Studying Law Students' Information Seeking Behaviour to Inform the Design of Digital Law Libraries

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ABSTRACT

In this paper, we describe our ongoing work which involves examining the information seeking behaviour of legal professionals. This work involves studying the behaviour of both academic and practicing lawyers with the long-term aim of integrating user-centred legal information seeking support into digital law libraries. We report preliminary findings from the initial phase of the study, which comprised a series of semi-structured interviews and naturalistic observations of academic law students looking for information that they require for their work. This group of academic lawyers often found it difficult to find the information that they were looking for when using digital law libraries. A potential symptom of this difficulty was that hazy and incorrect knowledge of the digital library system and information sources within the system were rife. This suggests the need for students to understand more about the digital library systems that they use (within-systems knowledge). We also found that although this group of academic lawyers often used several electronic resources in a complementary fashion to conduct legal information seeking, they often chose to rely primarily on one of either the LexisNexis or Westlaw digital law library platforms. Their preference was often based upon vague or sometimes flawed rationale and suggests the need for students to appreciate the situations in which different electronic resources might be useful (between-systems knowledge).

Categories and Subject Descriptors

H.3.7 [**Information Storage and Retrieval**]: Digital Libraries – *user issues.*

General Terms

Human Factors

Keywords

Digital libraries, lawyers, attorneys, law, information seeking, information behaviour, legal, user-centred design, Google, information seeking support, mental models, online help, grounded theory, qualitative, Contextual Inquiry.

1. INTRODUCTION

Callister [6] illustrates that lawyers have, at least since the beginning of the twentieth century, been regarded as having poor research skills; in a quote from the legal research literature in 1902, Justice Deemer of the Iowa supreme court states that he has "been amazed at the helplessness of law students and even of lawyers when they go into a library to search for authorities." Over one hundred years later, it can be argued that this statement still holds true (particularly regarding digital law library use); Howland and Lewis [10] surveyed law firm librarians throughout the United States in order to collect empirical data about the quality and extent of the electronic legal research skills of summer clerks and first-year associates. The authors found that these graduates were unable to efficiently and effectively research issues that appear routinely in cases handled by middle-sized law firms and concluded that recent graduates and summer clerks were not efficient or cost-effective users of LexisNexis and Westlaw (the two biggest digital law libraries in terms of case, legislation and journal coverage). This was despite all of the students having received some training on how to use the libraries while in law school.

Digital libraries have traditionally been regarded as difficult to use [5] and based on our contextual observations with academic lawyers, digital law libraries such as LexisNexis Professional and Westlaw are no exception. We believe that this difficulty of use contributes to the problems that lawyers face when conducting electronic legal research. Furthermore, we argue that developing better information seeking skills goes hand-in-hand with developing an understanding of the electronic environments in which these skills must be practiced. Our motivation is to gain a better understanding of lawyers' information seeking behaviour, knowledge and rationale when using existing electronic resources. This understanding can then be used to inform the design of digital law libraries in two potentially synergic ways; by designing them to better support user behaviour and by integrating support for user behaviour into the design.

2. EXISTING WORK
2.1 Existing Work on Legal Information Seeking Behaviour

As acknowledged by Leckie et al. [13], most of the literature about lawyers' information seeking behaviour concentrates solely on legal research and legal research education. Whilst there have been a number of studies on how computers can be used to support lawyers (mostly in the fields of Artificial Intelligence and Law [1], [8], [20] and HCI [11], [15]), these studies only touch on how legal information seeking can be supported. There is also only a small amount work which focuses on legal information needs and behaviour. This work includes a survey-based study on

how academic and practicing lawyers use information [16], an interview-based study with lawyers at the beginning of their careers and with lawyers who had practiced a specific branch of law for several years [7] and an observation-based study on practicing lawyers with a particular focus on the variety of information tasks that lawyers undertake, how they use information to accomplish their work and the role that mediators play in the process of legal information seeking and use [12].

Although this work is useful for helping us understand the role of information in lawyers' work, this work was not undertaken with the purpose of presenting insights for the design or evaluation of systems to support lawyers with their work. Our long-term aim is not only to understand lawyers' behaviour, but to design digital law libraries to better support user behaviour and to integrate support for user behaviour into the design.

2.2 Existing Work on the Usage and Perceptions of Digital Law Libraries

Despite the relative lack of research into legal information seeking behaviour, there are a handful of studies which focus on the usage and perceptions of digital libraries; in one of the few user-centred studies on digital law libraries, Yuan [21] monitored the LexisNexis Quicklaw searches of a group of law students over the period of a year. Yuan examined several aspects of their searching behaviour, including the increase of their command and feature repertoires, their change in language usage, increase of search speed and change of learning approaches. Yuan found that experience did not result in searchers making fewer errors or being able to recover from more errors. Yuan also found that although participants with higher levels of Quicklaw experience used a greater variety of commands and features than those with lower levels of experience, some commands remained rarely or never used. Despite this, however, participants were able to accomplish many tasks by knowing a core set of commands and features.

In order to identify the 'fit' of the same digital library to various organisations, Elliott and Kling [9] conducted a qualitative study on digital library usage. The authors interviewed forty-six legal professionals (including judges, District Attorneys, Public Defenders and criminal defense attorneys) based in three courtrooms in the same county within the California Superior Courts System. Each of the three courtrooms provided access to different degrees of technology to support legal research. Regarding attitudes to computer usage, Elliott and Kling found there to be two camps of legal professionals; one highly enthusiastic towards computer usage and another who view computer usage with derision. The deputy law librarian for the District Attorneys Office pointed out that lawyers will go to "what they are comfortable with." This is apparently despite the fact that all of the lawyers in the study had access to periodic training classes for all digital library systems. Indeed, regarding electronic information seeking training attitudes, Elliott and Kling [9] found that lawyers prefer one-to-one assistance with digital libraries rather than group training and made recommendations for increased tailored training assistance. They found that most lawyers were lost when attending formal classes (or simply did not want to allocate time to take such classes).

Andrews [2] examined perceptions of LexisNexis (and their perceptions of the training that they received) by administering questionnaires and structured interviews to eighteen legal professionals and law librarians. Andrews asked interviewees about the usability of the Lexis system as it stood in 1994 (which, it should be noted, has changed significantly since then). The user interface was regarded as a significant barrier to usage (although, interestingly, the author highlights that suggestions to make the interface more in-line with standard PC/Mac interfaces seem to be based on legal professionals comparing Lexis to software packages of the time rather than to other online systems).

Sutton [19] examined the legal literature in order to explore how lawyers construct 'mental models' of the law. Sutton notes that these mental models evolve through iterative interaction between lawyers and the corpus of law as well as between lawyers and the legal system. Sutton suggests that Lexis and Westlaw can be enhanced in order to support users in building a 'mental model' of the law. Unsurprisingly, these enhancements are user-focused (probably because Sutton's study was also 'user-focused' in the sense that his motivation appears to be helping lawyers to better understand their work domain of law). Sutton argues that "Lexis and Westlaw should embrace a dynamic behavioural model of system users and assist mental model building at all points along the knowledge continuum from base-level modeling through context-sensitive exploration to model disambiguation." He suggests that support should be provided to guide the user "from the most general topical outline through treatise/commentary responses to primary sources themselves, based on a legal schema of increasing complexity."

In a similar vein to Sutton's argument that digital law libraries should support users in building a mental model of the law, we argue that digital law libraries (and digital libraries in general) should also support users in acquiring and refining a mental model of the *system*. The value of supporting users in this endeavor is highlighted by Borgman [4].

3. OUR RESEARCH APPROACH

The initial phase of our study comprised a series of semi-structured interviews and naturalistic observations of twenty academic law students, ranging from first year undergraduates to final year doctoral students. This spread of academic participants was recruited to provide complementary theoretical perspectives at each stage of UK university-level academic legal research. All of the students were studying at a large London university for an LLB (4 first year, 3 second year and 2 final year students), LLM (8 students), or PhD (2 students). In addition one participant, who was a studying a vocational Legal Practice Course elsewhere, was included in the study in order to complete the theoretical picture.

Participants were informed that the study would focus on how they look for legal information as part of their work and interviews and observations were conducted based on the Contextual Inquiry approach (see [3]). Interviews began with a set of introductionary questions, focusing on what stage the student was at in their academic career, the nature of legal research involved, the electronic resources used and how they choose when to use a particular resource. These introductionary questions were followed by a naturalistic observation where participants were asked to use the computer to find some legal information that they currently need to find as part of their

academic work. If a student was unable to think of a pressing research need, they were directed to think back to a recent time when they needed to look for legal information and, if possible, to show the investigator how they went about finding that information.

Participants were asked to think aloud whilst using the computer, explaining what they were doing as they were doing it and were told to verbalise any thoughts that were going through their heads. Whilst they were using the electronic resources (which were predominantly the digital library resources LexisNexis Professional and Westlaw), the researcher asked seemingly innocuous but probing questions designed to uncover details about their knowledge of the digital library system and details about the information that they were expecting to find. These questions took the form of opportunistic 'how,' 'what' and 'why' questions. Interviews were transcribed and are currently in the early 'open coding' stage of analysis using Strauss and Corbin's Grounded Theory [18].

4. PRELIMINARY FINDINGS

This group of academic lawyers found it difficult to find the information that they were looking for when using digital law libraries. We found that much of this difficulty arose from hazy and incomplete knowledge of the digital library system rather than from poor general information seeking skills. Two broad aspects of users' hazy and incomplete system knowledge included knowledge about the coverage of the system in terms of cases and journal articles and also how to formulate the correct search terms for a specific system. As one participant commented, when asked to explain something useful she had learnt about how an electronic resource works:

"Although in Westlaw it appears as though [the document] doesn't exist, it does actually exist although you've just not typed in exactly what it wants you to type in. You have to type it in exactly how it's specified there [in the Westlaw database]. I just know this now from practicing a bit, but I guess if you didn't know it it's a bit of a pain because you get a bit stuck as to what to do and you think 'oh well, the resources aren't there so how am I meant to find it?'" – S13

Most worrying perhaps, and in line with the findings of Yuan and of Elliott and Kling, was that law students do not delve beyond the basics of digital library systems and were often unwilling to go to training classes on how to use digital law libraries despite being aware that these classes had been available to them. Whilst this may be understandable, since they are not approaching the system with the intention of learning how the system works but with the intention of satisfying a pressing research need, this suggests the need for students to understand more about the digital library systems that they use (within-systems knowledge).

In line with Elliott and Kling's findings that lawyers will go to the digital resources 'they are comfortable with,' we found that although this group of academic lawyers often used several electronic resources in a complementary fashion to conduct legal research, they often chose to rely primarily on one of either LexisNexis or Westlaw for conducting their legal research. This reliance on either Lexis or Westlaw was often independent of the information task at hand:

"In general I use LexisNexis, but there isn't a particular reason for it." – S1

Furthermore, their preference was often based upon vague or sometimes flawed rationale for always choosing one digital library over the other:

"Sometimes if I don't find something on Westlaw I will look into LexisNexis [Professional]...because Westlaw is more convenient... it's more easy to surf... and for some reason which I can't really explain, I always look first on Westlaw and then if I can't find it I'll go onto LexisNexis. It's probably because I'm more used to using Westlaw so I would only resort to LexisNexis in case of emergency." – S6

"If it's a case that's on both [digital libraries] then it's probably better to get it on LexisNexis because then you can copy and paste the case into a Word document whereas with Westlaw it's more complicated... you have to e-mail it to yourself and then cut and paste and print." – S5

Indeed, much of law students' rationale for choice of system referred to 'the interface' and may be symptomatic of problems or barriers caused by usability (as suggested by Andrews [2]). It is more difficult, however, to ascertain where flawed rationale for choosing systems stems from as it not only might be influenced by usability barriers, but also by other factors based on users perceptions as a result of system use. Similarly it is clear that poor knowledge of individual systems plays a part in the creation of incorrect assumptions. However, so might usability issues or a host of other inter-dependent factors such as knowledge of the law and knowledge of the legal research process.

A potentially more serious finding regarding the use of multiple electronic resources was that there was often an incomplete, incorrect or sometimes outright lack of awareness of concrete differences between how to approach digital law libraries; in example below, the student is unaware that Westlaw allows users to search by party name as opposed to by citation:

"I think on LexisNexis [Professional] I can simply type in the citation of the case but I think in Westlaw sometimes I have to type in the name of a case... I think they're basically similar because if you find the same case on the two sites, the text will be the same." –S1

Awareness problems between digital law libraries and Google existed to a far lesser extent; students were aware that Google could play a useful role in the legal research process – often as a starting point to find a concrete citation to a legal case or journal article, as a tool for finding 'a layperson's view' on a legal subject or a source to turn to when an impasse had been reached. Most students were also aware that it was necessary to use different search terms when searching using Google compared with when using digital law libraries - due to differences in the type and scope of information that search engines and digital law libraries are designed to help users to find. This finding contrasts with our previous study of Human-Computer Interaction and Librarianship students [14], which found that some students claimed to approach their digital library searches in the same way that they would approach Google. Interestingly, none of the students used any Boolean connectors or advanced search syntax when searching digital libraries, with the exception of enclosing phrases

in quotation marks, which they may well have learnt initially from searching Google.

Law students' lack of knowledge of the similarities and differences between individual digital law libraries might well play a part in law students' incorrect assumptions about the way that individual systems work. This finding also suggests the need for students to gain an understanding of the similarities and differences between digital law libraries in order to appreciate the situations in which different electronic resources might be useful (between-systems knowledge).

Overall, these findings highlight the need for integrated knowledge support in digital law libraries. Just as Sutton [19] argues that digital law libraries should be designed to allow lawyers to form a 'mental model' of the work domain, we believe that digital law libraries should also support users in forming a mental model of the *systems* that they use to find information; information that can then be used to support users' models of the work domain and of legal information seeking in general. Since digital libraries can act as both portals and barriers to finding legal information, we argue that 'getting to grips' with legal research tools might be just as important as getting to grips with the legal domain itself.

5. PLANNED FUTURE WORK

Aside from our planned work with practicing lawyers, complementary interviews are currently being conducted with other stakeholders that might provide a useful theoretical basis from which to triangulate and hence better validate our findings; academic teaching and research staff (from lecturers to professors) and Law Library staff. All of these stakeholders are likely to provide an element of support to law students conducting legal research and hence may hold perceptions or opinions on the difficulties that they face and why they behave in the way that they do. In addition, and particularly in the case of law librarians, we have found that stakeholders share a similar or complementary motivation to ours and hence have useful opinions that might guide our future design work. Indeed, we plan to feed our observations on academic lawyers' behavior back to major stakeholders in the form of a representative set of scenarios (see Rosson & Carroll [17]) and use these scenarios to drive our future design process.

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