in any way whatsoever” runs the risk of a myriad of legitimate information sources being deemed inappropriate. Websites on evolution may be offensive to a creationist – would this be potentially challengeable? Common sense would say no, however if an AUP is written in such a fashion, it potentially poses a risk that the library service may receive such challenges. A tighter focus on the AUP design could negate this risk.

One of the most challenging aspects of managing Internet access is around the issues of monitoring and filtering of access (Brown and McMenemy, 2012; Poulter et al, 2009). In the AUPs examined there was a consistent approach to ensuring the user was aware that content was filtered, and their use was monitored. How this was done, however, reveals an important aspect of tone. Some AUPs balanced the rights of the user with the filtering policy:

- Lib 1: we “reserve the right to monitor these services, and where deemed appropriate keep logged records of ICT use in accordance with the Data Protection Act 1998.”
- Lib 4: “We may monitor your use of the computer, including websites visited, in order to plan better services and to ensure you keep to this policy. We will not use personal information for any other purpose, or divulge it to other people or organisations, in accordance with the Data Protection Act 1998.”

This is a sensible tactic, since it reinforces that while monitoring may be necessary, it is done so with cognisance of the rights of the citizen. Other AUPs painted monitoring and filtering in more negative tones:

- Lib 2: “If staff are in doubt about a user's intentions they will be entitled to ask that user to cease using the Council's computer facilities.”
- Lib 9: We filter access “to reduce the risk of your finding sites which are not appropriate in a public library. These include an ‘intolerance’ filter which restricts access to sites which promote the more extreme views which adherents feel are part of their faith or belief.
- Lib 16: “monitor computer logs showing access to Internet sites, and any public access of illegal, offensive or controversial material may be the subject of further action. Monitoring of computer usage can be performed electronically and manually.”

When issues of monitoring and privacy of use are at stake, it is important for the library service to communicate this to users in such a way that it is not off-putting. Presenting this negatively potentially reflects on the image of the service. As a service that historically relies on a conception of privacy between the citizen and the library, communicating to them that their use of the service is now open to unspecified monitoring necessitates a sensitive approach.

Advice for users

Linked to the above, and an important aspect of tone, is how the AUP offers advice to the user. The AUP is able to get across important pointers as to how the user can be careful in their use of the service, for instance:

- Lib 1: "Be aware that the library is a public place and that in the interest of personal security customers are strongly advised not to broadcast personal or private details over the Internet. Confidentiality cannot be assured whilst using the libraries' ICT facilities."
- Lib 10: "Be safe on the web - If you have epilepsy, or suffer from any condition that may be affected by using a computer, use is at your own risk. If you find yourself feeling unwell while you're working on the computer please end your session and, if necessary, ask a member of staff for assistance….. Please be aware that subscribing to websites and entering or broadcasting personal or private details over the internet may lead to you receiving unwanted mail or attention. Always be sure to read the terms and conditions attached to any website you subscribe to. Families, children and young people should also be aware of other internet safety issues."
- Lib 12: "For your own security and privacy, we advise you not to use library computers to broadcast personal details, including online financial transactions."

In these examples we see an important duty of care evident from the library services. While the AUP must ensure the protection of the library service, it can also be used to communicate sensible precautions to users who may be new to using ICTs. In these cases we see positive use of the documents to interact with and educate users.

Discussion

Our pilot study has revealed consistent issues with regards how AUPs for public libraries are designed and utulised. While the emphasis on protecting the library service from liability is an important one, what is of equal importance is ensuring policies are designed that are consistent, understandable, and promote the service in the most positive way possible.

What seems clear from the evidence so far is that while we have a clear idea related to the appropriate structure of AUP documents, we understand less how to make the documents accessible to a broad range of users. In a public library context this is of vital importance, since the library serves the largest range of users of any other type of library. We cannot assume a universal understanding of the contents of an AUP document, and merely listing specific laws we do not expect our users to breach is not enough to ensure they understand exactly what those laws mean. There is arguably an unfair transfer of legal and ethical responsibility to users on crucially important factors that the library service could do much more to ensure an understanding of.

We can design policies that ensure users take responsibility for their online behaviour, and the importance of this cannot be understated. Equally, however, we can use the policies to educate and inform users as to the best use of ICT facilities, ensuring they can confidently access the services.

The author would suggest further research into the development of generic AUPs is vital; not merely from the point of view of templates or suggestions of wish lists for what they should

contain, but towards a more forthright adoption of a standard for what a universal service could look like. What exactly does computer and Internet access in a public library mean for all citizens in a geographic region?

Conclusions

Access to computing facilities and the Internet are vital factors in the role of the public library as a social equalizer. We must get over the understandable fear that providing this service brings, and move forward confidently understanding what we expect of the service, our users, and what they can expect of us. There is no reason that all public libraries in a single geographic region, subject to the same laws and same mores, should not have the same AUP. By a collective pooling of effort and an agreement on service standards we could create a document that is widely understood and could act as an advocacy tool for the services we provide. At the moment we have a situation where every public library service usually develops their own document, which as well as offering a duplication of effort, also muddies the waters with regards to what we as a profession tell the world we do. There is no ethical reason why a postcode lottery should exist in terms of the access citizens receive to ICT services in public libraries, and the development of a single standard for AUPs would go a long way to creating a truly universal understanding of this exciting, but challenging, area of service.

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Paper 13

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Rights to privacy and freedom of expression in public libraries: squaring the circle

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Abstract:

This paper highlights some of the tensions faced in public libraries in the United Kingdom between the desires to support patrons' rights to privacy and freedom of expressions, versus the reality of modern practice.

Considering both privacy and freedom of expression as ethical concepts, it then discusses some examples from the UK where the tensions between privacy and freedom of expression manifest in practice, including around filtering and government initiatives to tackle extremism, as well as issues around cloud storage of user data. It concludes with a discussion on how public libraries and the profession in the UK must struggle to balance the competing interests of patrons and the state, and encourages the profession to address the tensions head on by regular and rigorous debate as to the issues.

Keywords: privacy, ethics, freedom of expression, public libraries

There are inherent inbuilt tensions between privacy and freedom of expression which pose real challenges for the library and information profession. On one hand, respect for patron privacy allows the patron to seek out information and knowledge that can help them find their place in the world. It is a form of freedom that is cherished by much of the world. Nevertheless, information that one person may deem appropriate to seek out may be deemed by others, rightly or wrongly, as inappropriate or dangerous. This is the heart of the tension between those who advocate respecting privacy and freedom of expression and those who seek to curtail it.

This paper will discuss these tensions and highlight some real scenarios from public libraries in the United Kingdom that reveal the nature of the debate in practice.

The importance of privacy and freedom of expression

Privacy is the "right to be free from unwarranted intrusion and to keep certain matters from public view" (Law, 2015). As such, privacy is an important element in the autonomy of the individual. Much of what makes us human comes from out interactions with others within a private sphere where we assume no one is observing. Privacy thus relates to what we say,

do, and perhaps even feel. If we are not able to trust that we are in a private space, then we may not be completely autonomous, we may hold back crucial elements of ourselves. As Griffin has observed: "frank communication… needs the shield of privacy; it needs the restraint of peeping Toms and eavesdroppers, of phone taps and bugging devices in one's house, of tampering with one's mail or seizure of one's correspondence" (Griffin, 2008, p.225). Without a right to privacy, then, we are not able to be fully ourselves.

Equally, freedom of expression is also about autonomy and self-development. As has been argued, "restrictions on what we are allowed to say and write, or…to hear and read, inhibit our personality and its growth" (Barendt, 2006, p.13). Achieving our potential as human beings is fundamentally about being able to seek out our own path, through access to knowledge that informs our world view and way forward. Under this justification we can also see links between some other fundamental human rights such as the "rights to freedom of religion, thought and conscience" (Barendt, 2006, p.13).

Yet undoubtedly privacy can pose significant challenges to security. If an individual is seeking to commit a crime or a terrorist act, then arguably privacy affords him more opportunity to do so. This is the heart of the tension between a right to privacy and protecting the legitimate interests of others, and the state.

What is important for us to understand in this context is that privacy is a right *qualified* by other interests (as is freedom of expression). What we mean by this is that other rights may take priority over both. This is a perfectly rational notion, since unrestricted privacy or freedom of expression could entail individuals undertaking activities that potentially damage the interests of others or society in general. It does, however, reveal that there is a tension between what a person might expect in terms of privacy (and freedom of expression), and what may be deemed to be encroaching on the rights of others in doing so. Whether we recognise it or not, the intricacies of this qualification lie at the heart of the controversies we face in our professional practice.

In modern times, privacy has been defined as a right that we all should be able to expect to be defended. For instance, Article 12 of the *UDHR* states that:

> No one shall be subjected to arbitrary interference with his privacy, family, home or correspondence, nor to attacks upon his honour and reputation. Everyone has the right to the protection of the law against such interference or attacks.

The European Convention on Human Rights (ECHR) states both the right to privacy, and the limits that can be placed on it. Article 8 states that: "*Everyone has the right to respect for private and family life, his home and his correspondence."* Section 8 (2) of the ECHR covers the limits that are allowed to be placed on the right to privacy specified in 8(1): *"There shall be no interference by a public authority with the exercise of this right except such as is in accordance with the law and is necessary in a democratic society in the interests of national security, public safety or the economic wellbeing of the country, for the prevention of disorder or crime, for the protection of health or morals, or for the protection of the rights and freedoms of others."*

In reality, what does this mean? Firstly, that any restrictions placed on the right to privacy by states must be *lawful*. There must be a legal basis for the intrusion, and it must be justified by existing legislation. Framed as they are we can see here a set of restrictions that advocate

invasions of privacy only in terms designed to protect what are deemed to be the legitimate interests of others, whether in the body politic or in their own right.

For librarianship, then, the *qualification* of privacy and what it constitutes in our delivering services to patrons is a vital ethical area that we must seek to have sufficient debating space in as a profession. Much of what our patrons do as a result of using our services is about their self-development and autonomy, and our role in helping them achieve their potential is one we should be justly proud of. Nevertheless, in providing a free and open access to information we must be aware that we are open to critique from those who wish to restrict access for what they deem to be legitimate grounds. We need to have robustly debated all aspects of the arguments for and against if we are to have an influence in how society shapes these fundamental rights.

Our professional values

It is important to acknowledge how much importance we place on privacy and freedom of expression as a profession. As this is a UK-focused paper we will highlight how CILIP advocates for both from the point of view of its ethical principles, however, we will also touch on some of the literature on library values to reinforce the issues.

CILIP states clearly in its statement on intellectual freedom that "Access [to information] should not be restricted on any grounds except that of the law" (CILIP, 2005). On the same pages, CILIP also supports the Council of Europe's approach to accessing information through networked access points from 2000. This reinforces that services providing "Public Access Points should respect the privacy of users and treat knowledge of what they have accessed or wish to access as confidential." Importantly also for our discussion the Council of Europe also state:

> The use by managers of Public Access Points of software filtering systems to block access to certain content is an unwarranted interference with the individual's freedom of access to information. If filtering and blocking systems are to be made available, it should only be as an option that individuals can choose and calibrate at their own preferred levels (CILIP, 2005).

There are however arguments that we must be more pragmatic in our services to patrons, being aware when information may be potentially dangerous for society. Hauptman's landmark experiment in the 1970s where he asked a series of public and academic librarians in the USA for information on how to build a device capable of blowing up a house raised issues of accountability for the profession, in that all libraries asked provided him with the information. While adhering to our core principles, is such a response socially responsible? Hauptman himself later wrote that "censorship must never be confused with the refusal to provide socially detrimental information (in reference), the aiding and abetting of illegal acts, or the judicious selection of materials" (Hauptman, 1988, p.65). One could, of course, argue that personal autonomy of the patron brings with it the responsibility on their part to not do anything with legitimate information that is illegitimate, however, it could equally be argued that professions have a responsibility to not place others in harm's way.

In refusing access to information on a face to face basis, however, we run the risk of having to justify our decision to a patron, and explain in great detail why a legitimate piece of information is not available to them. Blocking access via filtering technologies, on the other

hand, removes that potential embarrassment, and ensures that censorship is carried on out of our view, with little to no input on our part. This lack of having to deal with and justify the restriction of access arguably plays some part in explaining why filtering has been adopted with so little debate by librarians.

In practice.

We will now move to some specific scenarios that highlight the issues around privacy and freedom of expression from the point of view of public libraries in the United Kingdom. While the scenarios may not necessarily provide answers to the dilemmas they highlight, they can raise questions in our minds for further debate.

Much of the controversy around privacy and freedom of expression in public libraries relates to internet filtering. As discussed above, this is a controversial activity that is arguably antithetical to the values of professional librarianship. Nevertheless, it is an activity that is widespread in the United Kingdom. A 2016 study found that 98% of public libraries in the UK filtered categories (Payne, 1016). How such filtering is undertaken raises significant issues for professional practice. The MAIPLE project found that an important dilemma related to the emergence of filtering software was the emergence of filtering software vendors as arbiters of appropriate and inappropriate information types, due to the purchase of off-the-shelf filtering systems with pre-defined categories:

> When it comes to material deemed "inappropriate" rather than unlawful, this can be a very subjective judgement. For formally published material, professional publishers have acted as arbiters of quality or taste and librarians have decided what to include in library collections. When it comes to the internet, it appears that filtering software vendors have a prominent role (Muir et al, 2016).

Two further examples of these issues from research undertaken in our own department are presented below:

- In a 2015 paper, some colleagues and I examined internet acceptable use policies provided by Scottish public libraries from the point of view of language around control and surveillance. In doing so we identified some very loose phraseology with regards to what patrons were requested *not* to access in terms of information types. This included material that was: "grossly offensive" (LA2); "indecent" (LA2, 7, 10, 20, 27 and 28); "disturbing" (LA5, 11, 13, 24 and 26); "depraved" (LA9); "offensive, indecent or menacing" (LA10); "any way that offends decency" (LA3) and "offensive, immoral or distressing" (LA11) (Gallagher, McMenemy and Poulter, 2015).
- In a 2013 paper examining the implementation of filtering in Scottish public libraries (Brown and McMenemy, 2013), it was found that 31 out of 32 public library services in Scotland had installed filtering. Only one stated that frontline staff had the ability to immediately release content blocked by the filter if requested by the user if deemed appropriate, at the point of use: 27 services stated that although there was a "release procedure" in place, the content could not be released at the point of use. It would rather be considered "appropriate" retroactively and released at a later date: two services stated that no procedure existed whereby content blocked by the public access internet filtering software could be released.

This ability or not to unblock filtered content raises important issues around privacy and freedom of expression. In a library context, an argument posited is that all a patron needs do is ask the librarian to unblock any legitimate material that is being withheld by the filtering software, but this is a naïve argument. Consider how many patrons may be too embarrassed to ask a librarian about issues like sexuality; indeed, this may be the primary reason why they have chosen the Internet as their information source as it offers relative anonymity and privacy. Being confronted with a screen blocking access to information is unlikely to have such a patron politely chatting to the person in charge to have their information provided, regardless of their approachability. It could be accurately argued that many organizations ventured down the filtering route to protect the organization rather than in a bid to halt intellectual freedom, but this makes the decision even more problematic for an ethical professional.

While it is certainly true that, as Hauptman puts it, "unfiltered access to the Internet presents some major ethical challenges even to those whose commitment to intellectual freedom is unequivocal," it is equally true that, "it is not our business to mediate between users and the virtual world" (Hauptman, 2002, p.65). As Sturges states, "when people describe internet content as harmful they tend to lump together both legal and illegal material" (Sturges, 2002, p. 21). Whether we can agree or not that some material should be filtered, filters block material that should *not* be filtered. We do our patrons and our profession a disservice by not doing everything we can to clarify this dilemma in our practice.

The Prevent strategy

We have already seen how filtering is cited by libraries in the UK themselves as being useful in blocking "offensive" and "inappropriate" materials. The concern with materials that offend sensibilities, or indeed are perceived as dangerous, is at the heart of the *Prevent* strategy, an initiative of the UK government post 9/11 and renewed after 2011 to tackle "home-grown" terrorism. The strategy's goal is "to prevent radicalisation and stop would-be terrorists from committing mass murder" (HM Government, 2011, p.1) and as such, it focuses on limiting access to and challenging material that has the potential to "radicalize" individuals and inspire them to commit terrorist acts.

The government is at pains to clarify its adherence to the concept of freedom of expression: "We remain absolutely committed to protecting freedom of speech in this country. But preventing terrorism will mean challenging extremist (and non-violent) ideas that are also part of a terrorist ideology" (HM Government, 2011, p.13). However, much of the information it is seeking to limit access to could be classed as reasonable in a democratic country that values freedom of expression, which raises ethical issues for a profession challenged with providing access to legitimate information.

While it is true that *Prevent* has been more controversial in a schools setting than public libraries, there is perhaps an important reason why. A key criterion of *Prevent* is that public bodies providing internet access limit access to information deemed to be potentially harmful:

> we expect local authorities to ensure that publicly- owned venues and resources do not provide a platform for extremists and are not used to disseminate extremist views. This includes considering whether IT equipment available to the general public should use filtering solutions that limit access to terrorist and extremist material (HM Government, 2015)

Therefore, arguably public libraries in the UK were already doing the work of limiting access to such content, rightly or wrongly. It may well be one less thing for them to worry about in

terms of accountability, however, the strategy also acknowledges that "we are unable to determine the extent to which effective filtering is in place in schools and public libraries" (HM Government, 2011, p.79). While a briefing note on *Prevent* from CILIP in 2012 suggested "that libraries have not been subject to interference or intervention" as a result of the strategy, it may well remain a concern for public libraries who buy an off-the-shelf filtering system and install it in the hope that it is the panacea for inappropriate content. CILIP have requested that libraries inform them of any issues with regards the programme.

It is important to note that public libraries in the UK have already been the subject of controversy with regards to access to "extremist" material after the 2007 report, *Hate on the State*, published by a right-leaning think-tank, found that books were found in several libraries that:

- Glorify acts of terrorism against followers of other religions
- Incite violence against anyone who rejects jihadist ideologies
- Endorse violence and discrimination against women (Brandon & Murray, 2007, p.3).

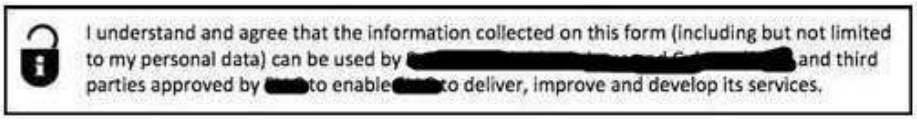
The report gained significant publicity at the time and resulted in the government advisory body developing an advice document on dealing with controversial materials in libraries (Museums, Libraries and Archives Council, 2008).

The emergence of the cloud

One last issue we need to be aware regarding patron privacy relates to a development that on the face of it is progressive rather than regressive. It has largely crept up on us due to the advancement in technology, however, it is one that raises significant issues for privacy, not only for the short term in how we handle the transition, but also significant potential dangers for the long term. This is a form of challenge of the type identified by Michael Gorman: "One of the most obvious prices we are all paying is the actual and potential erosion of privacy caused by the compilation of, and easy access to, large and complex databases resulting from out interaction with commercial, governmental, and other institutions" (Gorman, 2015, p.178).

The ongoing development of software as service (SaS) provides opportunities for library services to work more closely with LMS suppliers, allowing the data from the LMS to be stored in the cloud by the provider themselves rather than by the library service. This clearly has many potential advantages, such as efficiency, and reliability of data access, as well as savings on the costs around staffing to support the processes involved. However, in the UK context, and presumably also in EU areas, this poses challenges for data protection. Under UK law, the data protection statement a member agrees to when they join a library service has to state clearly who is storing the data and for which purposes. Thus, when a library service moves their data to the cloud via a third party, they have to then ask members to agree to a new data protection statement that shows the member has understood and agreed to this. An example of an actual statement emailed to library members of a local authority in Scotland is shown below:

[redacted] Data Protection Statement from July 2015;



To have your details removed from our database please reply to:
unsubscribelibrary@[redacted]

Now such a statement potentially poses significant potential ethical issues. Firstly, not agreeing to the statement means that a membership is no longer valid. In other words, unless the member is happy to agree to the new statement, they can no longer be a library member. Bearing in mind that the public library service in the United Kingdom is *statutory*, this is potentially unfair to the patron.

Secondly, the statement is essentially offering a blanket third party exemption for whom the data can be shared with. Notwithstanding the reassurance that it will only be with third parties the library service *approves*, this is asking the patron to place an element of trust in the service that is ripe for potential future abuse. Not knowing who your data will be shared with, under what pretence, and when, is no recipe for trust. Given that the data concerned involves significant personal information as well as borrowing habits, there is a sense here that convenience and innovation have once again overtaken our duty to debate fully the ramifications of a significant change. What rights does a patron have to challenge an approved provider? What exactly does "enable, deliver, improve, and develop" mean in terms of how data can be used, and the types of organization your data will be passed to? In 10 years' time, as data mining becomes embedded in so much of our lives, will it be prudent for a library service to *approve* selling a third party your data to raise income to buy books? At any point, a member can remove themselves from the database, but doing so means that the right to a library membership ceases, and this seems neither fair nor in the best interests of the patron's autonomy.

In privacy terms, the use of cloud services by libraries to store patron data means we are essentially outsourcing our privacy responsibilities to third parties. This may well be the way of the future, but in doing so we need to be absolutely clear what we are doing, and the potential implications of it down the line. Data protection statements created in haste now can pose significant challenges to patron privacy in years hence.

Conclusions

Public libraries need to tread a line that is deemed to be socially responsible while advocating core values that some in our communities might argue are at best self-indulgent, and at worse potentially dangerous. Only by continuously reinforcing our ethical values in regular debates can we hope to develop the nuanced approach to advocacy that is so crucial in a politically-sensitive time. Our values matter to us, but they serve no other purpose than window dressing if we simply use them to grandstand to members of the community who need reassurance or convincing as to why those values matter.

As *qualified* rights, the adherence of libraries to the rights of both privacy and freedom of expression should not be at the whim of individual librarians, or library committees to

interpret as they please. Equally, we cannot allow our ethical principles to stand as mere monoliths. Our values must be real values, adhered to by our profession wherever possible and always in the forethought of our mind when delivering services to patrons. That our values pose ethical dilemmas for us in practice is a good thing and should be welcomed by us: from debating such dilemmas comes strength of mission.

We have seen evidence in this paper that libraries have introduced practices that arguably challenge our ethical values. The limited debate in the UK profession on such pivotal issues as internet filtering and movement of sensitive data to the cloud challenges our stance as a profession that places privacy and autonomy of patrons at the core of what we do. As a profession, we need to be more upfront about debates around privacy and freedom of expression and continuously be articulating our values in these vital democratic areas. We may fail on occasion, and for legitimate reasons, to hold up to our own ethical standards: but we in no way succeed by pretending we do not have them.

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Paper 14

McMenemy, D. (2016) *Digital Ethics: A UKeiG White Paper*. UKeiG White Paper, no. 02, vol. 2016, London.

DIGITAL ETHICS

A UKeiG WHITE PAPER

UK eInformation Group

DIGITAL ETHICS

A UKeiG WHITE PAPER

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Abstract

This white paper discusses the topic of digital ethics and considers the topic within the background of theories on ethics and how they apply within the digital realm. It explores the issues of internet governance, net neutrality, freedom of expression, and privacy and considers how they impact on the work of the information profession and wider society.

Issues around internet governance challenge us from the point of view of net neutrality and the tensions between the original ethos of the Internet pioneers and the enhanced role of governemnts and corporations in Interent governance. The concept of "code" as law, introduced by Lawrence Lessig, is explored in terms of how it challenges ethical behaviour.

Freedom of expression is a constant challenge as we are presented with calls to limit acess to certain information types, and are increasingly charged with considering filtering systems to do so. The increasing emergence of online trolls also challenges freedom of expression rights.

Privacy is under challenge via both government and corporate interests in our activities and our data.

Overall the need to be aware of fundamental rights versus how those rights may impact on wider society is the primary concern around digital ethics.

Table of Contents

1. Introduction

The concept of ethics relates to how groups of people in society specify and regulate their behaviour. Thus ethics applies to the behavioural norms of entire societies but also to sub-groups within society, such as citizens, professions, corporations, governments, religious groups and the like. In this white paper, we discuss digital ethics, which applies considerations of ethical behaviour to the realm of information and communications technologies (ICTs).

1.1. What is digital ethics?

Digital ethics relates to how human behaviour is managed and specified as it applies to activities in the digital realm, including online and through our use of software and other technologies. It is an area of ethical study that is growing in societal importance by the day, as new technologies emerge that introduce new challenges to society. A previous UKeiG white paper explored the topic of the *Internet of Things* which is a recent phenomenon but one that raises ethical issues around how we implement these valuable new technologies and the data they produce. As the paper made clear, the "extent to which this is for the common good will depend on who controls this data, how it is used and what safeguards are put in place to protect privacy.[1] This is a classic question of digital ethics and can be applied across the wide range of technologies we use on a daily basis.

A fundamental paradox of new applications of ICTs is that they aim to make life for human beings easier, but at the same time can complicate our lives in ways that are detrimental to us. As Spinello argues with regards to the Internet:

> If it easier to publish and spread truthful and valuable information, it is also easier to spread libel, false-hoods, and pornographic material… And if it is easier to build personal relationships with consumers, it is also easier to monitor consumers' behaviour and invade their personal privacy.[2]

Our discussion in this paper will discuss the ethical issues highlighted by Spinello and more. We will discuss topics such as privacy, freedom of expression and censorship, Internet governance, and how all are being impacted within the digital realm.

1.2. Why does digital ethics matter?

An understanding of digital ethics is a vital area of knowledge for the information professional. As we are bombarded with solutions that appear to solve problems or challenges in our service delivery, we must be aware of the impact those technologies may have on our clients and wider society, but also on our own practice. There are fundamental values that information professionals stand to protect, and the reality is that some digital solutions to service delivery may challenge those values. An awareness of the challenges they pose, then, is of crucial importance in our professional practice. As professionals, we have societal responsibilities that go beyond our responsibility to employer or client, and we must bear this in mind when implementing any new technologies that may potentially harm others.

2. Ethical theories

Since many of the issues we will discuss highlight a dichotomy between opposing ethical viewpoints, it is important to begin with a short summary of those ethical viewpoints and what they say about

[1] De Saulles, Martin. *The Internet of Things: A UKeiG White Paper*. 2016. p.16. http://www.cilip.org.uk/sites/default/files/documents/internet_of_things_white_paper_final.pdf

[2] Spinello, R.A., *Cyberethics: Morality and Law in Cyberspace*. 6th ed. 2017: Jones & Bartlett Learning. p.ix

human behaviour. Readers wishing a more detailed overview are strongly encouraged to read the excellent summary of how ethical theories apply to society provided by Michael Sandel.[3]

When we discuss ethics we often focus on a specific branch, as we are doing in this white paper by discussing digital ethics. We often see discussions of professional ethics, business ethics, or medical ethics, for example. In reality, all micro discussions around branches of *applied* ethics, as all of the above themes would be classified, stem from the same overarching theories.

2.1. The main branches of ethical theory

There are essentially three main branches of ethical theory, complicated by the fact there are several subsets within each. However, an understanding of what the three main branches believe provides a good grounding for our discussion of digital ethics. The three main branches are consequentialist ethics, deontological ethics, and virtue ethics.

2.1.1. Consequentialism

Consequentialism relates to the potential outcomes of an action and the ethical results of that action. What is important for the consequentialist is that the outcome is satisfactory, not necessarily how that outcome has been achieved. The main consequentialist ethical theory is utilitarianism.

The father of modern utilitarianism was Jeremy Bentham whose theories were developed further by John Stuart Mill. The basic formula for utilitarianism is the greatest happiness for the greatest number. Utilitarianism had a significant effect on political philosophy through the Victorian era and well into the late 20th century before it was arguably supplanted by philosophies more focussed around individual freedoms. The emergence of major public services, welfare systems, and institutions like public libraries and museums can be attributed to the emerging utilitarian thinkers of the Victorian era.

As we have stated, utilitarianism relates to the happiness and well-being of the majority – therefore in a utilitarian world, it is acceptable for some in society to lose out if the happiness of the majority is the consequence. This is an important concept since taken to its extreme it could advocate harm being allowed to a small number of people to benefit the majority. Clearly, this raises significant issues of natural justice that have to be addressed by any ethical thinker. In addition, since utilitarianism is focussed on the consequences of an action, the ethics of the motive itself can be questioned.

In terms of digital ethics, we can see utilitarian arguments across many of the areas it is concerned with. For instance, is the monitoring of the online activity of people justifiable if a criminal or terrorist is caught and thus harm does not come to others as a result? A utilitarian might argue that the happiness of the majority is the benefit of online surveillance, as the majority is kept safe at the expense of a small number wishing to do us harm. On the other hand, a utilitarian argument could be made *against* online surveillance, since one could argue that the knowledge we are being surveilled makes the majority unhappy. We will explore some of these ideas further later in the paper.

2.1.2. Deontological ethics

Deontological ethics relate to the concept that there are certain values or actions that are inherently good or bad. Deontological or duty-based, ethics are primarily based on the theories of Immanuel Kant, a German 18th-century philosopher. Kant was not convinced by the concept of utilitarianism,

[3] Sandel, Michael. *Justice: What's the Right Thing to Do?* Penguin. 2009.

believing that it ignored a fundamental point in ethics that some actions were by their very nature good or bad and that this, not the consequences of the actions, were what is important.

Kant's *categorical imperative* is arguably the most important of his theories related to ethics. In his *Groundwork of the Metaphysics of Morals*, published in 1785, he stated two important maxims that underpin his theories. The first of these maxims states that "I ought never to act except in such a way that I could also will that my maxim should become a universal law". Within this oft-quoted line lies the basis of an ethical theory that has been interpreted and re-interpreted to this day. The basis of the imperative is that any action should be morally justifiable by virtue of it being measured against it being a potential universal law of nature. From a normative standpoint, it essentially means that actions that are unjustifiable to a reasonable person are morally unjustifiable. For instance, we would not wish theft or murder to become universal laws of nature, therefore under Kant's imperative, these actions are never justifiable. Conversely for the consequentialist they *can* be if the outcome aids utility.

Kant's final maxim relates to the morality of how we use other human beings. He states "Act in such a way that you treat humanity, whether in your own person or in the person of any other, never merely as a means to an end, but always at the same time as an end". Using a human being as a means relates to using them to further your own interests, and not thinking of their interests. Treating them as an end, on the other hand, means considering their interests in any dealings you may have with them. This essentially means respecting their freedoms to make decisions and to act in their own interests. This part of the categorical imperative is the basis of many of the rights-based philosophies that currently exist.

Deontological ethics apply in the digital realm also. For instance, a deontologist would likely consider the rights of individuals to be more important than the societal impact of an activity. This right to privacy and freedom of expression may be something that a deontologist would guard with care. The issue for a deontologist becomes whose rights should take priority in certain situations.

2.1.2. Virtue ethics

Virtue ethics has its origins in the classical philosophy of Aristotle. A major consideration in classical mythology was what the virtuous life would actually be, and this informed the concept of living the *good life* and being a good person. At the heart of the concept was *eudaimonia* or happiness. The concept of virtue is that it is a mean between excess, on one hand, and deficiency on the other. Importantly, however, it is not about moral absolutes such as anger or pleasure being always automatically right or wrong.

Virtue ethics is arguably of less practical application than either deontological or consequentialist ethics. Since its focus is on the subjective human condition, it is more difficult to apply its theories to discussions of digital ethics. However, as we are seeing increasing calls to the importance of good character in human agents, it seems that virtue ethics are making something of a comeback and are worth being aware of from that standpoint.

3. Internet governance

A vital aspect of digital ethics relates to how the Internet itself is governed. The success of the Internet has been unprecedented in human history. In December 1995 the Internet had 16 million users, and by 2016 the estimate for users was 3.4 billion across the globe. Yet arguably with its explosion in usage and impact the original goals of the medium have been under pressure.

3.1. The Internet manifesto

In 1996 the manifesto that overarched the early days of the Internet was published by John Perry Barlow. You can read the full text via the link below, but some snippets reveal how the early Internet pioneers saw the medium:

> "Governments of the Industrial World, you weary giants of flesh and steel, I come from Cyberspace, the new home of Mind. On behalf of the future, I ask you of the past to leave us alone. You are not welcome among us. You have no sovereignty where we gather." [4]

Importantly the manifesto sought to demarcate the Internet as a new medium that would not be subject to the same mores as the traditional world. As Barlow continues, "You do not know our culture, our ethics, or the unwritten codes that already provide our society more order than could be obtained by any of your impositions." Crucially Barlow is arguing that the Internet is creating a new ethical domain. In terms of digital ethics, the Internet manifesto is of vital importance in understanding the original mission of the medium.

Whether such grand notions for the medium were ever truly real, there was certainly a feeling among early adopters and those who shaped the Internet that this was an entirely new paradigm shift in humanity, and one that would be free of governmental and commercial influences. As Lessig states, "The claim for cyberspace was not just that government would not regulate cyberspace—it was that government could not regulate cyberspace." [5]

3.1.1. The Internet infrastructure

The Internet is governed in a multi-structured way, with several organisations responsible for separate aspects of its operations. These groups include the Internet Engineering Task Force (IETF) and the Internet Architecture Board (IAB), as well as the Internet Society (ISOC). The mission and mandate of the Internet Society are focused on the education, empowerment and awareness of governments, businesses and the users around the world. The ecosystem of the Internet provides a unique governance structure of a type that was originally designed to make the medium as participative and open as is possible.

Timothy Garton Ash highlights that what was essentially the pragmatism of building a network that could still ensure communication after a nuclear war, was also partly inspired by grander notions of openness and cooperation:

> For some of those involved, one reason for developing a 'distributed network', in which packets could reach their destinations via multiple alternative routes, was to increase the chances of information still getting through after a first nuclear strike. But their American libertarian convictions also fed into this notion of free passage irrespective of content: you pass my packets, I'll pass yours. Later, this would be elaborated into the broader principle of 'net neutrality', rejecting any discrimination on grounds of the content of the packet, the identity of its sender or the application used. [6]

We will discuss net neutrality further below.

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[4] Barlow, J.P. *A Declaration of the Independence of Cyberspace.* 1996. https://www.eff.org/cyberspace-independence

[5] Lessig, L. *Code version 2.0*. Basic Books. p.3. http://codev2.cc/download+remix/Lessig-Codev2.pdf

[6] Ash, Timothy Garton. *Free Speech: Ten Principles for a Connected World.* Atlantic Books. Kindle Edition. (Kindle Location 465).

3.2. Governance concerns

Cerf et al have observed that despite the desire of many that the Internet remains an open and universal experience "over the last several years more and more governments and companies have been taking action to control the flow of information over the Internet" [7] This focus on the influence of governments and companies forms a significant tranche of the concerns over what has been called, *Internet fragmentation*.

In his testimony on the future of the web to the US House of Representatives, Tim Berners-Lee identified three Internet concepts that he argued were crucial to the foundation of the web:

1. Universal linking
2. An open foundation for information-driven innovation
3. Separation of layers [8]

Hill mirrors this analysis more broadly and argues that:

> early Internet engineers incorporated into the Internet's architecture their belief that connecting people together and enabling them openly to share ideas was an objective that should be encouraged; consistent with that objective, the early designers insisted that governments should have a very limited role in regulating the Internet. [9]

These ideas are potentially under challenge as the Internet evolves, with arguments that both the openness and the freedom from government intervention of the ideal Internet experience are under threat. Although Berners-Lee was talking specifically about the world wide web, as one would expect given his role in its evolution, he is clear that the values that underpin the Internet made the web a reality.

3.2.1. Net neutrality

Net neutrality is an important concept in terms of digital ethics. The idea underpins much of what the Internet has become in terms of being a domain that contains a wide range of traffic that is efficiently distributed without fear or favour. Spinello defines net neutrality as such:

> All ISPs and telecom companies are required to treat every form of data equally, in a way that is consistent with the end-to-end design principle. They cannot discriminate between different packets of data. This means they cannot enhance the performance of some streams of data to create a "fast lane" for that data, nor can they employ "tolls" or any means that slows down the transmission of Internet packets.[10]

Net neutrality is of vital importance in terms of keeping the Internet running smoothly. As French notes, while the Internet has evolved into bandwidth-hungry services that rely on quick and efficient packet switching to ensure the service is provided (i.e. online gambling, Skyping, video streaming), the Internet was not originally designed for this, nor was net neutrality as a concept built around the reality of an Internet that offered such services. Therefore the infrastructure has had to deal with

[7] Cerf, V., P. Ryan, and M. Senges, "Internet Governance Is Our Shared Responsibility". *I/S: A Journal of Law and Policy for the Information Society*, 2014. 10: p.1.

[8] Berners-Lee, T. *The Future of the Web.* Testimony of Sir Timothy Berners-Lee Before the United States House of Representatives Committee on Energy and Commerce Subcommittee on Telecommunications and the Internet. http://dig.csail.mit.edu/2007/03/01-ushouse-future-of-the-web.html

[9] Hill, J.F., *Internet Fragmentation: Highlighting the Major Technical, Governance and Diplomatic Challenges for U.S. Policy Makers*. 2012: Belfer Center, Harvard Kennedy School. p.15.

[10] Spinello, R.A., *Cyberethics: Morality and Law in Cyberspace*. 6th ed. 2017: Jones & Bartlett Learning. p.38.

highly increased capacity and had to undergo essential and expensive improvements in bandwidth capability. [11]

Linked to this is the emergence of telecommunication companies as content providers, something that was not the case when the Internet was designed. Companies whose previous roles were limited to the telecommunications infrastructure and ensuring Internet traffic passed unhindered began to merge with other companies involved in content creation, and thus began to have interests in ensuring their content, or their customers, were privileged. One solution is to more heavily regulate how ISPs offer their services, ensuring they commit to providing a steady service for all. The concerns expressed by those who advocate tighter regulation are highlighted by McCartney, namely the fears that "dominant broadband providers, such as AT&T and Comcast, will use their market power in consumer markets unfairly, favouring Internet content in which they have a financial interest." [12]

French argues that essentially three concepts underpin the net neutrality debate, namely freedom of expression, consumer protection, and innovation and economic growth. [13] Freedom of expression is limited if ISPs are able to throttle content from a service they do not favour. While the intention may not be to censor, the favouring is strictly business, the end result is that legitimate content is not seen by Internet users. A recent example of this was highlighted on BBC News where T-Mobile was argued to be favouring its own video streaming service, *Binge On*, across its US network while throttling content from providers such as YouTube. [14] The *Binge On* service provided content from T Mobile's partner Netflix at the expense of other providers.

The second of French's concepts, consumer protection, is also of vital importance. When a consumer signs up for an ISP account, they are reliant on the service that the ISP provides. They have little way of knowing unless they are informed netizens aware of issues such as net neutrality, whether the reason they cannot access a service is because the service provider is poor, or the ISP is merely throttling bandwidth. Given it is unlikely that a consumer would be able to cite throttling as a reason for getting out of an ISP contract, we have an added element of concern re consumer protection.

Lastly, innovation and economic growth are stifled if ISPs are allowed to favour content from one provider over another. The investment a company may put into providing an excellent service may well be wasted if consumers cannot access it efficiently. If the reason they cannot do so is, again, throttling of content, then a company is having its commercial interests restricted by another with vested interests. This not only goes against the values of the Internet, it is also arguably anti-business generally, and risks stifling innovation and creating monopolies. We can see then that net neutrality does indeed raise important ethical issues with regards Internet fragmentation that we must be aware of.

3.3. Code is law

An important concept around Internet governance and digital ethics is the idea proposed by Lawrence Lessig that *code is law*. A unique aspect of the Internet medium was that it was a system designed around computer code and systems architecture. This meant that those very things could be used to govern interactions with the system. Every act performed on the Internet involves the use of code and a systems architecture to achieve the desired result, and that meant those

[11] French, R.D., "Net Neutrality 101". *University of Ottawa Law & Technology Journal*, 2007. 4(1 & 2). p.115
[12] McCartney, D., "Law and the Open Internet". *Federal Communications Law Journal*, 2011-2012. 64(3). p.494
[13] French. *Op. cit*. p.116
[14] See "T-Mobile 'breaks' net neutrality rules with binge on". http://www.bbc.co.uk/news/technology-35232288

technologies could be used to control the experience. This clearly gives those writing the code and designing and managing the infrastructure, immense power to shape the Internet experience. Lessig argues that:

> "the invisible hand of cyberspace is building an architecture that is quite the opposite of its architecture at its birth. This invisible hand, pushed by government and by commerce, is constructing an architecture that will perfect control and make highly efficient regulation possible. The struggle in that world will not be governments. It will be to assure that essential liberty are preserved in this environment of perfect control. [15]

In terms of code being law, Lessig clarifies his argument and the importance of that idea: "In cyberspace we must understand how a different "code" regulates— how the software and hardware (i.e., the "code" of cyberspace) that make cyberspace what it is, also regulate cyberspace as it is."[16] The ethical implications of this are clear, and as DeNardis observes, "Technologies of Internet governance increasingly mediate civil liberties such as freedom of expression and individual privacy."[17] The implications of this will be discussed below when we consider both topics in more detail.

Lessig's full thesis actually highlighted what he defined as the four modalities of regulation:

1. Law: these are the laws created by governments and other regulatory bodies that govern conduct on the Internet. This mirrors the real world where law governs all.
2. Norms: this relates to the behaviours and the etiquette of the Internet. Norms regulate behaviour because communities in the digital realm specify behaviours they will tolerate and those they will not.
3. Markets: companies provide services that Internet users consume, and the provision of the service also acts as a form of regulation.
4. Code: as we have seen Lessing believes it is the code written by those who build the architecture and services we access on the Internet who are the ultimate regulators. In code being law, all transactions and experiences are subject to regulation by the inbuilt system delivering them. Passwords for website access, filtering systems for limiting certain types of information, and the like.

We will see Lessig's theory coming up again in several further areas of our discussions below.

4. Freedom of expression and censoring content

Providing access to a wide range of information sources is a *sine qua non* of the information profession. This entails a commitment to and understanding of the debates around freedom of expression. Article 19 of the *Universal Declaration of Human Rights* states that:

> Everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers.

The idea is also included in Article 10 of the *Human Rights Act* in the UK. Therefore the notion that access to information should be restricted, clashes with a fundamental core belief in the modern age, and is something that challenges the ethical parameters of information work. Yet there are

[15] Ibid p.4.

[16] Ibid p.5.

[17] DeNardis, Laura. *The Global War for Internet Governance.* 2014. Yale University Press. p.1.

legitimate grounds for restricting access to some kinds of information: "some forms of expression, like pornography, venomous hate speech, or terrorist threats, are offensive." [18]

In the arena of digital ethics Lessig's argument that code can be used to restrict access is again valid here, since, with a system built on code, information can be easily blocked or restricted based on parameters set within the code. This ability is also evident from the point of view of countries being able to apply their own content controls over Internet traffic, which is something that fundamentally goes against the thesis of the Internet pioneers who sought a global medium where governments could not interfere.

As we will find, we can also see this in Internet filtering systems on a daily basis, for instance within public services offering Internet access such as public libraries and schools, where Internet filters on local servers are often utilised to restrict access to information deemed to be inappropriate. As Spinello has argued, "the issue of free speech and content controls in cyberspace has emerged as arguably the most contentious moral problem of the nascent Information age." [19] An overview of the arguments around freedom of expression should provide some context.

4.1. Arguments for and against freedom of expression

The notion of freedom of expression encompasses several important ideas: forming opinions, expressing opinions, and being able to access the information that helps make you informed are inherently related concepts. Immediately then we can also see a direct link to the notion of privacy; privacy allows the freedom for an individual to access information out of the gaze of others and form opinions.

The arguments that are posited for defending and protecting free speech are usually presented as a counter to those who may wish to restrict it for various reasons. The philosophy of free speech could be an entire volume in itself, therefore to neatly summarise the arguments we will focus on and discuss the categorisation put forward in the authoritative summary of the topic in Barendt's peerless text on the subject. Barendt defines some core defences that are often used to justify the protection of free speech, and these can be summarised as:

- Argument from truth
- Argument from autonomy
- Argument from democracy [20]

The *argument from truth* is largely associated with the approach to issues of individual freedom posited by John Stuart Mill in *On Liberty*, although as Barendt observes we can trace similar sentiments in the defences provided much earlier by Milton in *Areopagitica*, and latterly by Judge Oliver Wendell Holmes in the famous *Abrams vs. US 250 US 616* case. Another over-arching term applied to the concept of the argument from truth is that of a *marketplace of ideas*, referencing the notion that people should be presented with the broadest possible range of ideas to select their truth, or in other words: "we cannot deny currency to any expression of opinion without reducing the efficiency of the knowledge market." [21]

As Campbell has also suggested, the argument from truth could be classified as a justification for freedom of speech that is based on a consequentialist rather than a rights-based point of view. In other words, truth matters to society because it ultimately benefits the majority of people by

[18] Spinello. *Op. cit*. p.67
[19] Ibid p.67
[20] Barendt, E. *Freedom of Speech*. 2nd Edition. 2006. Oxford: Oxford University Press.
[21] Campbell, T. *Rights: A Critical Introduction*. 2006. London And New York: Routledge. p.143.

building a better society, rather than truth being fundamentally about any one individual's rights. However, we could contend as Barendt does that truth could also be seen to be "an autonomous and fundamental good" in and of itself. [22] For Mill truth was "justified belief" and this justification was only valid when an idea or viewpoint has been thoroughly tested and critiqued within society through argument and debate. As Campbell summarises with regards to Mill's view, to suppress freedom of expression on a topic "is to make the epistemological mistake of assuming that you know in advance of hearing an opinion that it is false".[23] Therefore, the argument goes that we should not exclude any perspectives because we cannot be certain whether a viewpoint that is being expressed bears some truth to it that can challenge an orthodoxy and make proponents for it justify the truth of that view in the public sphere. By this token, we should also *not* suppress false views we know to be false, as the expression of a falsehood may also have value since it entails the speaker of a truth justifying their truth in the face of said falsehood. As Mill states, no one has "authority to decide the question for all mankind, and exclude every other person from the means of judging." [24]

The *argument from autonomy* is based on the concept that freedom of expression is a fundamental right for individuals if they are to achieve their potential as rational persons. It is one of the most overt justifications of free speech from a liberal standpoint since it is entirely focussed on the rights of individuals rather than any societal benefits that may accrue: it "is an intrinsic, not an instrumental right…It values speech for its own sake, not for the indirect results that flow from it." [25] By the same token, however, it could be seen to be antithetical to consequentialist arguments for free speech, since no consideration is given to the impact of free speech on wider society under this justification.

As Barendt suggests, "restrictions on what we are allowed to say and write, or…to hear and read, inhibit our personality and its growth." [26] Under this justification, we can also see links between it and some other fundamental human rights such as the "rights to freedom of religion, thought and conscience". [27] As he also notes, however, the argument from autonomy also veers into territory that can see a clash between one person's right to express their freedom of speech, versus another's right not to be insulted or defamed. The contemporary problem of online trolling and harassment is an example of the challenges inherent in the argument from autonomy, as we will see below.

Campbell offers that the argument from autonomy is "powerful in its scope, for it can take in all forms and types of speech, and it is powerful in its foundations, for it finds its justification in the flourishing of distinctively human capacities." [28]

The *argument from democracy* relates to the notion that "freedom of speech is a necessary ingredient of the accountability on which the benefits of democracy are posited." [29] This defence focuses on the importance of a free flow of information and viewpoints within a democracy, allowing citizens to be informed and able to hold their elected representatives and the institutions that they manage on our behalf to account. This defence also not only bestows rights to free speech on citizens, it also often focuses on the importance of rights to freedom of information from the point of view of government documents, and many countries have legislated for such rights. In

[22] Barendt. Op. cit. p.7
[23] Campbell. Op. cit. p.143
[24] Mill, J.S. *On Liberty*. London: Walter Scott Publishing Ltd. 1869. pp.11-12.
[25] Campbell. Op. cit. p.147.
[26] Barendt. *Op. cit.* p.13.
[27] Ibid. p.7.
[28] Campbell. *Op. cit* p.147.
[29] Ibid. p.145.

other words, a citizen would have the right to exercise their freedom of speech in asking from the government and getting the information they wish to see to hold them to account.

There are again some key criticisms that can be levelled at this defence: if the focus is primarily on democracy and the institutions and people who are a part of it, free speech could be argued to be defined in a very narrow sense. Unlike other defences which focus on the totality of human experience, the argument from democracy would be in danger of focussing only on speech that supported political decision-making at the expense of artistic, or spiritual expression. As a consequentialist defence of the right, a plausible scenario could be posited that any speech act that harmed democracy could be made illegal. Therefore, it could be deemed wrong "to tolerate the circulation of material advocating its overthrow." [30] Schauer goes further in his analysis: "the very notion of popular sovereignty supporting the argument from democracy argues against any limitation on that sovereignty, and thereby argues against recognition of an independent principle of freedom of speech." [31] As Campbell summarises, the argument from democracy "provides some powerful rationales for increased and different types of freedom of speech, but only within the domain of political assessment and debate." [32]

4.1.1. Free speech restrictions

Challenges to free speech can be identified in several areas. Firstly, we can identify concerns that relate to the dignity of groups, on one hand, whereby hate speech attacks their sense of worth and identity and even possibly places them in physical harm. A second area of concern exists from the point of view of group rights and free speech, largely distilled from a critical feminist perspective, and related to the notion that some voices represent viewpoints that are already over-represented in the public sphere, and therefore more space should be made for voices deemed to be marginal. In this context there is the belief that the privilege of some groups means there is often a case for restricting their access to the public sphere, and therefore by implication their right to speak. In some modern contexts, especially academic settings in both the United States and the United Kingdom under the epithets of *no-platforming*, and *safe spaces*, we see a combination of these two stances combining for effect, and controversy.

At the heart of the debate around hate speech lies the thorny issue of actual harm that can come about as a result of speech acts. For Mill, there was a distinct difference between speech that targeted a group in a general sense, and speech designed to stir up physical harm to someone. In an oft-quoted passage from *On Liberty* he states:

> An opinion that corn-dealers are starvers of the poor, or that private property is robbery, ought to be unmolested when simply circulated through the press, but may justly incur punishment when delivered orally to an excited mob assembled before the house of a corn-dealer, or when handed about among the same mob in the form of a placard. [33]

In the argument from truth, then, there is space for severe speech that challenges individuals, but only when that speech leads to actual harm should it be punished or restricted. This notion forms part of Mill's widely-cited harm principle.

To this end, Post delineates how legislative frameworks have interpreted hate speech from the point of view of passing laws against it. He highlights the fact that in a modern democracy, mere disagreement with an opinion is not enough to constitute a hate crime: thus objecting to a religious

[30] Barendt. Op. cit. p.19.
[31] Schauer, F. (1982) *Free Speech: A Philosophical Enquiry*. Cambridge: Cambridge University Press. p.41.
[32] Campbell. Op. cit. p.145.
[33] Mill. *Op. cit*. p.39.

doctrine and stating that opinion should not be enough to constitute hate speech. He identifies that hate crime normally will only be defined when a speech act expressing abhorrence or dislike is combined with another element "that is thought to identify the unique presence of extreme hate and hence to justify legal intervention." [34] These elements are usually:

1. The manner of the speech act
2. The likelihood of it causing contingent harm, violence or discrimination

In the first category Post explains that the manner of the speech act relates essentially to the style of it; in that vein, it considers speech acts that are "formulated in such a way that insults, offends, or degrades". [35] He acknowledges the difficulty, however, of ascertaining this, and suggests that "ambient societal norms" need to influence the categorisation.

4.2. Free expression and the digital realm

While the technologies used to facilitate free expression may change with each generation, the concerns of unfettered free expression and its impact on society remain the same as those summarised above. What limits should be placed on free expression, and what justifications can be made, if any, have become a major controversy in the digital realm. Two important issues are of immediate concern: filtering of Internet content, and offensive behaviour online.

4.2.1. Filtering of content and managing access to the Internet

Internet filtering is a software-driven process of excluding websites from being able to be accessed is used by many organisations to prevent users from accessing specific categories of website. The process is normally driven by the blocking of words or phrases within the text of a webpage, or via a web address which is on a list of banned sites, or a combination of both. More specifically the two main types of filter have been defined as stand-alone systems or protocol-based systems:

- In a stand-alone system, the filtering software vendors pre-designate which content will be filtered, and the user does not have control.
- Protocol-based systems, on the other hand, do not determine in advance which content will be blocked. Rather, protocol-based systems can locate information on the Internet and, based on established standards interpret the information to determine whether a particular page should be blocked. [36]

While the organisation installing filtering will have some control over the blocking parameters through the initial specification supplied to the vendor, and the administrative settings provided, it remains a fact that the initial design of what the filtering system will block is largely specified by the software creators.

It is certainly true that, as Hauptman puts it, "unfiltered access to the Internet presents some major ethical challenges even to those whose commitment to intellectual freedom is unequivocal," however it is equally true that, "it is not our business to mediate between users and the virtual world." [37] Yet undoubtedly there are occasions when this must be considered.

In terms of digital services, filtering of internet content in publically-funded libraries is ubiquitous in the United Kingdom. The MAIPLE project found that 100% of the respondents to their survey (80

[34] Post, R. (2009) "Hate Speech" In. Hare, I. And Weinstein, J. (Eds) (2009) *Extreme Speech and Democracy*. Oxford: Oxford University Press. p.127.
[35] Ibid. p.127
[36] Sobel, D.L. (2003). Internet filters and public libraries. *First Repor*ts. 4 (2). p.5.
[37] Hauptman, R. *Ethics and Librarianship.* 2002. Jefferson, NC and London: McFarland and Co. p.65.

library authorities) filtered internet content, [38] while a study conducted by Scottish public library services found that 31 of the 32 authorities filtered content. [39] Such filtering has ethical parameters, and there is no public audit of the content that is filtered. Since the process is software-driven, legitimate content can be blocked, and while both of the studies cited above found that some library authorities provided the ability to unblock legitimate sites that are blocked, there remains an issue of equity of access. In the MAIPLE study, it was found that 75% of respondents working for public library services found filtering to be either very useful or somewhat useful. [40] Research earlier this year by the Radical Librarians collective revealed that many public library services have installed off the shelf systems that apply categories of blocking to information which differed between each council, and included categories such as "Abortion", "LGBT", "alternative lifestyles", "questionable", "tasteless", "payday loans", "discrimination", "self-help" and "sex education". [41]

The rationale for filtering is clear from a specific ethical standpoint; it is about the prevention of access to materials deemed to be "inappropriate", such as specific types of pornography, or other materials that be inappropriate for a specific age group or deemed excessively offensive. Yet the basis of Internet filtering is the antithesis of free and open access. This becomes even more of a concern when we consider the nature of the legitimate material blocked, such as material on sexual health, breast cancer, or sexuality, or lifestyle as evidenced above.

Consider how many users may be too embarrassed to ask a teacher or librarian about issues like sexuality, indeed this may be the primary reason why they have chosen the Internet as their information source as it offers relative anonymity and privacy. Being confronted with a screen blocking access to information is unlikely to have such a user politely chatting to the person in charge to have their information provided, regardless of their approachability. It could be argued that many organisations ventured down the filtering route to protect them rather than in a bid to halt intellectual freedom, but this makes the decision even more problematic for an ethical professional. The problem with filtering, as discussed above, is that while it may block material that is offensive or questionable (though the question remains to whom), it has also been found to block material of a legitimate nature, and often this material is of personal or sensitive importance to a user.

It could be argued that it is the clumsiness of filtering software that poses the largest ethical concern. Taking the human out of assessing information for a user is always a bad thing, but to put it in the hands of a software program is clumsy in the extreme. Code may well be law, but code does not understand nuance or subtlety. Code is also not able to understand the urgency or importance, or sensitivity of a piece of information to the person seeking it.

In reality, organisations may be required to manage access to their networks and the content accessed on it for several crucial reasons. Firstly, the accountability of the organisation needs to be considered, as providing access to users will be for a purpose, be it a public access issue, or access for an employee to undertake the business of the organisation. The user of the system is accountable to the organisation, and the organisation is liable to its funders, shareholders or board members.

[38] Spacey, R., Cooke, L., Creaser, C. and Muir, A., 2015. Regulating Internet access and content in UK public libraries: Findings from the MAIPLE project. *Journal of Librarianship and Information Science.* 47 (1). pp.71-84.

[39] Brown, G. and McMenemy, D. (2013) "The implementation of internet filtering in Scottish public libraries", *Aslib Proceedings*. 65 (2) pp.182-202.

[40] Spacey et al. *Op. cit.*

[41] Payne, D. New research maps the extent of web filtering in public libraries. 2016. http://www.cilip.org.uk/blog/new-research-maps-extent-web-filtering-public-libraries

As well as content filtering, developing acceptable use policies (AUPs) that each user would have to agree to before being given Internet access has been a key tool to use. As a general rule, acceptable use policies (AUPs) should include the following considerations:

1. Informing users of their responsibilities;
    a. these include both legal requirements and those defined by the organisation
2. Providing the organisation with legal protection from liability;
    a. it should be made clear to users that the organisation is not responsible for their actions on-line with regard to e-commerce and possible fraud by third parties resulting in losses to the user – for example, all on-line transactions are at the user's risk, and are not the organisation's responsibility
3. Defining a contract between the organisation and the user;
    a. the policy should define the limits of the service, setting out what services are available and what would lead to those services being withdrawn.

The format of an AUP is normally a written document that is presented to a user when they are either requesting access to the network or are being provided with their login details to do so. Other ways of presenting an AUP to users include Log-in Banners, which are agreements presented to a user on the screen of their computer as they seek access. An acknowledgement button normally has to be clicked by the user to confirm that a set of terms have been agreed to by them.

Ethical issues around AUPs are also important to consider. Does the user understand the nature of the document they are signing for? Since the document constitutes a contract between the user and the information organisation, it is important that policies are as understandable as possible. [42]

4.2.2. Freedom of expression online

One of the current concerns of our time relates to what have been dubbed Internet trolls. These are individuals who disrupt online communications or who use social media to harass others, or *"who posts inflammatory, extraneous, or off-topic messages in an online community, such as a forum, chat room, or blog, with the primary intent of provoking readers into an emotional response or of otherwise disrupting normal on-topic discussion."* [43] While traditional online trolling pre-social media may have been aimed at individuals on message boards, special media services like Twitter allow public figures with accounts on the services to become potential targets for the activity.

As Spinello has observed, "offensive and threatening language has become all too common in the infosphere and especially in interactive social media." [44] Even in a country like the USA, with a history of free expression as guaranteed though the First Amendment, behaviour that is threatening towards another crosses a line when it comes to freedom of speech. This could be defined as harm under Mill's principle.

The UK authorities are clearly concerned about what they see as a growing public menace. As Hume informs us, "Guidelines issued by the UK Director of Public Prosecutions in December 2012 make clear that somebody should face prosecution if they post – or repost – a message online that 'clearly

[42] Gallagher, C., McMenemy, D. and Poulter, A. (2015) "Management of acceptable use of computing facilities in the public library: Avoiding a panoptic gaze?", *Journal of Documentation*, 71(3), pp. 572–590. doi: 10.1108/jd-04-2014-0061.

[43] Moreau, E. What Is a Troll, and Internet Trolling? How Internet Trolling Affects Us All. *Lifewire*. 21st September 2016. https://www.lifewire.com/what-is-internet-trolling-3485891

[44] Spinello. Op. cit. p.97.

amounts to a credible threat of violence'." [45] The same guidelines, however, highlight that "online posts deemed 'grossly offensive, indecent, obscene or false' would be much harder to prosecute." [46]

High-profile figures being forced off social media due to harassment seem an ever-present item in the news, but the experiences of US actress Leslie Jones who was racially abused on Twitter highlight how offensive and personal the trolls can be when let loose. [47] The harassment of female UK Members of Parliament such as Stella Creasy has seen trolls convicted and imprisoned, yet the behaviour still occurs. [48]

A large ethical question around online trolling and harassment is how much responsibility social media services themselves should have. Stella Creasy, herself a target of online trolls as cited above, suggests that both the police and the Internet companies need to do more to combat the situation. For Creasy, the issue of online trolls is not one of content, but one of harassment: "I am particularly frustrated with the police and CPS because I still don't think they get it in terms of making it a harassment issue, not a malicious content issue." [49] This is the ethical argument that the trolling behaviour is not one of freedom of expression, then, but one of actual assault on a person. Where harm occurs is an age-old argument that goes back to Mill, and is one that is constantly debated. The ability for numerous individuals to send individuals synchronous online insults and harassing messages is a new problem for that debate, however, as Mill could not have conceived of a medium like the Internet. It is difficult not to accept that Creasy has a point in this regard.

5. Privacy issues

Privacy overarches many of the issues related to digital ethics. The privacy to access and consume materials out of the view of others, the privacy to communicate, and go about our daily lives without hindrance is something many of us have come to expect. The reality is that privacy poses significant ethical issues within the digital realm.

5.1. Defining privacy

Perhaps the most famous definition of privacy was uttered by Supreme Court Justice Louis Brandeis in the case Olmstead v. U.S., 277 U.S. 438 (1928) where he defined privacy as "The right to be left alone—the most comprehensive of rights, and the right most valued by a free people." [50] In more modern times, privacy has been interpreted as a right that we all should be entitled to expect to be defended. For instance, Article 12 of the *Universal Declaration of Human Rights* states that:

[45] Hume, Mick. *Trigger Warning: Is the Fear of Being Offensive Killing Free Speech?* (Kindle Locations 1570-1573). HarperCollins Publishers. Kindle Edition.

[46] Ibid.

[47] Oluo, Ijeomoa. "Leslie Jones' Twitter abuse is a deliberate campaign of hate." *The Guardian*. 19th July 2016. https://www.theguardian.com/commentisfree/2016/jul/19/leslie-jones-twitter-abuse-deliberate-campaign-hate

[48] Twitter troll who targeted Stella Creasy abandons appeal against conviction. *The Guardian.* 7th May 2015. https://www.theguardian.com/uk-news/2015/may/07/twitter-troll-peter-nunn-labour-co-operative-stella-creasy

[49] Creasy, S. Police and tech firms are failing to tackle trolling, says Stella Creasy. *The Guardian.* Friday 15th April 2016. https://www.theguardian.com/technology/2016/apr/15/online-trolling-not-taken-seriously-enough-labour-stella-creasy

[50] American Library Association. *Privacy and confidentiality*. http://www.ala.org/Template.cfm?Section=ifissues&Template=/ContentManagement/ContentDisplay.cfm&ContentID=25304

> No one shall be subjected to arbitrary interference with his privacy, family, home or correspondence, nor to attacks upon his honour and reputation. Everyone has the right to the protection of the law against such interference or attacks.

Therefore, privacy is defined as a right that we all should be able to expect to be defended in law. However, the right of the individual to privacy is becoming an ever-increasing concern in the information society, as information about us can easily be exchanged between parties at the click of a mouse, across countries and continents. It is also extremely difficult to know when and if this occurs, and this poses major problems for any legislative body seeking to curb such excesses.

Of course, as we will see, privacy has also to be balanced against other values. As with other rights, there are trade-offs and competing rights and interests which need to be respected. Economic interests may cause consumers to trade privacy for convenience such as occurs in credit card shopping. Efficient government requires personal information for taxation, health care, and the like. Privacy can also conflict with publicly accepted principles of law enforcement and public safety, as it is not desirable for the work of criminals or terrorists to remain private if they break laws and threaten wider society.

It could be argued that privacy is beginning to become a potentially old-fashioned concept. The increasing desire of our governments and the businesses we use to know more about us is impinging more on our day-to-day lives. Registering for many web-based services sees us having to tick boxes to unsubscribe from mailings or to ensure we do not have our data passed on to "selected third parties." Individuals and organisations increasingly have to spend money on spam and junk mail filters to attempt to ensure that their email inbox is not stuffed with inappropriate mails offering dubious services. This is all at the very least an inconvenience, and at the worst offers the potential for personal information to be abused or misused.

5.1.1. Privacy and autonomy

Privacy is also an important element in the autonomy of the individual. Much of what makes us human comes from our interactions with others within a private sphere where we assume no one is observing. Privacy thus relates to what we say, do, and perhaps even feel. If we are not able to trust that we are in a private space, then we may not be completely autonomous, we may hold back crucial elements of ourselves. As Griffin has observed: "frank communication… needs the shield of privacy; it needs the restraint of peeping Toms and eavesdroppers, of phone taps and bugging devices in one's house, of tampering with one's mail or seizure of one's correspondence". [51] Without a right to privacy, then, we are not able to be fully ourselves. Wacks also emphasises this point in considering the issue of electronic monitoring of employees: "the slide towards electronic supervision may fundamentally alter our relationships and our identity. In such a world, employees are arguably less likely to execute their duties effectively. If that occurs, the snooping employer will, in the end, secure the precise opposite of what he hopes to achieve." [52] In summary, "knowledge that our activities are, or even may be, monitored undermines our psychological and emotional autonomy." [53]

Yet undoubtedly privacy can pose significant challenges to security. If an individual is seeking to commit a crime or a terrorist act, then arguably privacy affords him more opportunity to do so.

[51] Griffin, J., *On Human Rights*. 2008: Oxford University Press. p.225.

[52] Wacks, Raymond. (2010) *Privacy: A Very Short Introduction (Very Short Introductions)* Oxford University Press. p.4-5.

[53] Ibid. p.4

This is the heart of the tension between a right to privacy and protecting the legitimate interests of others, and the state.

What is important for us to understand in this context is that privacy is a right *qualified* by other interests. This puts privacy in the same domain as freedom of expression, as other rights can take priority over both. This is a perfectly rational notion since unrestricted privacy could entail individuals undertaking activities that potentially damage the interests of others or society in general. It does, however, reveal that there is a tension between what a person might expect in terms of privacy and what may be deemed to be encroaching on the rights of others in doing so. Whether we recognise it or not, the intricacies of this qualification lie at the heart of the controversies we face in our professional practice. Wacks identifies seven *shortcomings* of privacy that are important to consider:

1. Privacy is often perceived as an old-fashioned value: "an air of injured gentility"
2. It may conceal genuine oppression, especially of women by men, carried out in the private realm of the home.
3. It may weaken the detection and apprehension of criminals
4. It may hamper the free flow of information, impeding transparency and candour
5. It may obstruct business efficiency and increase cost due to the necessity to adhere to standards in the collection of personal information
6. From a communitarian viewpoint, privacy is individualistic and trumps community values
7. Withholding unflattering personal information constitutes a form of deception. [54]

The European Convention on Human Rights (ECHR) states both the right to privacy, and the limits that can be placed on it. Article 8 states that: *"Everyone has the right to respect for private and family life, his home and his correspondence."* Section 8 (2) of the ECHR covers the limits that are allowed to be placed on the right to privacy specified in 8 (1): "There shall be no interference by a public authority with the exercise of this right except such as is in accordance with the law and is necessary in a democratic society in the interests of national security, public safety or the economic wellbeing of the country, for the prevention of disorder or crime, for the protection of health or morals, or for the protection of the rights and freedoms of others."

In reality, what does this mean? Firstly, that any restrictions placed on the right to privacy by states must be *lawful*. There must be a legal basis for the intrusion, and it must be justified by existing legislation. Framed as they are we can see here a set of restrictions that advocate invasions of privacy only in terms designed to protect what are deemed to be the legitimate interests of others, whether in the body politic or in their own right.

5.2. Privacy within the digital realm

Within the digital realm, privacy confronts us on two fronts, that of governments monitoring our behaviour, and that of corporations doing likewise. In truth the former can be argued to be about the protection of the realm, while the latter is about commercial advantage, however, both types of surveillance of Internet users raise their own controversies and ethical issues.

A primary concern for EU legislators relates to the ubiquity of cookies, the small files that download to a person's computer when they browse a website in order to track activity and allow the user a more enhanced experience. As much as cookies are essential for e-commerce solutions, they pose significant privacy concerns, as they store user activity while they are using websites, but can also track behaviour across the web. In an analogue world this would be the equivalent of a customer walking into Marks & Spencer's, using their credit card to buy an item, and then being followed

[54] Ibid. p.35-37.

around other stores afterwards by someone who is making notes on their purchases. This is clearly an invasion of privacy and goes against the spirit of data protection in the EU.

EU Directive 2009/136/EC of the European Parliament and of the Council has laid down the parameters of cookie use across the EU, and compels member countries to address its provisions within their own national legislation. The key element that relates to cookies within the Directive states that the placing of cookies on a browser's computer is "only allowed on condition that the subscriber or user concerned has given his or her consent, having been provided with clear and comprehensive information, in accordance with Directive 95/46/EC." [55] The emphasis then is that a user must *opt-in* to receiving a cookie, and in doing so they must have been given access to information as to what that cookie will store about them, and why. In this context, we are dealing with the concept of *informed consent*, which has a history in EU Directives on data protection. [56] In other words, users "must understand the facts and implications of an action to be able to make informed choices, ensuring that they are effectively able to choose freely and voluntarily. [57]

This links to the important point that the "cookie directive", as it is commonly known, builds on pre-existing EU Directives related to data privacy, and thus forms the next link in a chain. *Directive 95/46/EC*, is the backbone of data protection legislation throughout Europe and is an important component in privacy law, and *Directive 2009/136/EC* itself was an update to *Directive 2002/58/EC* which first dealt with the issue of cookies amongst other issues related to electronic privacy and transmission of data. [58] Thus within the EU we can see a natural evolution of data protection law that now encompasses the threats to privacy posed by cookies and the tracking of user behaviour in the online space.

5.2.1. Privacy, customised services, and social media

One of the most contentious areas around privacy online relates to customised services and social media and the voluntary surrender of personal privacy necessary on the part of individuals to take part in them. As online security expert, Bruce Schneier observed: "Surveillance is the business model of the Internet… We build systems that spy on people in exchange for services. Corporations call it marketing." [59] All of this plays into the larger concept of big data, where enormous databases of user data can be mined to predict consumer behaviour for corporate advantage. The elephant in the room, however, is the behaviour of citizens themselves when using online services.

One of the common paradigms of the modern era is the notion of customisation of services to users. In an online environment, the use of cookies for a user could well be a good trade-off with regards their privacy if the experience they receive from the website is more tailored to them. However, this tailoring comes at a cost, the loss of part of their privacy. This is perfectly fine if the informed consent concept we discussed earlier is a part of the process; however, research on the awareness of cookies amongst the population suggests this is far from the case. The Information Commissioner cites a report conducted in the UK for the Department for Culture, Media and Sport that raised some significant issues:

- 41% of respondents were unaware of different types of cookies
- Only 13% indicated they fully understood how cookies work

[55] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:337:0011:0036:en:PDF

[56] Borghi M, Ferretti F and Karapapa S. "Online data processing consent under EU law: a theoretical framework and empirical evidence from the UK" *International Journal of Law and Information Technology* 21. 2013. p.109.

[57] Ibid. p.120.

[58] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32002L0058:en:HTML

[59] Rashid, F.Y. "Surveillance is the Business Model of the Internet: Bruce Schneier." Security Week. April 09, 2014 https://perma.cc/S5AA-299Y

- 37% had heard of cookies, but did not understand how they work
- 37% did not know how to manage cookies on their computer [60]

We can see then a significant issue with regards the actual issue that is being legislated against. If people do not understand the nature of what they are being protected against, how can the legislation be effective?

From an ethical standpoint, we must also consider here the concept of *engineered consent*, which in contrast to informed consent is built around consent being given because the user essentially has no choice, if they wish to receive the service provided. As Borghi et al state, "if data subjects have to give more information than is strictly necessary to buy goods or access services, then it is likely that they will consent to whatever broad uses of their data to obtain the goods or services." [61] If the user *not* accepting cookies on their computer means the service they will receive will be of lesser quality, they may trade off in their mind consent for the service versus their privacy. Such a process has arguably coercive elements to it that we must be wary of. Similar scenarios apply to social media and email accounts: is not having them a worse scenario for a citizen than actually having them?

In terms of social media, how the companies deal with user data is a constant controversy. One example highlights a key issue: in 2007 Facebook launched a new service called Beacon, which sought to provide a peer-based advertising system. Purchases by Facebook members from certain third-party vendors would show up on the pages of friends to alert them to their friend's purchase. This garnered great controversy and was seen by many members as an intrusion into privacy. It does not seem an outlandish concept for someone to wish to keep their purchasing habits secret from others, and the Beacon idea raised a significant issue with regards the usage of user data and how it can be used to invade privacy. Ed Felten sums up the issue perfectly: "We agree that privacy matters, but we don't all agree on its contours. It's hard to offer precise rules for recognising a privacy problem, but we know one when we see it. Or at least we know it *after* we've seen it." [62] Ultimately the Beacon episode is an example of the public recognising a significant privacy problem when they saw it, their autonomy being utilised for the commercial gain of another without their permission, and they acted to stop it.

5.2.2. Privacy, government surveillance

A major controversy with regards to privacy in the digital realm relates to how much power our governments should have with regards to monitoring our behaviour. Governments would argue that since the defence of the realm is a crucial aspect of their role, they have a duty to be able to investigate when people are using online services, etc to cause us harm. Such defences can be argued to include issues around harassment, cybercrime and fraud, and terrorist offences. The arguments around this, as stated earlier, relate to the limits that should be placed on these monitoring activities.

[60] Information Commissioner, *Guidance on the rules on use of cookies and similar technologies*. 2012. https://ico.org.uk/media/1545/cookies_guidance.pdf

[61] Borghi et al. *Op. cit*. p.120.

[62] Felten, E. Lessons from Facebook's Beacon Misstep. 2007. https://freedom-to-tinker.com/blog/felten/lessons-facebooks-beacon-misstep/

In the UK the recent passing of the *Investigatory Powers Bill* into law has raised significant controversies. [63] The provisions that raise most controversies relate to:

- Forcing internet companies to keep user browsing records on users for up to a year
- Forcing companies to hack into products they have built, such as mobile phones, to enable government agencies to monitor them

The government would argue that such powers better enable them to combat crimes since often investigations need to consult records that are old to be able to build a case against perpetrators and to identify the full extent of any others' involvements. On the other hand, campaigners argue that the legislation is unnecessarily invasive and an assault on the citizen's right to privacy.

The topic of government surveillance has become more controversial in recent years after revelations by a former CIA consultant, Edward Snowden, revealed mass surveillance was far more widespread in democratic countries than was ever anticipated. The revelations that the National Security Agency (NSA) were collecting "vast amounts of data regarding the internet use of everyone online" also revealed that the US government was in collusion with large corporations who also collected data on users. [64]

While such surveillance raises issues around privacy and trust in government and those who collect the data, there is also research from the USA that suggests the knowledge of being potentially monitored impacts on freedom of expression, as writers limit what they search for or write about, leading to self-censorship. [65] Therefore, we see here a classic ethical dilemma over whether the utilitarian concern over protecting society as a whole impact on individual rights excessively.

5.2.3. The right to be forgotten

In May 2014 a landmark ruling saw the European Court of Justice support the claim of a Spanish man, Mario Costeja Gonzalez, to block from Internet searches a 1998 newspaper notice that discussed how his home was to be auctioned off to pay off his debts. Gonzalez's argument was that this old information was no longer relevant to his life, and in fact hindered him as it was revealed prominently in searches about him and this saw others make assumptions about him and his ability to manage debt. On the face of it, this seemed like a straightforward argument, and the idea that someone in 2014 should have their life impacted by an out of date aspect of their past seems harsh. The ramifications of the judgement, dubbed the right to be forgotten, have been significant, however.

Essentially the ruling meant that anyone could have removed from Internet searches in Europe any item that was "'inadequate, irrelevant or no longer relevant". [66] Critics argued that it would lead to famous people or criminals seeking to remove embarrassing aspects of their lives. Statistics accidentally revealed by Google, however, suggested that the vast majority of requests came from ordinary citizens seeking to remove embarrassing or irrelevant items related to them: "Less than 5%

[63] Griffin, A. "Investigatory Powers Bill: 'Snoopers Charter 2' to pass into law, giving Government sweeping spying powers" *The Independent.* 17th November 2016. http://www.independent.co.uk/life-style/gadgets-and-tech/news/snoopers-charter-2-investigatory-powers-bill-parliament-lords-what-does-it-mean-a7423866.html

[64] Clark, I. "The digital divide in the postSnowden era" Journal of Radical Librarianship, Vol. 2 (2016) pp.1–32. http://www.journal.radicallibrarianship.org/index.php/journal/article/download/12/26/

[65] Global Chill: *The Impact of Mass Surveillance on International Writers.* US PEN. 2015. https://pen.org/sites/default/files/globalchilling_2015.pdf

[66] Ronson, J..*So You've Been Publicly Shamed* (p. 195). Pan Macmillan. p.195.

of nearly 220,000 individual requests made to Google to selectively remove links to online information concern criminals, politicians and high-profile public figures." [67]

Nevertheless, the right to be forgotten raises significant digital ethics questions. Does the ability to remove Items from searches impact on freedom of expression? Does the individual's right to privacy and autonomy for past, and no longer relevant information about them, trump another's right to know that information? Search engines are relatively new items in terms of our ability to seek out information, and since the right to be forgotten does not remove the actual item, only the ability to find it, there does seem a grey area here from the point of view of ethics. As a relatively new ruling, it is one that must be watched from the point of view of its impact on society.

5.2.4. Privacy and library and information services

A concern for the information profession should be how it handles user data, especially with the expansion of services into the cloud, and the use of third-parties to deliver services. We see such scenarios occurring with the development of software as service platforms, where vendors provide services like library management system (LMS) access via the cloud, as well as the provision of services such as e-book services via vendors.

Caro and Markman urge librarians to be mindful of LMS security and to regularly test their systems for any inadequacies. [68] A recent case saw the Miami-Dade Library Service change their e-book vendor over concerns over third-party access to and data mining of user data. [69] The reality is that the more library services use vendors to store user data, the more valuable datasets on user behaviour that are created. Librarians must be aware of the dangers to that data that are potentially posed by storing it off site and must reassure themselves of the security of the data and that use it will be put to by third parties.

The Library Freedom project provides information for library and information professionals on how to provide more secure services for users and recommendations on software that can be used to protect user anonymity online. [70] Recommended services include advice on encryption software for email services and other online services, as well as advice on how to use secure web services such as https as a standard.

6. Conclusions

Digital ethics presents us with a range of new challenges based on old values and controversies. The arguments around ethical behaviour, freedom of expression, and rights to privacy are not new but transplanted into the digital realm present us with brand new challenges to solve.

The emergence of a new paradigm presented by the Internet, built on an infrastructure and ethos of openness and inclusivity, provides many potentially positive opportunities for access to information and ideas. Nevertheless, it also provides opportunities for enhanced surveillance and usage of citizens' data that could be potentially detrimental.

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[67] Tippmann, s. and Powles, J. Google accidentally reveals data on 'right to be forgotten' requests. *The Guardian*. 14th July 2015. https://www.theguardian.com/technology/2015/jul/14/google-accidentally-reveals-right-to-be-forgotten-requests

[68] Caro, A. and Markman, C. "Measuring Library Vendor Cyber Security: Seven Easy Questions Every Librarian Can Ask." *Code 4Lib Journal* . 34. 2016-04-25. http://journal.code4lib.org/articles/11413

[69] See Miami-Dade Library Service: press release over use of Overdrive service, http://www.mdpls.org/news/press-releases/2016/overdrive.asp

[70] What is the Library Freedom project? https://libraryfreedomproject.org/

An understanding of digital ethics from the point of view the services provided by information professionals thus necessitates addressing some fundamental ethical theories and applying these to the information domain. We must be cognisant of newly emerging challenges to practice if we are to be able to navigate these challenges.

Paper 15

McMenemy, D. and Buchanan, S. (2018) Character building in children's online information behaviours: applying a virtue epistemology perspective to information literacy. *6th European Conference on Information Literacy (ECIL), Oulu, Finland, 24-27 September 2018*.

Character Building in Children's Online Information Behaviours: Applying a Virtue Epistemology Perspective to Information Literacy

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Abstract. This paper advances our understanding of the theoretical and practical challenges of developing intellectual character in children's online information behaviours. We argue that widely reported issues such as misinformation and disinformation extend IL education beyond considerations of ability to considerations of disposition, and highlight this as an understudied topic within IL education. We introduce the classical concept of intellectual character and discuss virtues traits in the IL context. Applying Baehr's nine intellectual virtues to two commonly cited IL models, we evidence limited presence of virtues in IL models, and propose an important agenda for future research.

Keywords: Digital citizenship; virtue ethics; information literacy; information behaviour, virtue epistemology; children.

1 Introduction

This paper advances our understanding of the theoretical and practical challenges of developing intellectual character in children's online information behaviours. Character is understood as "the comprehensive set of ethical and intellectual dispositions of a person" [1]. In relation, intellectual character "is the part of your character—your dispositions to act, think, and feel—that pertains to thinking and learning" [2, p.18]. The authors position intellectual character as a topic of significant societal concern. Issues in the online information behaviours of children are reported globally, ranging from access (e.g., obtaining) to use (e.g., application) to conduct (e.g., respect). For example, a recent UK national report identifies common issues of misinformation, hate speech, sexting, and cyberbullying amongst children [3]; and another that as many as one in four young people in the UK have experienced cyberbullying [4]. Similar cyberbullying rates are reported in many other countries, e.g., Australia and the USA, and South Africa, rising to 43% in Serbia, and 77% in Argentina [5-7]. Issues of disinformation for malicious purposes are also reported [8].

2. Background

Whilst intellectual character is positioned by the authors as an important aspect of information literacy (IL) education, it would also appear to be an understudied topic within the discipline. Reviews of the main library and information science databases, *Library and Information Science Abstracts* (LISA) and *Library, Information Science, and Technology Abstracts* (LISTA) were conducted Spring 2018, encompassing the entire collections to date. Searches combined IL with relevant epistemological keywords (discussed in 3.1) including: virtue epistemology; virtue ethics; character.

Notably, limited specific reference and/or discussion of intellectual character was found. For example, virtue epistemology produced two precise hits on LISA (one a general review of Baehr's book, and the other a brief reference to Zagzebski) and three precise hits on LISTA, two of which were further reviews of Baehr's book, and the other related to cultivating online enlightenment from a Buddhist perspective. Ethical values related to social justice have received some attention [9-15], but relate to ethical aspects of character, not intellectual.

Similar concerns regarding a lack of attention to issues of intellectual character have been raised within education more broadly. For example, Dow argues that "there is a striking lack of familiarity with matters of intellectual character and virtue at the academic and popular levels" within education [16, p.16]. Other researchers have observed the "constantly evolving legitimating principles of character education and their continued non-appearance on education-policy and teacher-training agendas" [17, p.79]. Consequently, this paper asks two fundamental research questions: (1) What are the desirable intellectual character traits applicable to children's online information behaviours? (2) How is the development of desirable intellectual character traits currently addressed within IL education?

3 Methodology

In this initial exploratory study, we sought to identify and understand concepts of character in the IL context, and explore presence of character concepts in IL models.

3.1 Theoretical framework

Our interdisciplinary framework brings together theories and models of information literacy with theories and models of virtue epistemology to explore shared concepts of knowledge acquisition and sharing. Virtue epistemology (VE) relates virtue (i.e. the traits of a moral person) to knowledge, and knowledge acquisition pursuits. VE in the knowledge acquisition context, "requires that we think, reason, judge, evaluate, read, interpret, adjudicate, search, or reflect in various ways," with particular attention to aspects of personal and intellectual character [18, p.18]. VE is placed in the educational context via the use of Baehr's [2] framework of nine core virtues: curiosity; intellectual autonomy; intellectual humility; attentiveness; intellectual carefulness; intellectual

thoroughness; open-mindedness; intellectual courage; and intellectual tenacity.

Our IL definition is provided via the UK Chartered Institute of Library and Information Professional's (CILIP) Information Literacy Group (ILG) definition, which states that: "Information literacy is the ability to think critically and make balanced judgments about any information we find and use" [19]. The CILIP ILG definition, with emphasis on critical thinking and balanced judgment, appeared particularly appropriate due to potential synergy with open-mindedness aspects of VE. Other IL definitions, while similar, possess less synergistic use of language. For example, the American Library Association define IL as [20], "a set of abilities requiring individuals to recognize when information is needed and have the ability to locate, evaluate, and use the needed information effectively."

3.2 Identifying character concepts in information literacy models

Baehr's nine core virtues provided a conceptual framework for identifying concepts of character development in information literacy (IL) models. The IL models selected for analysis were the Big6, and the ACRL Framework; representing two commonly cited models widely used in education. Content analysis was identified as an appropriate method for identifying the presence of character concepts in IL models.

Content analysis "is a research technique for the objective, systematic and quantitative description of the manifest content of communication" [21, p.18]. It provides a method to "quantify content in terms of predetermined categories and in a systematic and replicable manner" [22, p.689]. However, it is important to note that whilst quantifying content, our approach to coding also incorporated qualitative analysis and extended beyond identification of manifest content to latent content facilitating an interpretative approach to content analysis [22]. Manifest content refers to exact or close matches, the latter extending to synonymous terms. Latent content refers to matches expressed in different terms but with shared meaning. Whilst open to interpretation, analysis of latent content was considered important given the cross-disciplinary nature of this study and the potential for variance in articulation of character concepts. Periodic code checking (multiple sample coding), was conducted by one team member independent to the first to validate coding, with no notable variations found. Our initial focus was the identification of presence of concepts. We reserve further examination (e.g. exploration of prescriptive depth of character concepts) for future work.

4 Character

Character has long been discussed, and long recognised as something to be nurtured in children. For example, in the *Nichomachean Ethics*, Aristotle explored the importance of human virtue for the cultivation of the virtuous citizen. For Aristotle, virtue fell "into two divisions, intellectual excellence and goodness of character" [23]. Aristotle believed that virtuous behaviours were gained by repetition and training: "the virtues are not formed in us by nature, but they result from our natural capacity to acquire them when that capacity has been developed by training" [23]. Importantly, bad habits could

be formed in a similar way, "as [bad] habits of character are formed as the result of conduct of the same kind" [23]. Consequently, Aristotle believed that the cultivation of virtue in the young was something of "supremest importance" [23].

Cultivation of virtue to foster citizenship must now consider behaviours in both the physical and digital space, and the concept of digital citizenship, now considered crucial for future generations [24]. Further, issues such as cyberbullying and misuse of information extend IL education beyond considerations of *ability* (i.e. skills) to considerations of *intellectual character* (i.e. desirable or virtuous dispositions).

4.1. Baehr's 9 core virtues

Baehr's research on VE led to a widely cited book in 2011, followed by a project, "Intellectual Virtues in Education," which investigated the application of virtue epistemology theories within educational practices. This led to the formation of a US middle school which teaches based on VE theories. In addition, Baehr has produced a practical guide for applying VE in the educational setting. Baehr is thus selected as a theoretical model that has successfully put character concepts into educational practice.

Baehr provides two classifications of intellectual virtues. The first is a set of 9 core virtues arranged under three groupings related to the knowledge-building process. The second provides a further more detailed exposition of intellectual virtues divided into 6 categories [2]. For the purposes of this study the first classification is considered sufficient to introduce core intellectual character concepts and guide analysis of IL models. Each of the nine core virtues are discussed below and are placed in the information behaviour context by identifying related concepts within two commonly cited models of information behaviour: Wilson's [25] model of information behaviour; and Kuhlthau's model of the information search process [26].

Baehr's first grouping identifies intellectual character virtues required for initiation of knowledge acquisition and ongoing direction:

a. Curiosity – relates to being "driven to explore and expand their mind" [2, p.59]. For Baehr this "occupies a special role in the overall economy of learning" [2, p.59]. Unlike those who are curious only for extrinsic reasons such as prescribed tasks, Baehr argues that, "fostering curiosity is akin to fostering a 'love of the game' in sports" [2, p.59-60]. For Baehr, curiosity is motivated by a desire for genuine, and broad, understanding.
b. Intellectual autonomy – describes "a willingness and ability to think for oneself" [2, p.70]. Baehr argues that, "like all the other virtues, [autonomy] needs to be balanced and constrained by complementary virtues, in this case virtues like intellectual *humility*…We need to be aware and accepting of our intellectual limitations and deficiencies" [2, p.72].
c. Intellectual humility – refers to"an alertness to and willingness to "own" one's intellectual limitations, weaknesses, and mistakes" [2, p.81]. Baehr argues that the "intellectually humble person, instead of trying to steer the conversation away from his ignorance, will seek to replace it with knowledge or understanding" [2, p.81].

In information behaviour terms, curiosity is recognised as a psychological motivation

that can activate and drive information-seeking activity [25-26]. Intellectual autonomy can be related to aspects of self-efficacy [25], and intellectual humility to knowing one's limitations, and being willing to seek out assistance when experiencing uncertainty [26].

Next, Baehr identifies virtues required for continued progress, and in particular, depth of understanding:

d. Attentiveness – relates to the individual being "present in the sense that he's personally engaged and invested in what's being said or learned" [2, p.94]. According to Baehr, the attentive student "listens carefully and openly" [2, p.94].
e. Intellectual carefulness –is present when the "person takes pains to avoid making intellectual mistakes… [and] also has a grasp of the rules of good thinking and related intellectual activities" [2, p.105].
f. Intellectual thoroughness – is present when the "person is disposed to probe for deeper meaning and understanding" [2, p.117].

In information behaviour terms, attentiveness can be related to active and constructive information seeking behaviours [25-26]. Intellectual carefulness and thoroughness can be considered in relation to the process of constructing meaning from new information, and inherent reflective practices and expansive information searches [26].

Finally, Baehr identifies virtues for overcoming obstacles throughout the learning process:

g. Open-mindedness – refers to a "person is one who is willing and able to consider alternative standpoints, to give them a fair and honest hearing, and to revise her own standpoint or beliefs accordingly" [2, p.126].
h. Intellectual courage – refers to, "when we subject ourselves to a potential loss or harm in the context of a distinctively intellectual pursuit like learning or inquiring after the truth" [2, p.139].
i. Intellectual tenacity – is present when a "person doesn't give up when she doesn't understand something. Nor does she treat intellectual failure or defeat as a final judgment of her abilities." [2, p.150].

In information behaviour terms, open-mindedness can be related to exploratory and expansive information seeking actions [26]. Intellectual courage and tenacity can be considered in relation to stress/coping mechanisms influencing subsequent information behaviours [25], and resilience to uncertainty including new knowledge that can challenge existing personal constructs [26].

5 Character in information literacy models

We now discuss our findings related to the presence of Baehr's nine core virtues in the Big6 model and the ACRL framework.

5.1 The Big6

The Big6 is a widely-used "six-stage model to help anyone solve problems or make decisions by using information" [27] developed by by Eisenberg and Berkowitz [28-

29]. The model is built around what are described as the six big skills of information-problem-solving: task definition, information seeking strategies, location of and access to information, use of information, synthesis, and evaluation. The focus of the model is "on developing broad skills areas reflecting the information problem-solving process rather than teaching how to use specific resources, tools, or library systems" [28, p.100].

None of the 9 core virtues were manifest within the Big6. Latent analysis also failed to identify virtues with any degree of confidence. For example, for the first step in the Big6 model, task-definition, it is stated that, "Before using any other information skill, students must first be able to articulate information needs" [28, p.115]. Within the objectives listed for this skill, the focus is on a specific information-seeking problem, and thus has limited interpretation. This was the case across all Big6 steps. Perhaps the closest to a degree of interpretation as incorporating character concepts was step two, information-seeking strategies, which suggests, "examining alternative approaches to the problems of acquiring appropriate information" [28, p.110], which could arguably be associated with virtues of open-mindedness, intellectual autonomy, and intellectual humility. However, again the description of the skill is focused on meeting an individual task as opposed to developing knowledge acquisition. Overall the Big6 was found to be task-focused, and thus limited in relation to character development.

5.2 ACRL Framework for Information Literacy for Higher Education

The ACRL Framework [30] is a development of the *Information Literacy Competency Standards for Higher Education* first published in 2000. The current Framework was adopted by ACRL in 2016, and has six frames that form the basis: Authority Is Constructed and Contextual; Information Creation as a Process; Information Has Value; Research as Inquiry; Scholarship as Conversation; Searching as Strategic Exploration. An important point to note about the fit of the Framework for a virtue epistemology approach is that it refers to the expected skills that should be acquired as "dispositions." This is a potential indication that the approach taken in the development of the Framework is cognisant of character issues. None of the 9 core virtues were manifest within the ACRL Framework; however latent analysis identified several relationships.

The first frame, "Authority Is Constructed and Contextual", relates to the credibility and construction of information, and recognising what levels of authority are required for different kinds of information need. There is latent presence of several virtues. Specifically, the following except supports both open-mindedness, and intellectual carefulness: "Experts view authority with an attitude of informed skepticism and an openness to new perspectives, additional voices, and changes in schools of thought." This mirrors Baehr's notion that, "the "intellectually careful person takes pains to avoid making intellectual mistakes… [and] also has a grasp of the rules of good thinking and related intellectual activities" [2, p.105]. It also reflects Baehr's summation of open-minded people as "willing and able to consider alternative standpoints, to give them a fair and honest hearing, and to revise [their] own standpoint or beliefs accordingly" [2, p.126].

The second frame, "Information Creation as a Process", focuses on the process of creating information in multiple formats, and the awareness in the researcher of that

process: “experts look beyond format when selecting resources to use.” While we recognise it could be argued that this could be described as an aspect of intellectual thoroughness or intellectual carefulness, the frame relates to skills as opposed to dispositions, and thus is not considered to incorporate aspects of intellectual character.

The third frame, “Information Has Value”, relates to the value of information on multiple fronts, from economic to social, to legal: “the individual is responsible for making deliberate and informed choices about when to comply with and when to contest current legal and socioeconomic practices concerning the value of information.” This was not found to have presence of any of the core virtues.

The fourth frame, “Research as Inquiry”, relates to the process of research as being iterative and about complex or emerging questions. Several core virtues are present latently within this frame. The virtue of curiosity is present in the statement that, “Experts see inquiry as a process that focuses on problems or questions in a discipline or between disciplines that are open or unresolved.” This mirrors Baehr’s notion that “a curious person is disposed to wonder, ponder, and ask why... to know how or why things are the way they are” [2, p.61]. We can also see both intellectual humility, and open-mindedness in the following summary of the process of inquiry: “this process includes points of disagreement where debate and dialogue work to deepen the conversations around knowledge.”

The fifth frame, “Scholarship as Conversation”, relates to the cultivation of scholarship as discourse between different minds. This frame is supported by several of the core virtues. It presents scholarship as “a discursive practice in which ideas are formulated, debated, and weighed against one another over extended periods of time” and this can be clearly linked to open-mindedness, intellectual humility, intellectual carefulness, and intellectual thoroughness. In addition, that, “Experts understand that, while some topics have established ... query may not have a single uncontested answer. Experts are therefore inclined to seek out many perspectives, not merely the ones with which they are familiar.” This mirrors Baehr’s insistence that the intellectually thorough person probes for “deeper meaning and understanding” [2, p.117]. On intellectual humility, and again, open mindedness, we can identify the virtues in sentences like: “develop awareness of the importance of assessing content with a skeptical stance and with a self-awareness of their own biases and worldview.”

Lastly, “Searching as Strategic Exploration” emphasises the potential complexity of seeking out information and the skills necessary in understanding that overall process. It states that, “Searching for information is often nonlinear and iterative, requiring the evaluation of a range of information sources and the mental flexibility to pursue alternate avenues as new understanding develops.” There is latent presence here of intellectual humility, as Baehr suggests the intellectually humble person, “instead of trying to steer the conversation away from his ignorance, will seek to replace it with knowledge or understanding, possibly by noting his ignorance and asking others to fill in the gap” [2, p.80].

6 Discussion

The development of intellectual character in children can be considered in relation to nine virtues [2]: curiosity; intellectual autonomy; intellectual humility; attentiveness; intellectual carefulness; intellectual thoroughness; open-mindedness; intellectual courage; and intellectual tenacity. We have positioned these virtues as core to the development of desirable online information behaviours in children, but in relation, we report a lack of previous studies within IL education, and identify limited presence of such virtues within our sample of IL models.

Within the Big6 only one step, 'information-seeking strategies', could be loosely associated with virtues of intellectual autonomy and humility, and open-mindedness; however, relations are not explicit and subject to interpretation. Within the ACRL we identified virtues latently present within the descriptions of the frames. The most common virtues related to open-mindedness and intellectual humility. Relationships to intellectual carefulness, curiosity, and thoroughness were also identified. However, several of these relations are not explicit and subject to interpretation. This could be interpreted as a usage of the terminology of virtue without a clear connection to the epistemological meaning. Baehr argues that using the language of virtue in inauthentic ways, or over-using the terms when not actually undertaking teaching from that perspective risks backfiring on educators [2, p.363]. He encourages intellectual virtue language to "be integrated into statements of course goals and objectives" [2, p.366]. This is synergistic with ACRL recommendations to view IL frames as outlines to be developed further. In particular, "to develop resources such as curriculum guides, concept maps, and assessment instruments to supplement the core set of materials in the frames" [30]. Character concepts would be incorporated at this stage.

It is also important to note that IL educational programmes should not only make virtues explicit, but should also consider how such virtues are developed in children (i.e. process aspects). In relation, development of character should be viewed as an incremental and iterative process [2]. Baehr argues:

> Character virtues arise through the practice or repetition of virtuous actions. Applied to intellectual virtues, the idea is that the traits in question develop through thinking, reading, interpreting, reflecting, analyzing, and discussing academic content in ways that are inquisitive, attentive, careful, thorough, [and] honest." [2, p.507].

Such principles of incremental learning are again synergistic with recommended approaches to IL education. For example, the ACRL framework, whilst acknowledging that single classes in IL have value, nonetheless recommends that IL education be viewed as a gradual process of learning transfer. In addition, it is important to recognise that the cognitive dispositions being developed require deep understanding, and require sufficient time be allocated to desired learning outcomes. Baehr recommends that: "…if we want to do what we can to ensure that our classes have a positive impact on the intellectual character of our students, we would do well to ask ourselves: "How well does my allotment of the time I have with my students reflect this pedagogical goal?" [2, p.292]. Further, careful consideration must be given to how to incorporate character development into IL education, and development of appropriate teaching and learning resources. We reserve exploration of this challenge

for future research.

7 Limitations

The paper provides the first critique of IL education models from a virtue epistemology perspective; however, our qualitative analysis is open to subjective interpretation. Further independent assessment would verify findings. Further, our analysis is limited to a sample of IL models. Analysis of further IL models would establish generalisability of findings. In relation, our methodology provides a repeatable approach for examination of both our sample and further IL models.

8 Further research

We position the development of intellectual character in children's online information behaviours as an understudied topic of significant societal concern, and encourage further research. In particular:

1. Further theoretical refinement of IL education models to explicitly incorporate application of intellectual character virtues.
2. Empirical studies with children to explore appropriate methods of intellectual character development to inform IL education programmes.
3. Analysis of current IL education for practitioners to consider how VE concepts can be introduced into the professional body of knowledge

9 Conclusions

The cultivation of character in children to foster virtuous citizenship must now consider behaviours in both the physical and digital space, and the concept of digital citizenship. We have argued that widely reported issues such as misinformation and disinformation extend IL education beyond considerations of ability to considerations of intellectual character; however, to date, the latter appears an understudied topic within IL education. Further, we have identified limited presence of concepts of intellectual character in our sample of IL models, with none explicit, and all subject to interpretation. If we accept that the development of character in children's' online information behaviours is indeed an important aspect of IL Education, much further research attention appears required to put into practice.

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